

Digital Business Ecosystem

Workpackage 27: SME engagement

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Short Description: This deliverable takes into consideration and analyses the outputs of the focus group activities carried out by Censis between October and December 2005. The focus of this deliverable has been the delicate passage from Driver to Implementer engagement. The report offers a concise overview of the goals achieved, evaluates the experience done so far and describes possible opportunities/problems related to the next engagement stages.

The methodologies applied is a qualitative one; a combination of online focus group and mental map development has been used with the main object to gather opinions and visions from RCs and other Business Domain members.

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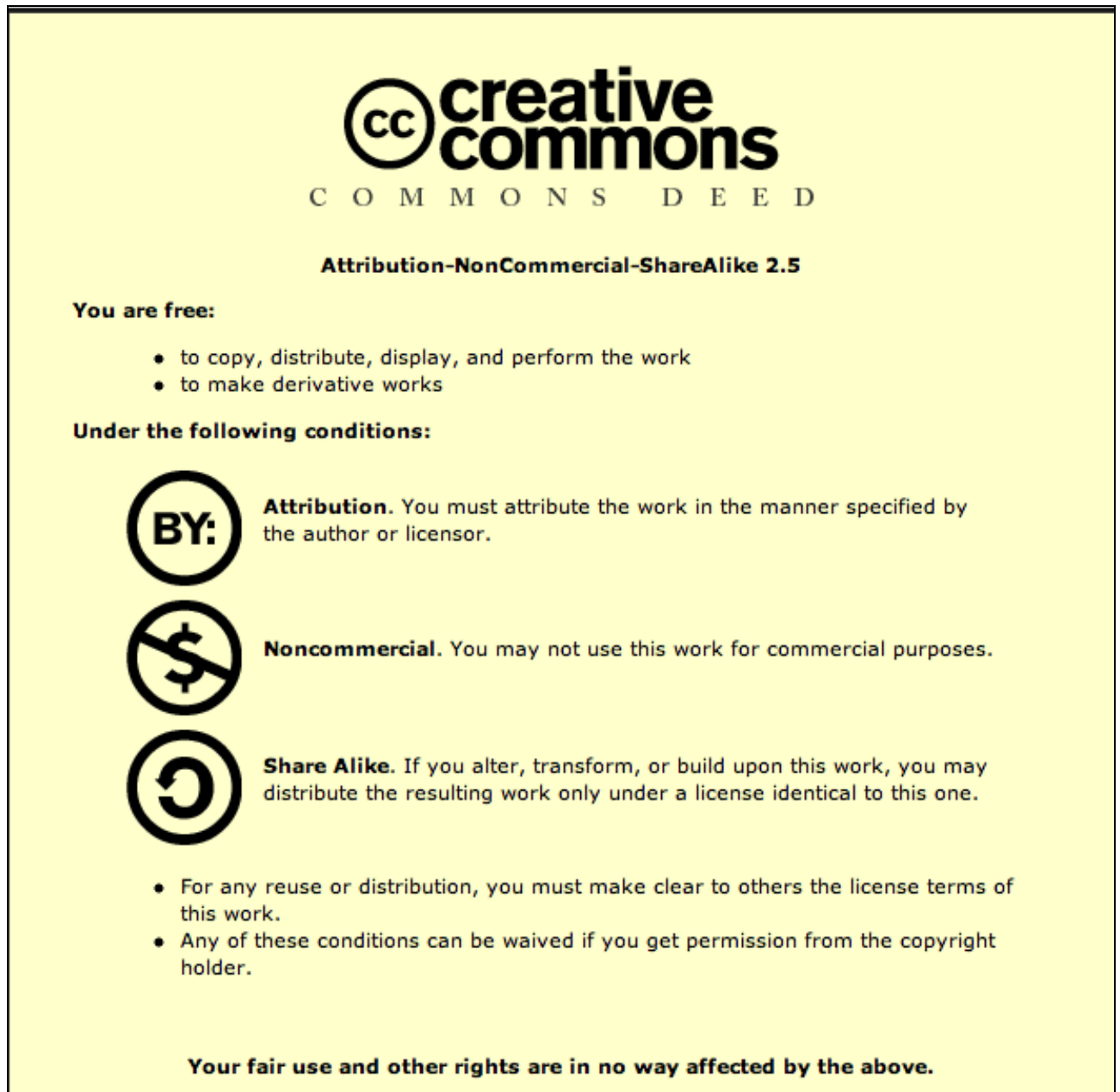


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Executive summary

This report summarizes the focus group activity carried out by Censis from October to December 2005 in the context of WP 27: 'SMEs engagement'. The main goals of this activity (described and analysed below) were to develop a 'memory' of SME engagement as a crucial process within the DBE project and to gather the opinions of main protagonists, or key actors, who were involved. The focus group activity was intended as an opportunity to picture the present situation and make the process visible and communicable to other regions. However, this report cannot be considered a final evaluation of SME engagement because engagement is an ongoing process that needs constant observation.

The qualitative methods used - online focus group and mental map development – fit well with the desire to picture the passage from the Driver stage to the Implementer stage of engagement. More over, these methods offer the opportunity to develop a shared vision of the process. The activity carried out can be interpreted as an activity of social sense-making, a collaborative generation of meanings.

With respect to the results, the interviewees shared an optimistic opinion about the Driver engagement. The first phase activities are judged positively and the recognisable weaknesses are seen as recoverable. The vision of future steps is a more complicated one. Behaviours change from one region to another and lights and shadows emerged quite clearly. The upcoming (at the time of activities) stage of Implementer engagement is seen as a crucial yet complex one; point of strengths and weaknesses are delineated.

With reference to the more abstract topic of ecosystem population, here considered strongly correlated (a consequence of engagement, but not only) to the SMEs engagement, the issue of engaging the 'real world' within the DBE has been partially pictured, and different visions have been presented. The term 'real world' should be understood as the word outside the project. Outside in terms of group and in term of time; i.e. we're speaking about the passage from a project-based ecosystem to a self-sustainable ecosystem.

In all the processes, the role of RCs appears – as in previous engagement research – as a crucial one. Beside this obvious relevance, some room for improving the effectiveness of approaches taken has been identified retrospectively together with some possible answers.

The focus group activity can be seen as an activity of RCs support and is strongly related to other research such as Del. 27.2 'Studying SMEs engagement practises' carried out by LSE during the very first period of Driver SMEs engagement, and Del 27.1 'Territorial social capital and Driver SMEs' carried out by Censis in the same period.

Introduction

The activity here analysed represent a trial of making available an interactive methodological tool that gives the participants the possibility to compare different panoramas, learn from each other and, at the same time, help understand local SMEs' condition, specification and necessities.

This activity took place in a period of transition from a focus on Driver recruitment to Implementer recruitment; in this context it represented a 'space' in which Regional Catalysts (RCs) and other partners can compare different situations and tackle possible problems. These activities explored the necessities of different players and tried to find possible shared solutions. It has been an action of support of RC activities.

The above-mentioned objectives show two faces; a research oriented one and a more proactive one. The research face wishes to evaluate the first stage of SME engagement, the second and more important one, looks at developing a vision of future stages. This objective is strictly linked with the problem of transferability. Analysing the past, developing a common understanding of its points of strength and weaknesses, envisaging possible problems or critical actions for the future are all processes that enable us to provide other regions with a sense of orientation.

It's important to highlight the dependency of this work upon previous research that has been conducted. First of all, this deliverable, shows important dependencies in relation to the research carried out by LSE during the very first period of SME engagement. It's possible to see this report as a continuation of this work. That research offered to this work not only important information about the practice of SME engagement, but also a theoretical frame about what engagement is. The main differences between the two pieces of research (the present one and that on LSE) are two: the objective and the period. With reference to the last objective, this research temporally follows the first one; and takes into consideration the period of transition from Driver engagement to Implementer engagement. Another important difference is the objective of this research that is not, as the first one to describe and analyse the process, but, rather to gather the perceptions of key players. The present report is not going to provide first-hand data and descriptions about the present situation, but it will provide the consortium with important insights about how the past is read by key players and how they see the near future. The latter is an important dimension; this deliverable, in fact, can be useful in order to understand and visualize graphically which are the main concern of RCs about the future stages of SME engagement. More over, the present work, offers new tools useful not only from a research point of view but also in term of collaborative knowledge sharing and participant decision taking.

This research, by summarizing and putting into dialog different opinion about SMEs engagement, can also be useful in terms of transferability. Together with the other deliverable about RC (Del. 31.1) this report can help new RCs in new regions to better understand their role, the very nature of their activities and possible critical actions in the process of DBE territorial development.

