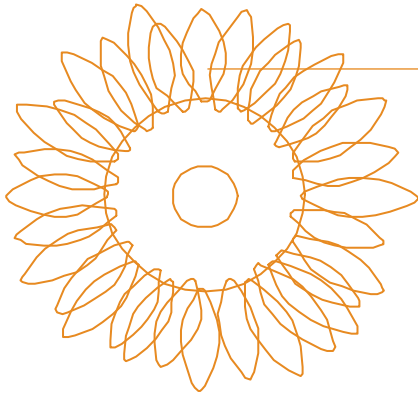


Instrument type: SSA
Priority name: 3NMP



Start date of project: 1th of April 2004
Duration: 2 years



EMUDE

Emerging User Demands for Sustainable Solutions

1. Publishable final activity report

1.1 Project execution

1.1.1. Project objectives

The EMUDE programme background had been the observation of a phenomenon of social innovation: the emergence in Europe of groups of active, enterprising people inventing and putting into practice original ways of dealing with everyday problems (from childcare and care of the elderly to getting hold of natural food; from looking after green spaces to alternative means of transport; from building new solidarity networks to the creation of new forms of housing and shared facilities and services).

The initial hypotheses were that (1) these cases of social innovation presented promising signals both from the aspect of environmental sustainability and, moreover, from that of social sustainability; (2) these promising cases, and the active group of people that generate them, the creative communities, at the same time both anticipated a possible future, and offered concrete indications as to how technology, production and market innovation could be orientated from now on. I.e. to how they could usefully point a new direction for technological and market research and innovation.

For these reasons it was thought that policies and tools of governance should have to be outlined in a way to support existing cases and foster the development and orientation of analogous and equally promising activities.

From this perspective, the EMUDE main objective had been described in this way:

- to encourage a virtuous circle between social and technological innovation, or more specifically, between society's capacity to emit positive signals (promising cases), its capacity to recognise, reinforce and effectively communicate them, and then its ability to pick up these signals and act on them, putting them to good use.

Form this perspective, EMUDE had to play the role of a collective subject working as a signal amplifier, i.e. that (1) identifies promising signals, (2) reinforces them, and (3) re-emits them into the system in the most suitable ways and forms (see the figure 1)

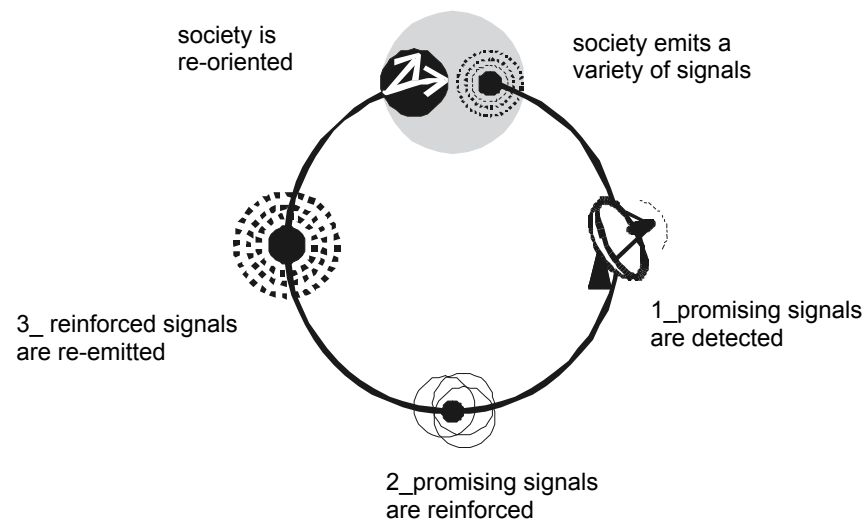


Figure 1

1.1.2 Contractors involved

Emude has been promoted and developed by a Consortium of European universities and research centres. In order to identify a collection of promising cases it has set up a network of observers, known as Antennas, encompassing teams of researchers and students from 8 European design schools.