1 Methodology

In order to capture the perceptions of the key actors about SMEs engagement and to make available to the entire consortium, and to others, the experiences acquired thus far- highlighting strengths and weaknesses, describing and assessing possible difficulties in the future as they are perceived by social actors - two methodologies have been combined: the online focus group and the so-called 'mental maps'. Both methodological tools will be described briefly below.

As interest and involvement in digital ecosystems grows, techniques for encouraging collaborative approaches to problem solving among a distributed group of participants are going to prove increasingly important. These tools are not only important to explore in terms of digital ecosystems research, but also in terms of collaboration over practical contributions and contributions to digital ecosystems organisation and decision-making. Therefore, as with the research tools that have been used in previous research on DBE engagement, such as DBE Regional Maturity Grade tool and Social Network Analysis, these tools will be described and publicised through the DBE web site in order to form a repository of tools for regional analysis that new regions can make use of.

In this research, the process as a whole may be seen as an action-research practice based on qualitative tools. The group involved consists of RCs and some members of the Business Domain. It is thus a micro-group¹ of actors, which, unlike traditional focus groups, know each other very well, have worked together for almost two years and share objectives and methods.

The focus group

Unlike the individual interview or simple interview with the questionnaire, the focus group makes it possible to create group dynamics, or interactions, allowing for a greater spontaneity, less resistance from participants, more dialogue and consequently a greater understanding of problems, expectations and opinions regarding the matter under discussion.

Since its first use in the 1940s, this method has been used in very different ways, above all - but not only - in the marketing sphere. The methodology is particularly suitable for exploratory researches into orientations and motivations underlying social actions. The focus group method is also used in so-called 'action research'. Within the context of action research (to which this analysis refers) the methodology serves to gauge the opinions of different social actors and to trace possible planning intentions. The method has generally proved to be very flexible, and can be used in conjunction with other methods.

Traditionally focus groups are group interviews conducted with the physical presence of participants. This characteristic determines the positive aspects described above. By using new information technologies however new ways of conducting focus groups or techniques derived from this method are being tried out.

¹ In the project phase the possibility of involving the representatives of SME drivers was also put forward. But it was felt that drivers should not be directly involved due to the amount of work asked of them and the research requirements involving them. Because of the role they play in the project, RCs were invited to act as spokesmen for the opinions and appraisals expressed by drivers.

The online focus group differs from the traditional version by virtue of the use of web interfaces, which are often 'advanced chat' methods. But as with the traditional method, the group focuses on a single topic, and a moderator facilitates interaction, introduces stimuli and monitors the group's dynamics (Meyer, 2002).

There are three main advantages of the online focus group, which constitute the reasons for its use in the DBE project:

- lower costs;
- the possibility of involving people who are physically distant;
- the possibility of involving people who are very busy or have commitments that make planning difficult.

The virtual focus group also has some disadvantages, which should be mentioned here. Many researchers, such as Zammuner, stress that group dynamics are very different from those of a traditional focus group, since:

- the persons involved do not see themselves as a group;
- it is impossible to acquire non-verbal information;
- the moderator cannot know who is answering questions, and so cannot control and steer the group during the course of the discussion;
- the participants are not necessarily focused on the matter being discussed.

In our case however the focus group involved RCs and members of the business domain, i.e. people that have worked together for almost two years, who already form a group and perceive themselves as a group, share activities and common goals. With reference to the difficulty of acquiring non-verbal information, it should be stressed that computer-based interaction is by no means neutral, and it is also possible to detect attitudes and emphasis through virtual interaction. The focus group, which will be briefly described below, is moreover based not on a chat technique but on interactive mental maps and conference calls. The use of these two media at the same time has made it possible for the moderator to steer group members in their interaction, certainly in a different way to face-to-face groups but nevertheless quite effectively.

With reference to the latter point it would perhaps be a good idea to specify the role of the moderator. Below are the main activities that he must perform:

- arrange the meeting;
- steer discussions towards the objective;
- offer stimuli for reflection;
- moderate the discussion;
- gather and process data;
- generate feedbacks.

The role of the moderator, which is anything but neutral, is not that of seeking agreement among the group but rather of ensuring that very different opinions can be aired. In this case an attempt has been made to look back at engagement activities, assess the current situation and imagine problems and solutions for future project phases.

The activity presented here may be viewed as a collaborative reinterpretation of activities undertaken by regional catalysts and other partners. The central

characteristic of the focus group - and as we have mentioned, thanks in part to technical adjustments of the online focus group - is that of its interaction, which makes it easier for multiple ideas to emerge, with associations among more dynamic concepts and, often, a greater level of depth compared with individual interviews. It is indeed an interpersonal cognitive process, which we might call 'sensemaking'.

K. Weick uses this term to indicate a process to construct meaning through retrospective processes that help to 'place elements inside frames'. Not individual, but social, shared frames.

The focus group activity described below sets out to be an area of shared reflections, with the exchange and production of 'sense'. In the traditional focus group this sensemaking area consists of a restricted temporal space (2-3 hours) and a limited physical space, in this case is a process experience without space limitation and with a wired timeframe. To emphasise interaction and expand it from a temporal viewpoint it was decided to use the 'mental map' tool in conjunction with the more limited conference call or chat mode.

The mental maps

The main characteristic of a mental map is the possibility to visualize peoples' opinions, knowledge, behaviours and, by visualizing, make them more understandable, easy to communicate and sharable.

Mental maps are intrinsically dynamic, and well reflect the thinking flow. Our way of thinking, the process of putting idea together and develop-organize knowledge is not a linear one, is not something that goes like a text page but works for connections, associations, coherent jumps. For its very nature, mental maps are one of cognitive tools that support, drive and extend the thinking process.

Mental maps shared in a collaborative environment, then, enable those taking part in activities to interact simultaneously, benefiting from feedbacks in real time and from a dynamic exchange of 'sensemaking'. The maps were thus constructed by focus group participants by stretching the definitory use – the mapping of a concept – to a more procedural use – the mapping of an ongoing course. With reference to simultaneous interactions, i.e. more than one actor drawing the map together, the role of the facilitator was reduced, with reference to the use of maps on the part of a single actor working on a map drawn by others, whereas the role of the moderator was more relevant, being required to put the declarations of offline participants in a context and gather the reactions of newcomers, providing new stimuli.

Beside this, the activity of maps building helps is fixing concepts and injects a process of knowledge transformation. The shared mental maps, in fact, produce a passage from a pragmatic and procedural way of thinking to a more declarative and analytic one. Building a map doesn't means providing a simplification of thinking but, to the contrary, develops new, shared views.

For the above-described characteristic, mental maps are often used, as in this case, in collective process for collaborative knowledge representation and meaning 'negotiation'. The maps here presented have been developed using the Cmap software; it's a free downloadable tool developed by the Institute for Human and Machine Cognition (IHMC) of Pensacola-Florida.

Cmap software offer an important advantage if compared to other software for mental map' drawing. Cmap, in fact, give the possibility to develop shared and collaborative maps by the usage of a peer-to-peer network. Thank to this open infrastructure many players can draw maps simultaneously. The map keeps trace of the person adding concepts, so that the writer is always recognisable by the facilitator and, at the end, by the readers. The maps, then, can be modify at any time by the authors so that, rethinking and interpretative action can be visualized.

In conclusion, the constructivist elements of focus group and mental map development are merged together in this activity and, thank to this software, both elements empower one each other.

The process

Focus group activities started from an initial mental map based on the definition of SME engagement. This definition was then broken down into three dimensions. SME engagement is defined as a complex process - set in motion primarily by RCs, but through them by the entire consortium - defined both procedurally and temporally by calls for interest, involving communication, training and support activities.

The three dimensions of analysis, consequently, were:

- operative management: the planning and implementation of calls for bids designed to involve a large number of SMEs in the DBE project;
- communication: how to communicate the DBE as a project, as a technological solution, as an approach to local and business development;
- ecosystem population: the most 'macro' components of the process of SME recruitment, participation not in the project in a narrow sense but in an ecosystem of practices and knowledge. The development of a community. The relationship between DBE, social capital, local development and governance of the process.

These dimensions derive from the theoretical necessity to clearly divide the actual ecosystem (the project based one) from the broad concept of Digital Business Ecosystem. Consequently the 'operative management dimension' take in consideration the action put into practise in developing three regional community of SMEs; when the 'ecosystem population dimension' regards more the future - less clear, less manageable – perspective of territorial clusters of knowledge and business. In operating this theoretical division, the 'communication' dimension emerges as self-standing. The communication, in fact, is equally crucial for both the dimensions and seams to deserve a separated analysis.

The above three dimensions were turned into as many questions for discussion and relative sub-questions. Below are the initial questions and what we might call 'stimulus maps':

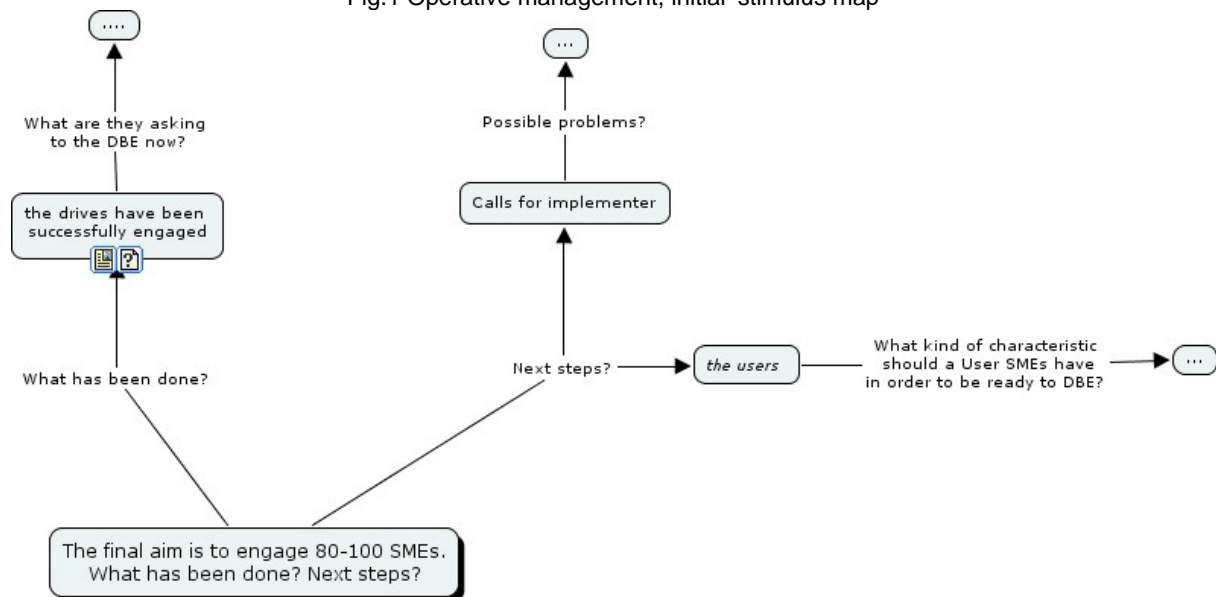
- the final aim is to recruit 80-100 SMEs; what has been done? Next steps?
- how to sustain the ecosystem growth?
- how to communicate with and train SMEs?

Before introduce the 'stimulus map' it's important to briefly describe the Cmap tool's features. Cmap gives the possibility to the interviews to add and modify questions, to attach documents and make it available for the entire group, add comments and

concepts with a click, move concepts (boxes) around and change their relationships. The questions are, in fact, presented on a web page. Links between questions and possible related concepts are presented but are at all stages modifiable; this explains the great differences between the 'stimulus maps' and the following maps developed by the interviewees. Each interviews added how many answers and comments as feel necessary and - by choosing a colour for its entries - he makes itself recognisable by others. The original 'stimulus maps' show pale blue boxes, and first answers where also introduces as provocative stimulus by the moderator using turquoise boxes.

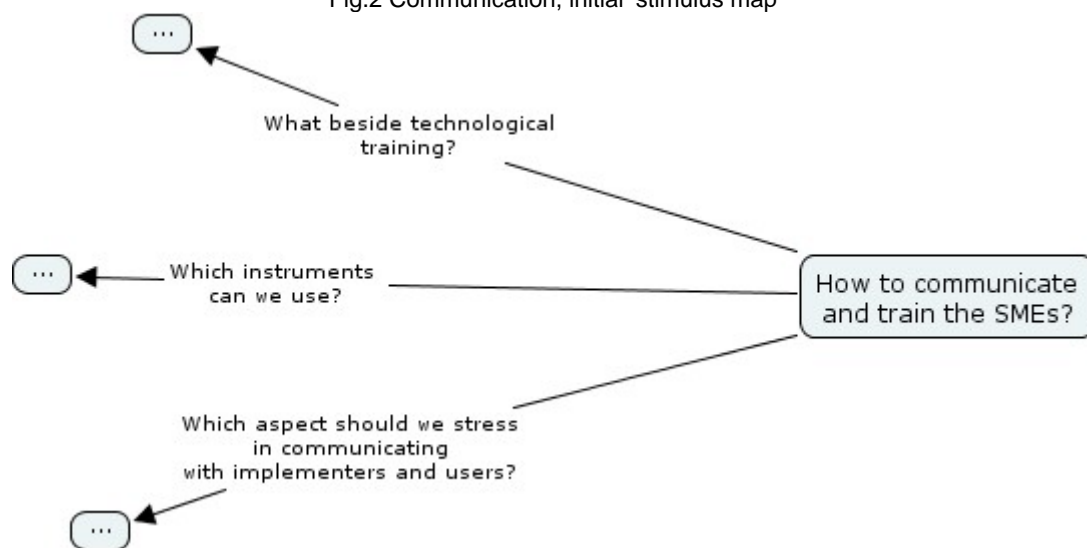
Below are the three initial stimulus maps that participants were shown.

Fig.1 Operative management, initial 'stimulus map'



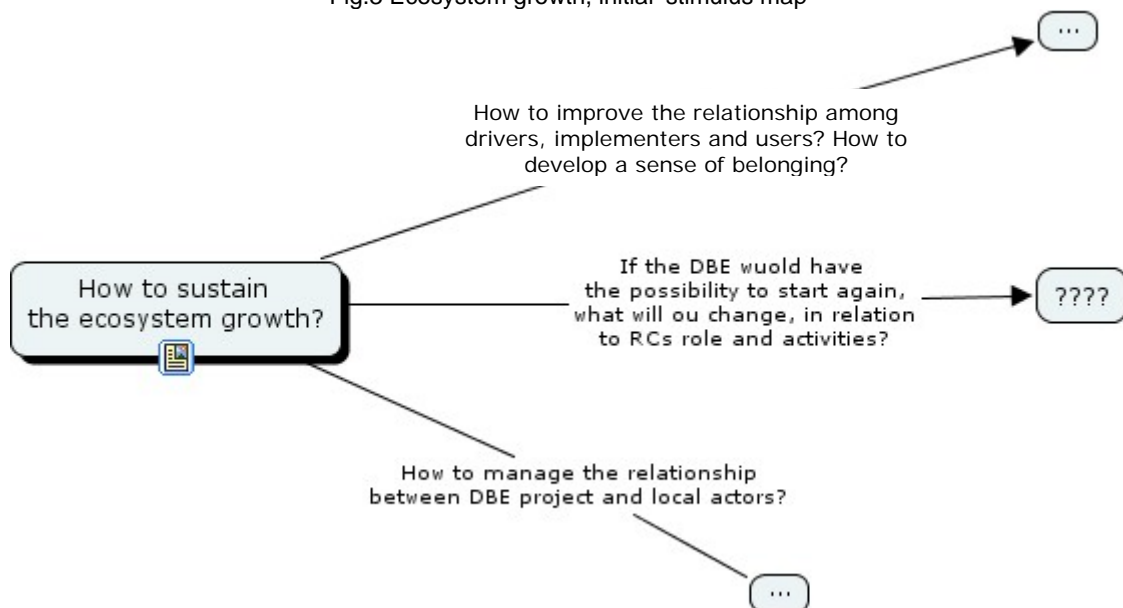
Source: Censis, 2006

Fig.2 Communication, initial 'stimulus map'



Source: Censis, 2006

Fig.3 Ecosystem growth, initial 'stimulus map'



Source: Censis, 2006

This initial stimulus maps bring together a level of definition (as described above) and explore some of the more provocative questions regarding engagement. The constant contacts between Censis and the Business Domain, made it possible to appreciate critical elements and dark areas, which we felt needed to be analysed through the focus group method. In this case these stimuli should not be considered as researchers' opinions, but are often provocations that seek to bring out views and tacit practices.

All three dimensions bring with them different cognitive requirements: evaluative, descriptive and forecasting. In other words, 'interviewees' were asked to assess the ongoing process, describe present actions and suggest the pros and cons of future situations and related profiles. These three cognitive layers will form the structure for the analysis below.

The actual process was structured over a number of sessions, with some individual and some group sessions. The group changed several times in terms of size and composition, but the organic nature of the process was guaranteed firstly by the facilitator, who reported elements emerging in previous sessions to the following, and secondly by mental maps. The mental maps allowed a sort of 'deferred' interaction among the various actors involved. In other words, it allowed interviewees to interact with the views of others not present at the working session. The maps were also supplemented by documentation that participants could consult prior to the working session. Such materials were further 'food for thought' to foster dialogue.

These procedures imply that persons interacting on the map at the beginning of the process have less information and less possibility of dialogue than those acting at a subsequent date. In addition, actors interacting when the map has already been expanded by other people's interactions may be tempted to fall in with already voiced views. In both cases the role of the facilitator is crucial, as is the possibility of involving actors in different phases. This did in fact happen.

Although in line with original objectives, this process would have benefited from a greater participation in sessions, and in particular from a larger number of 'synchronous' sessions with all potential participants. However this was not possible in the period when the activity was carried out (October-December 2005)². The maps, however are going to be available and open to further development until the end of the project at the following address:

http://skat.ihmc.us:80/servlet/SBReadResourceServlet?rid=1130766760515_214553115_5095&partName=htmltext

2 Analysis of results

As already mentioned, the stimuli input implied evaluative, descriptive and forecasting approach to the present DBE phase. Below is a summary of activity output broken down into the three dimensions (descriptive and evaluative element are taken in consideration together and forecasting elements follow), taking all maps into consideration (operative management, ecosystem population and communication).

Evaluation of Operative management

With reference to descriptive and evaluative elements, all the actors involved gauged the SME engagement experience positively. The first-phase goal – the involvement of drivers – was deemed a success in all three regions. In all three regions, drivers understood their role in the project, acquired specific knowledge and skills and developed initial DBE services. With regard to the acquisition of skills and know-how regarding the 'technological platform', the main tools used – code camps, blogs and forums – were viewed positively by RCs. The blogs constructed and kept up by RCs, some drivers and the forums with Sun and Intel implementers proved to be useful and effective. Considering the experimental nature of the DBE project this success is a very significant one and the process seems ready to be implement in other regions.

There were, by the way, some areas where the process can be improved. The training of drivers was generally considered time-consuming and therefore costly, for two main reasons:

- it was performed chiefly in one-to-one situations;
- the subject of training was an ongoing product modified several times, requiring parallel re-training.

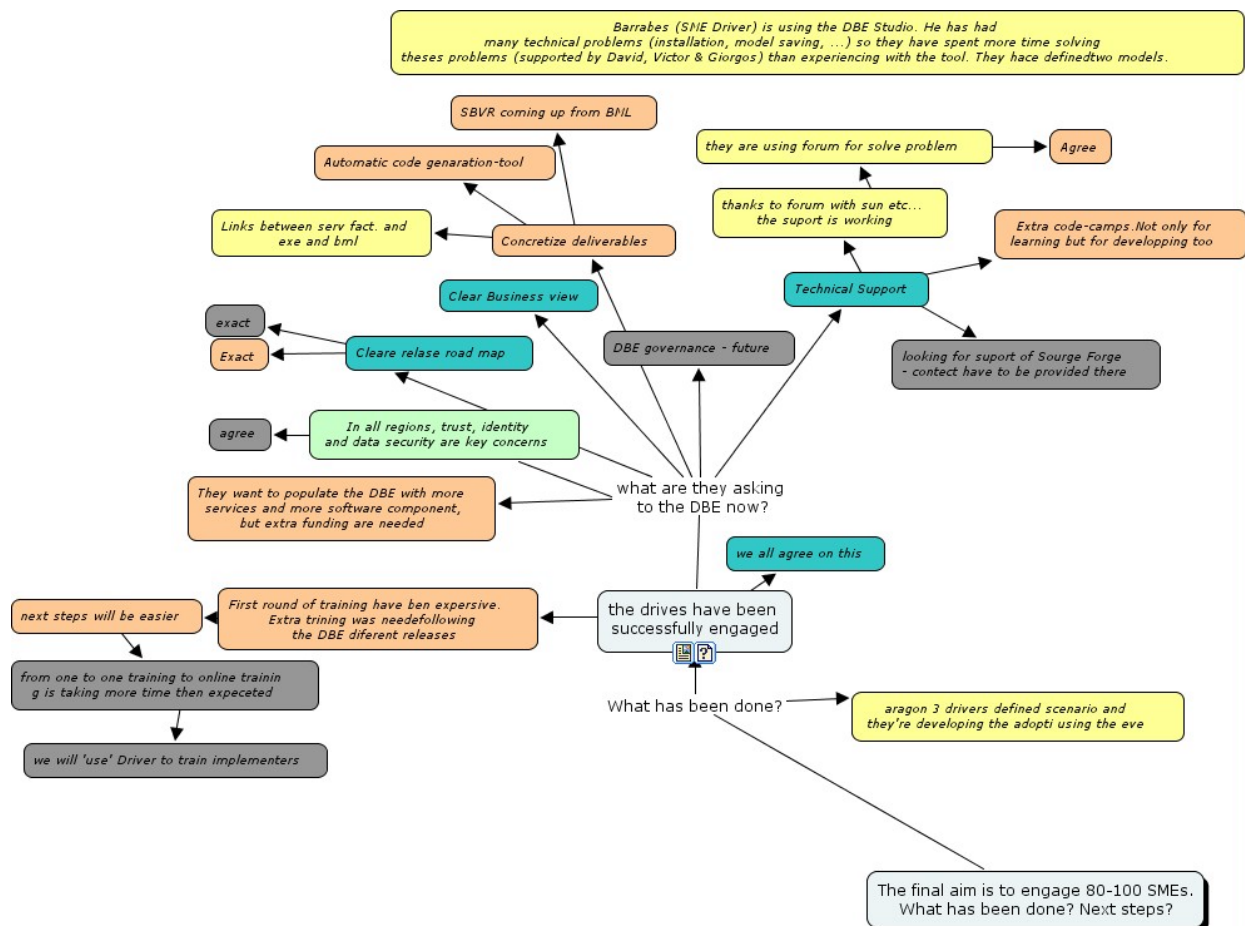
Training and support activity moreover had to be adapted to the past knowledge of single drivers and to their service development projects, and followed the various code-releases. The previous aspects has forced RCs to work intensively in a one-to-one way which can be considered not so 'productive' but it has been more efficient and has guaranteed positive results.

² The August-November period proved to be the most suitable for focus group activity as RCs and Business Domain members had in those months developed and consolidated relations with Drivers, and the SME engagement phase was going through the important transition from Drivers to Implementers. While the period was thus correct in terms of skills acquired and awareness of the process, it proved to be a period of extreme work overflow, bringing about some organisational difficulties.

As we shall describe below (analysing the forecasting aspects of the activity) interviewees were optimistic when imagining future training and support phases. At this point in time indeed the DBE platform and its components are becoming more robust and stable. This fact, together with the possible reuse of training materials developed in the first phase, points to positive developments and possible savings. Focus group activities as well as business domain meetings showed up the need to move from face-to-face training to online forms. This shift was perceived as being slower than forecast.

Below is a part of the focus group mind map showing the evaluative aspects of Operative Management dimension (the whole map can be seen on page 17). The initial mind map stimulus for this part of the map is 'the drivers have been successfully engaged' which is connected to two questions, 'what are they asking to the DBE now' and 'what has been done?' i.e. to achieve the final aim of reaching 80-100 implementers. Contributions from the Aragon Regional Catalyst are in yellow, from the facilitator they are in turquoise, from the Tampere Regional Catalyst are in grey and from the West Midlands Regional Catalysts are in pale orange. The pale green boxes are from LSE social scientist.

Fig.4 Operative management, evaluation aspects

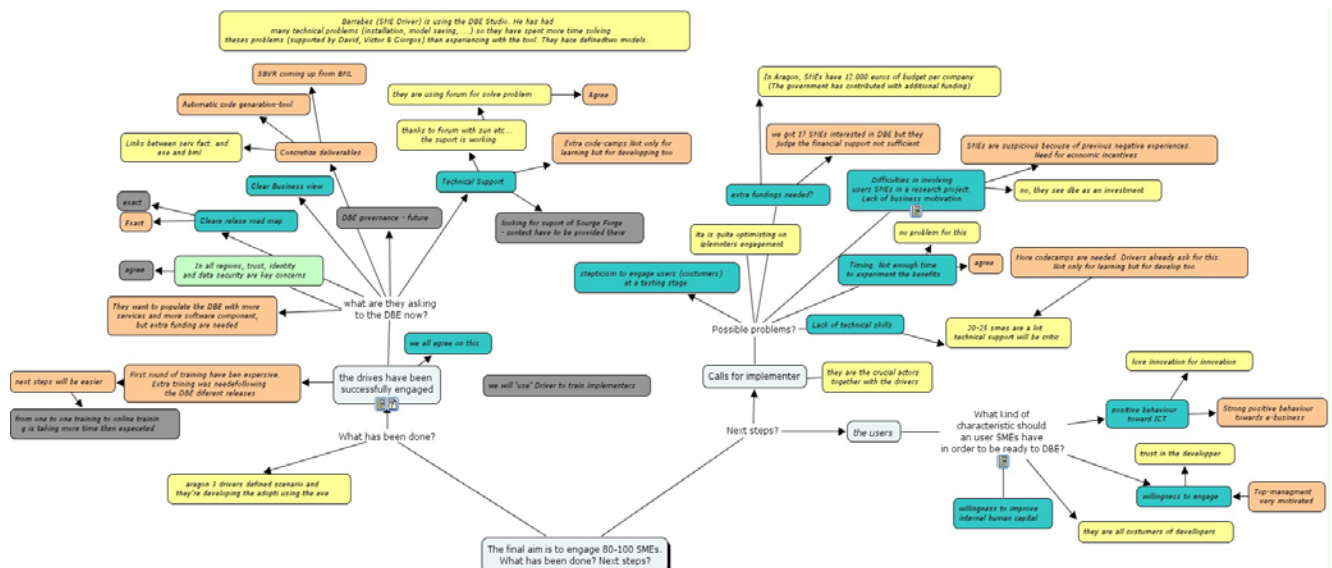


Source: Censis, 2006

The need also emerged to increase the number of code camps, and one RC stressed the need to use code camps not only for training but also as opportunities to actively develop operational services and solutions (code development).

With reference to support provided by blogs and forums, Tampere RC suggested that the Forge be used as a shared repository for training and support material available to the entire community of Open Source Implementers. This suggestion appears to be particularly interesting since it gives us the possibility of moving on from the current phase of the process of SME engagement to the future phase which, regardless of the DBE being a project funded by the European community, envisions the involvement of the Open Source community and a broader ecosystem population process. Various Driver SMEs are already part of the Open Source community (this is particularly true when speaking about Tampere region) and this is an important, positive fact. A good example of willingness to develop strong contacts with the Open Source Community is that of Aragon, in which the RC strongly suggest to their Drivers to public the code produced within the DBE project in a CVS. This is now happening, so that everyone can read that code generated following the Open Source philosophy.

Fig. 6 Operative management, evaluative aspects³



Source: Censis, 2006

The above image shows how the Operative management's map look like at the end of the of focus group activities.

Evaluation of ecosystem population

Moving on to the analysis of the ecosystem population, which as already mentioned is at a higher level of generalisation and abstraction, and refers to a future time frame, evaluative elements give way to forecasting elements. Nevertheless, some evaluative elements emerged when discussing the role of RCs and aspects to improve their role (reference stimulus: 'if the DBE could start again, what would you

³ Pale green is for LSE social scientist; pale orange is for West Midlands RC; Yellow is for Aragon RC and grey is for Tampere RC; purple is for Intel responsible for communication. First stimuli are in pale blue and moderator's entries are in torques.

change in relation to the RCs' role and activities?'). On this point the RC of West Midlands argued that the medium of the call for interest was possibly not the most appropriate for involving SMEs, as they did not have sufficient resources to dedicate to planning, and European Community's procedures were perceived as risky (there is no guarantee of returns for the time invested in planning activity, or of winning the call) and complex. This assessment was backed up by the entry of Tampere RC, of assigning to RCs the role of facilitator in solving the 'red tape' aspects of SME engagement.

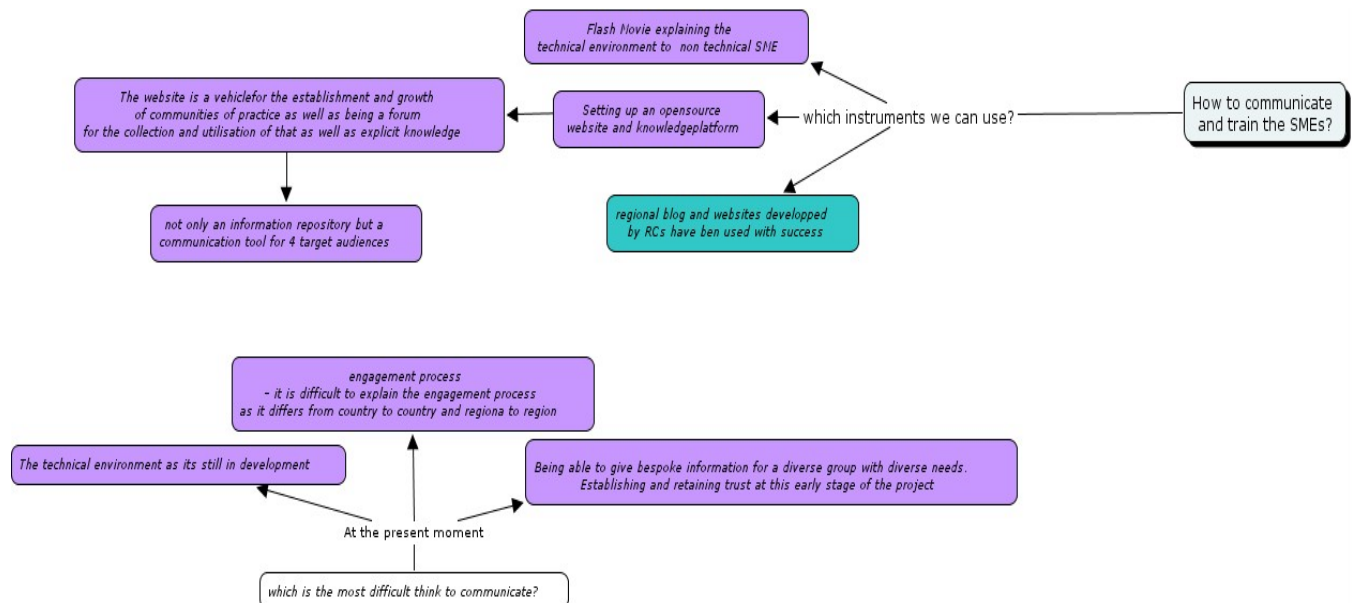
The verb 'assigning' would be better modified with that of 'reinforcing'; in fact the RCs are already such a kind of facilitators. With reference to the implementers engagement, in fact, the RCs will conduct one-to-one interviews in order to help the candidates in understanding DBE goals and prospective. The RC and the SME Implementer candidates will discuss how the particular applications of each of them could be integrated in the DBE and specific indications about how to present the proposals will be provided. In some cases, the RC will propose a generic work plan so that it could fit to all the Implementers after brief particular modifications.

The management aspects of the process are another of the major criticalities. Interviewees stressed the need to constantly update the programming of activities, the need for better coordination among regions, better synchronisation with other domains, greater freedom in managing resources and a greater recognition of their role. These aspects are going to be further analysed in next paragraph (see page 24).

Evaluation of communication

With reference to communication with SMEs, in addition to the already described blogs and forums it is important to highlight the creation and use of the new version of project website. This tool is conceived not as a simple communication channel but rather as "a vehicle for the establishment and growth of communities of practice as well as being a forum for the collection and utilisation of tacit and explicit knowledge". The institutional site, with areas dedicated to regions and links to different language sites, offers important tools for communication and participation. The site also includes access to a series of five explanatory films aimed at different targets. These short films were used in training sessions conducted by RCs, and are a mixture of training and information materials. Interviewees viewed them extremely positively. The following map shows only a part of the entry related to the communication issue here reported, other are presented in others map as well. The map that follows is the results of the interaction between the moderator and Intel responsible (in purple) for DBE communication. The interaction here reported follows some of the interaction expressed in the 'Operative Management' map and those has been reported by the moderator to the communication team that here summarize most of the related issues.

Fig. 5 Communication – evaluative aspects



Source: Censis, 2006

With reference to the descriptive and evaluative factors of communication, some difficulties emerged. First there was the difficulty of describing, summarising and communicating the SME engagement process, which varies considerably from region to region, in terms of activities performed, procedures and output. Communicating the SME engagement process is also important for the purposes of DBE transferability. In the current phase of the project it is important, but difficult, to provide regions potentially interested in the project with adequate information on the path to be followed. It appears to be difficult, and perhaps not a good idea, to identify a model of action, since the process of SME engagement is closely tied up with local contexts. It is however important to match up territory typologies and actions to be undertaken to involve local SMEs in the best possible way.

Another element that is difficult to communicate is the DBE technological environment, since it is still in the development phase, and subject to ongoing changes, making communication materials quickly obsolete. It is also difficult to find the right language to communicate with different targets, each of which has different DBE needs/interests. This implies an additional difficulty, i.e. that of acquiring, through communication actions, the trust of SMEs in what is still a development phase of the project and of the technological platform.

With regard to the 'trust issue' the role of RC is, again, a crucial one. The RCs must have a clear idea of SMEs behaviours in order to manage their expectations. If RCs do not have a personal one-to-one contact with the SMEs, it is difficult to predict their behaviour in this delicate moment of engagement and technology adoption. This will require a high effort for the RC when the new Implementer SMEs start to work.

Forecasting aspects

Forecasting aspects have taken up greater space in group discussions. The term 'forecasting' should not be misconceived, here it is used in its most common meaning, and refers not to scientific forecasts but to the opinions of interviewees regarding future phases of the SME engagement process. With reference to the 'operative management' dimension, some important distinctions among interviewed actors are evident. While there is substantial and positive agreement about past activities, thoughts about the future show greater concern and criticism.

With reference to the map 'operative management' future-oriented stimuli can be broken down by target, i.e. drivers, implementers and users. With reference to drivers, the question 'What are they asking the DBE for now?', requests came in the technological and management spheres. The RCs of the West Midlands and Aragon perceive requests for specific technological solutions, in other words transforming theoretical deliverables into a code that can be used and integrated in practice. In the real world, then, the move from BML to SBVR, a tool for automatically generating the code and offering the best link between the service factory and BML. An element uniting all three regions, as stressed by LSE research on SMEs engagement practise (Del. 27.2) is the need to deal with the issues of trust, identity and data security. At this time, the SMEs are acutely aware that if they were to actually try and run an application on the DBE then there would be no data security. From a business perspective, this is a problematic issue since SMEs cannot allow sensitive client data to be exposed in this way. This, together with other software elements as language customisation are critical now in order to eliminate adoption barriers and facilitate the DBE adoption outside the project itself. In this context the role of Implementers can be an important one, some of them, can in fact dedicate their effort in developing such solutions during the project period.

In terms of management, in the West Midlands, Aragon and Tampere regions there emerged the need for a clearer road map of releases. The explanation of the roadmap, does not have to be deep in detailed, just a brief easy to understand description of what is included in each of those releases and the expected date. This need, clearly tied up with the technological aspects of the project, requires a management rather than technological response, in other words better coordination among project areas. This element is perceived as being crucial by RCs and other actors, and has been seen in answers regarding the specific role of RCs, which we shall see shortly.

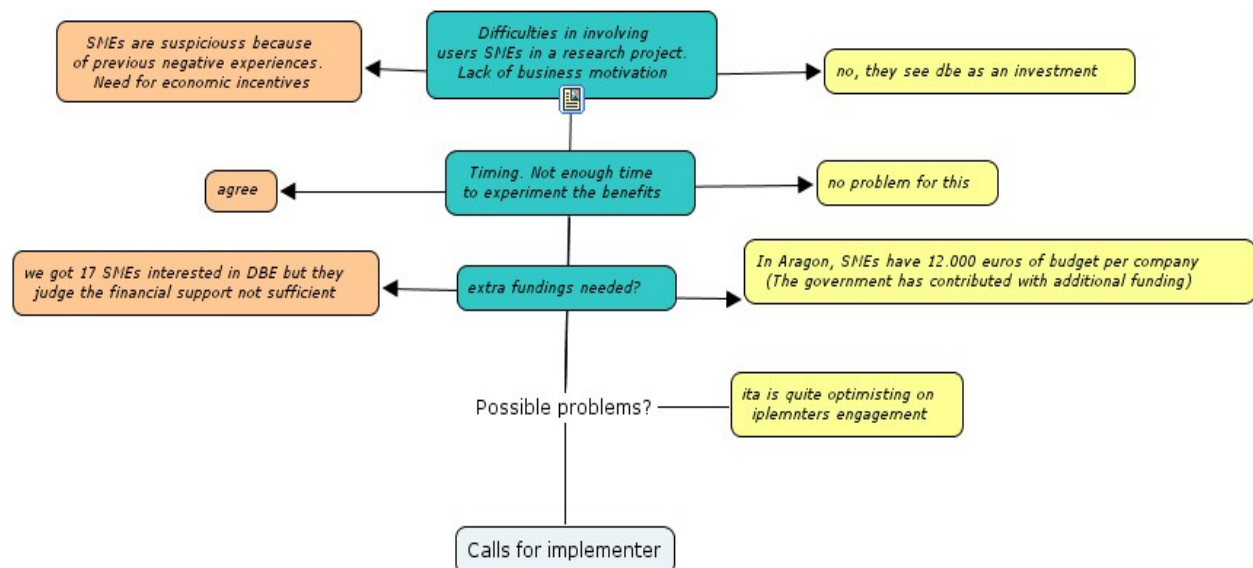
Issues pertaining to business visions on the other hand do not appear to take top priority. This lack of agreement on the 'Clear business view' stimulus may be interpreted positively. In previous phases of the project indeed, when no SMEs were directly involved, one of the major concerns of RCs related to the business view. From this viewpoint the problem may be said to have been partially resolved, with drivers having found by themselves an economically valid reason for joining the DBE, or being sufficiently motivated to take part in the project (refer to WP 27.2 SME engagement practice for a more in-depth analysis of positive feedbacks from drivers with reference to the use of DBE). In addition to these requests, interaction with the Finnish RC showed up the need for Tampere drivers to have a shared vision regarding the future of the DBE as a technological platform over and above that of a

project. In this sense the RC raised the problem of governance and sustainability. This aspect, which emerged only in the final phase of focus group work, needed further study and discussion among different actors. There is now a multi-stakeholder discussion on the problem of governance and sustainability, reference should thus be made to the project forum:

<http://www.digital-ecosystem.org/Forums/DBE%20Governance%20-%20process>

Moving on from the requests of drivers, as they are perceived by RCs, to the same actors' views about the future involvement of implementers, the two RCs that drew this part of the map (West Midlands and Aragon) have different visions. The ITA vision was more optimistic than that of the UCE. With the exception of a converging opinion regarding the topic of technical support, which for both RCs was critical, for all other aspects their visions were in opposition. In this sense the suggestion of increasing the number of code camps was again made, making them an opportunity not only for learning but also for the development of DBE services.

Fig. 7 Operative management, call for implementers



Source: Censis, 2006

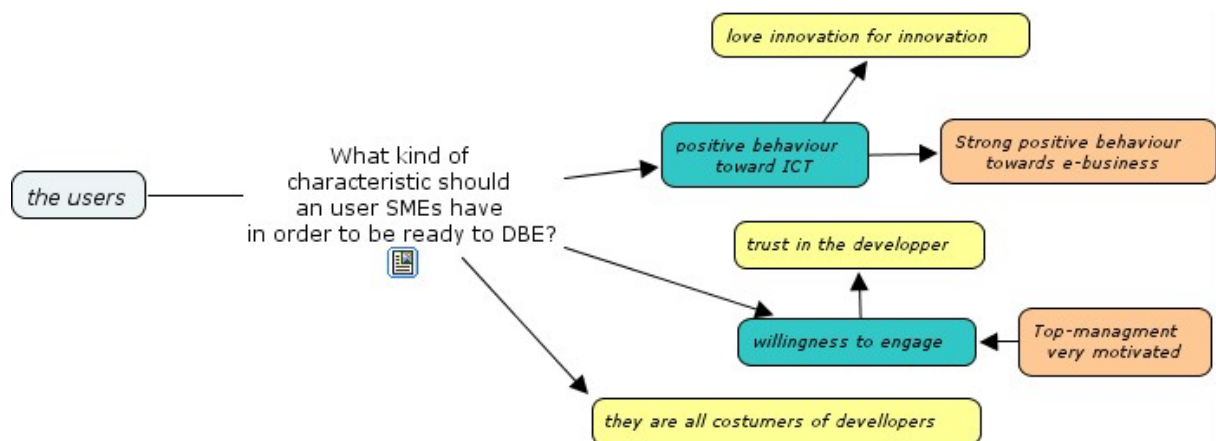
The opposing views of the two RCs may be explained by the different situation in Aragon compared to that of UCE or, as the map clearly shows, the different economic support that RCs can offer SMEs. The difference, in this sphere, is made by the funding that the Aragon government has allocated to the DBE project which, with the relative political support, makes the project more reliable from the point of view of SMEs, giving them greater resources with which to work on the development of ad hoc solutions. It should be stressed here that this observation does not imply that in the future regions should necessarily seek the direct and economic involvement of local governments, merely that in a region such as Aragon, political support has been a positive intervening factor. Studies conducted until now and the Censis research on local social capital highlight the differences between the three regions involved in DBE. If one looks at the different networks, the importance of policy in the Aragon network is clearly visible, while it is neither in the West Midlands nor in the Tampere networks. Moreover - in further face to face debates - the financial issue appear crucial both in Tampere and in West Midlands; the funding

dedicated to implementers SMEs are perceived as inadequate if compared with the work expected by SMEs. The issue is linked with the stability of the platform that is under development and, for this reason, imply more development and test by the Implementer that can be seen as early adopters. Some suggestion in order to face the financial issue have been presented by the same RCs: beside the research of extra funding, emerge the possibility to reinforce the exchange of practise and results (services, tools, models , etc..) among regions; this is an important and promising aspect that may be interesting for further analysis.

Moving on to an analysis of opinions regarding the involvement of users, the stimulus did not so much seek possible scenarios in pragmatic terms (what to do?) as a clarification of expectations regarding their nature. In this sense, the characteristics that a user should have (in addition to being a client of Implementers⁴), according to the views of interviewees, are as follows:

- trust in Implementers;
- very motivated top management;
- strong positive behaviour towards e-business;
- love innovation for innovation.

Fig. 8 Operative management, users



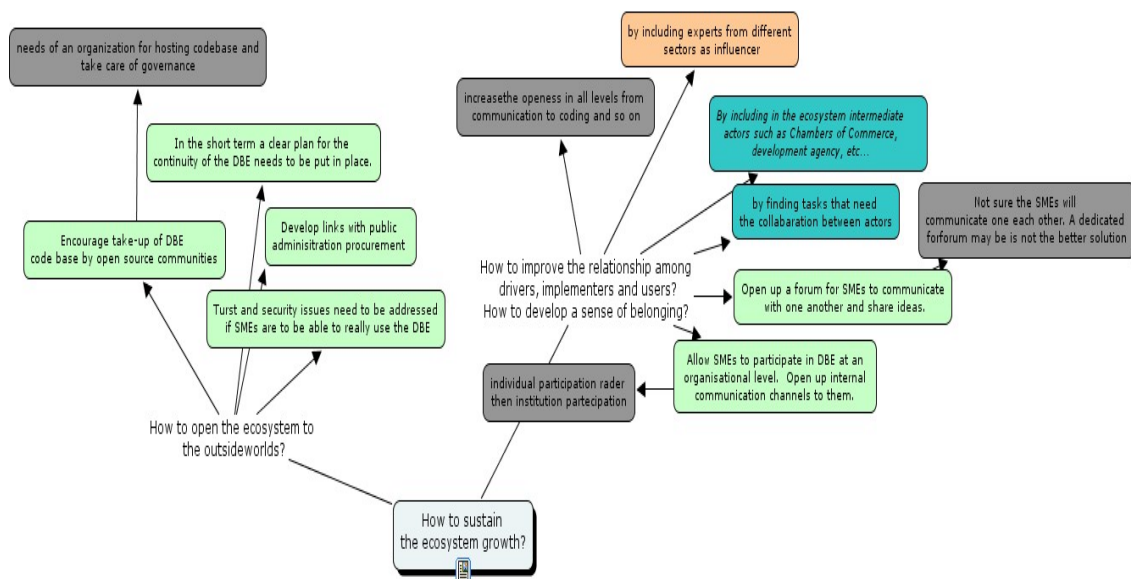
Source: Censis, 2006

The indicated characteristics maybe related to two main areas: the relational and the innovation one. Together, they identify very well the main difficulties that the SMEs have while dealing with innovation. The reduced businesses dimensions together with their typical internal organization make the top-management involvement very important, the involvement of the internal innovators wouldn't be sufficient, considered the investment purpose that is linked to the project DBE's participation. Together with that, the propensity to an innovation executed using technologies is very important. Having access to the ICT through the DBE for the business is surely possible, but an experience, or better a strong willingness to inovate, is definitely a key factor.

⁴ The engagement plan itself establishes this as the key trait of users who, unlike intentions in the first phase of the project, are not firms belonging to traditional categories (i.e. belonging to a given economic sector, from neighbouring territories, high economic performers, etc.) but rather the clients of Implementers that will study ad hoc services to be tested on the same clients.

Taking now in consideration the map 'Ecosystem population' the given suggestions come, as previously said, from the Censis' survey on the relation between social capital assets and DBE. From this survey the possibility/necessity of increasing the relations between the drivers and strengthen up the sense of belonging came out, as well as the suggestion 'how to improve the relationship among drivers, implementers and users? How to develop a sense of belonging'. From the above survey we know that a better sense of belonging has been achieved in the Aragon region thanks to group meeting (instead of one-on-one meetings) between drivers and RCs. West Midlands suggests, while already experimenting this method, to involve various sectors' experts in SMEs' engagement program. The involvement of experts recognised from the SMEs should give the project a higher credibility, in this way the experts become DBE testimonials and could eventually facilitate a better trust in the project as well as a higher sense of belonging. The testimonial, in fact, other than being an expert is also a subject that has already been working with the SMEs: he knows them and has also their trust. Not only he offers his knowledge, he has and offer credibility too. Together with this possibility the focus group has shown some suggestions related to the Open Source communities model. The need for a bigger involvement of the SME in the communication and decision processes has been proposed from the Finnish RC and also from a researcher. It comes out the possibility of involving the SME in the decision processes, a suggestion wants to use them as subjects and not as institutions. The possibility of opening a trans-regional forum for the SMEs also came out, even if there is no accordance on the possible and effective participation of the SME through this method. Another suggested level of participation is constituted by the code development. Following this path the possible developing levels are essentially three: the communication one, the decisional one and the technological one. The Open Source community, seen as an organization model as well as possible subject of the ecosystem, comes back as the solution to the suggestion 'How to open the ecosystem to the outside world?'. This suggestion was not present, in the beginning, in the focus group working path, but it came out from the interaction of the subjects with the maps.

Fig. 9 Ecosystem population, future aspects



Source: Censis, 2006

In this vision the Open Source community needs to actively participate as well as to take the responsibility of the base code; linked to that emerge in Tampere region the necessity of a governance structure. The governance structure is related - in the way emerged in the activity - to the maintenance of the base code, and in this way it appears limited to this aspect more than to the full management of a post-project phase.

It also comes out the possibility of developing links with the public administrations, with the DE cluster projects and of developing new project at national and international level. With regard to this last point some Drivers may wish to propose new research projects together with other regional partners to regional and national R&D programs based on the DBE Technology. DBE partners can, in fact, generate new proposals for new EU projects based on the DBE technology and theoretical approach.

Also in this case it is strictly necessary to postpone the treatment of this topic - sustainability - on the debate that is taking place in the project website. Among the critical aspects linked to this topic comes out the necessary management of the issues about security and trust and also the ones about a long term clear planning about the DBE's future. From what it comes out the topic about the opening of the DBE is linked more to the problem of the internal governance and the code maintenance than to the economical or local development aspects. In this phase, the interviewed people see in the passage management from project financed from the European Commission to his over passing in a critical factor of the digital ecosystem growing.

Talking about the territorial dimension, it has been asked 'how to manage the relationship between DBE project and local actors?', it emerge the necessity, especially highlighted from the West Midland RC, of building a better relation with the local stakeholders, strengthen the influence of the project in the regional environment, give it a higher visibility. The RCs role appears without any doubt very important; they have to be (according to the interviewed) constantly a point of reference and maintain constantly up to speed the stakeholders on the projects development. Together with that emerge the suggestion to multiply the DBE nodes at a regional level, in other words multiply the RCs and activate other subjects equally valuable and of sure credibility and trustworthiness for the SMEs. This action, seen as necessary according to the social capital analysis, has been partially started; it is linked to the possibility of involving experts in the meetings with the businesses holders (as previously said).

Among the topic about the ecosystem growth and the communication one, some suggestions that propose an involvement of the local stakeholders in the development of communication material such as the website. This represents a way of involving them while giving them some responsibility and making them participate to the development of knowledge. 'People can criticise methods but nobody criticize success': this sentence synthesizes a key method, i.e. the usage of success stories in convincing local actors to actively participate. The use of success stories is important for the social actors as well as for the single SMEs to whom we need to communicate (according to the opinion of the interviewed) the economical benefits of the DBE and the one coming out from the collaboration. These two aspects are

synthesized in the Open Source model that can be seen as very benefits-full model of collaboration.

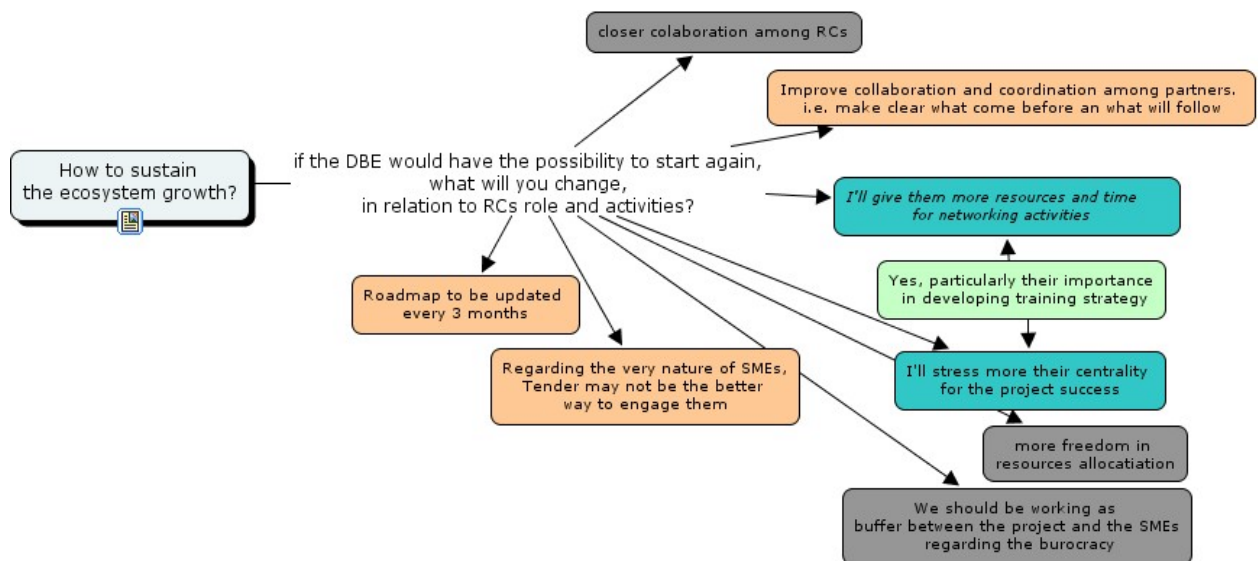
The RCs role

Another important outcome of the research about the social capital has been the confirmation of the central role of the RCs. It has been therefore decided to investigate the opinion over the RCs but not only about their central role, trying to collect some possible self-criticism over the role played by them. This part of the map can be seen as a first outcome of the experiences done until here but also as a useful input to better steer the next RCs (transferability). This suggestion had a provocateur goal, 'if the DBE would have the possibility to start again, what will you change, in relation to the RCs role and activity'. Part of the map-related outputs has already been described in previous paragraphs (see page. 17), here is sufficient to visualize the critic areas as these shown up.

The critics that came out are belonging mainly to the following three areas:

- the recognition;
- the management;
- the collaboration.

Fig.10 Ecosystem population, RCs' role



Source: Censis, 2006

Recognising the central role of the RCs, asked more from the local researchers than from the RCs themselves, is a topic that is present in the suggestion, done by RCs, of giving them a bigger financial decision power.

With respect to the topic of collaboration, it is clear the necessity of a better synergy among the RCs and the other project partners. This need is partially linked and reflects the necessity of better manage the management phase especially for what concerns the coordination between the code release and the SMEs management steps. The misalignment between these two phases comes out, in fact, as one of the main critical points according to the participants. Thinking about this problem in terms of transferability it is vital, according to the interviewed, to create dynamic divisions of the tasks, by clearly defining the dependence link between the various actions and

then to reappraise the road map consistently at regular times so as to cushion the effects of possible delays and account for changes and deviations (always present and maybe also desirable in a research project)

3 Summary of results

The table below summarize the outputs of focus group activity considering points of strength, criticalities and possible solutions; the table is divided in two sections, the first one is related to the close past and the second refers to the near future. The table, at the contrary to the mental maps is not able to keep trace of 'who says what' and of different kinds of interrelations among topics; so this has to be understood as a summarizing exercise. This can be useful for having a wider view but cannot substitute the maps.

Fig. 11 Summarizing focus group's outputs – drivers engagement

Dimension/ Opinions	Points of strength	Criticalities	Suggestions
Drivers engagement			
Operative management	<ul style="list-style-type: none"> - Driver engagement is considered a success - Code camps 	<ul style="list-style-type: none"> - Training has been time consuming because of the 'under development' process - Slow passage from one to one training to online training because of the 'under development' process - Call for tender possibly is not the best way to engage SMEs - Necessity to update the program more often - Improve the coordination among different domains 	<ul style="list-style-type: none"> - Reuse, when possible, already developed materials - 'use' drivers to train implementers and users - More code camps - Using also Surge Forge as information repository - More freedom to RCs from a management point of view
Communication	<ul style="list-style-type: none"> - Blogs and forums - Interaction with Sun for the ExE and Intel and Soluta for the DBEStudio. - New website - Animation movies 	<ul style="list-style-type: none"> - Difficult to describe the SMEs engagement process - Difficulties in generalizing - Difficulties in communicate the development platform while is still under development - Difficulties in finding a trustable language for different targets 	<ul style="list-style-type: none"> - Possibilities to develop a typology of regions based on research outputs
Ecosystem population	It's mainly related to forecasting aspect (see the following table)		

Source: Censis, 2006

Fig. 12 Summarizing focus group's outputs – future steps

Dimension/ Opinions	Points of strength	Criticalities	Suggestions
Future steps			
Opetative managment	<ul style="list-style-type: none"> - For Aragon extra funding from regional government - In all the three regions positive answers from Implementers 	<ul style="list-style-type: none"> - Need for new DBE releases, concretising the deliverables - Identity, trust and data security - Technical support 	<ul style="list-style-type: none"> - Clear road map of releases - Better coordination among partners
Communication		<ul style="list-style-type: none"> - Improve the visibility of DBE at local level 	<ul style="list-style-type: none"> - Using success stories - Involve local stakeholders in the communication material production
Ecosystem population	<ul style="list-style-type: none"> - RCs centrality 	<ul style="list-style-type: none"> - Improve the sense of belonging - Stronger engagement of third actors - Security and trust - Long term vision 	<ul style="list-style-type: none"> - Involvement of experts as testimonial - Engage other intermediate actors - Engage the Open Source community

Source: Censis, 2006

These tables, by no means exhaustive, show an important output of this activity, i.e. the ability to develop a shared vision and to prospect possible solutions. The visions developed and the suggestion proposed have not to be understood as totally welcomed by all the actors, but thank to this activity this visions are, at list, openly shared.

Conclusions

The activity here reported has been one of participation and collaborative meaning creation. The reduced time frame of this task make no possible to keep the activity further in order to concretely develop a plan for the future, but it represent a good starting point for further discussion and it offers important in signs for future regions. With reference to the last point, a not hagiographic picture as this one can provide new regions with important information about risks, opportunity, and positive actions to be undertaken. Part of this results are going to find a dipper analysis and a wider debate in the project website forums and in the future research activity, in any case the maps are going to be available and open to modification until the project end.

A contribution that this deliverable wish to have made is that of adding further 'tools' for carrying out regional analysis and project auto-analysis. The use of mind maps and distributed focus groups provides and important way for groups to collaborate and develop a shared sense of problem formation and solution development. These tools along with those provided in previous deliverables will be made available to new

regions via the project website to enable them to carry out their own regional assessments.

With regard to activity outputs, the work done so far has been judge positively and described in their multifaceted reality. Beside this, there is no doubt that the Implementer stage has been overshadowed by concerns regarding the future. For the RCs whose future funding and position in relation to national funding initiatives is not so sure, this has had an impact on the recruitment of implementers since there was no assurance to offer SMEs that their efforts would be worthwhile.

At this stage in the project, questions about the future cannot avoid touching on questions of sustainability. Understandably, there are political sensitivities regarding the debate on DBE sustainability, particularly for the RCs because the decisions that are taken will directly influence the outcomes of their work. So far, the project has broken the sustainability question down into three parts. The first is – what is the short term actions required to ensure DBE sustainability? The second is – what are the long-term sustainability issues for digital ecosystems?. The third question concerns governance, which is in fact being kept separate to sustainability questions for the time being. The reason for keeping questions of governance separate is that each of the different regions may need to take different approaches to governance. It is likely that they will need to find different kinds of funding or revenue models and that they will have different organisational requirements and obligations. It is worth pointing out that in deliverable 27.1 the absence of credit agencies (and venture capitalist organisations) from the regional networks was discussed and this could be a question that regions will need to consider in the future.

At the moment of writing important steps has been already made; the project is developing a stronger sense of belonging to the Digital Ecosystem Cluster and possible collaboration with other projects come into view. Beside this the very concept of 'Business Ecosystem' is growing in popularity and it's getting clearer to a wiser audience so that future opportunities for collaborations and project partaking can growth.

The deliverable 27.4 will offer the RCs further support in these matters since it will identify potential funding streams that are available to the RCs. It will also analyse the situation with respect to new and associate regions.

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