The EMUDE Consortium comprehends some of the most experienced institutions in the different concerned disciplines and fields of research (from sociology of consumption, SIFO, to technological assessments, TNO, from scenario making and trend analysis, IPTS, SDS and Philips design, to design and communication, Politecnico and Doors of Perception. These institutions will bring to EMUDE the results of their previous experiences and their specific competencies in organizing this specific programme of actions.

The Consortium integrates also the contribution of an important institution in a new European country (the Central European University) and of two worldwide institutions (UNEP and Consumers International). These institutions will bring insights at a global scale (permitting to confront the European emerging demands with the similar phenomena in other regions in the world) and will help in disseminating the EMUDE results in Europe and, when required, outside Europe.

The Consortium generates and manages a Network of design schools (the Antennas) based on 8 design schools in 8 European countries, thus increasing the European dimension of the project partnership.

Consortium

Politecnico di Milano, INDACO Department (Polimi) – co-ordinator
National Institute for Consumer Research (Sifo)
Netherlands Organisation for Applied Scientific Research (TNO)
Strategic Design Scenarios (SDS)
Doors of Perception (Doors)
Philips Design (Philips International)
Joint Research Centre - Institute for Prospective Technological Studies (JRC-IPTS)
Central European University, Budapest Fundation (CEU)
Consumers International (CI)
United Nations Environment Programme (UNEP DTIE)

Antennas

The School of Design, University of Applied Science, Cologne
POLI.design (Consorzio del Politecnico di Milano), Milano
Glasgow School of Art, Glasgow
The University of Art and Design (UIAH), Helsinki
Innovation Center of Estonian Academy of Arts, Tallinn
ENSCI Les Ateliers, Paris
TU Eindhoven, Eindhoven
Academy of Fine Arts, Krakow

1.1.3 Work performed and end results

The field study carried out by EMUDE has verified the validity of the original hypotheses and has shed light on the characteristics of these promising cases in the framework of contemporary society, the enormous transformations that is going through, and scenarios that outline ways in which it may evolve in future.

Work focused on the situation in Europe in general, but also looked at the specificities of Eastern European countries. In addition, to make a more solid appraisal, the phenomenon was also considered, even if only with very initial considerations, from the point of view of “the Global South”, in order to verify to which extent this was specific to Europe or if it could have a global value.

It emerged from the study that there exists a dynamic new form of creativity: a *diffused creativity* put co-operatively into action by “non-specialised” people, which takes shape as a significant though scarcely studied expression of contemporary society. More specifically, this diffused creativity is one aspect of the design

attitude each one of us must develop if we are to organise our lives in a highly turbulent and therefore unpredictable context.

For all these reasons it appeared legitimate to define these groups of enterprising people as *creative communities*: groups of active, enterprising people inventing and putting into practice original and sustainable ways of dealing with everyday problems.

At the end of the programme we can summarise the main results in this way:

- A collection of *promising cases of creative communities* .
- Discussion of these creative communities as positive examples of *diffused creativity*, in the frameworks of the knowledge based society and in the perspective of the transition towards sustainability.
- Definition of the concept of *diffused social enterprise (DSE)*, as the evolution of *creative communities* in more mature and lasting forms of social organization, and discussion of its implication in the present, emerging ideas on welfare and local development.
- Proposal of a scenario (the *scenario of creative communities and the diffused social enterprise*) and of the *enabling solutions, platforms and frameworks* that could enhance it.
- A *policy agenda* articulated around three main questions: how do creative communities and DSE support the exiting European policy agenda? What kind of policy agenda is suitable to support creative communities and the DSE? What are the creative communities and DSE implications for the industrial research funding?

1.1.4 Overview on the main final results.

A collection of cases and a network of “antennas”.

The direct observation of this emerging reality was carried out by building a network of observatories (Antennas) located in 8 European design schools. In this way more than hundred cases were gathered, from which 56 particularly significant ones were selected.

This *collection of promising cases* constituted the basis of the following stages in the programme and has been the first result of this phase of work. It is of value as an intermediary result in the research project. However it is also of value in itself, as a communicative instrument proposing a vast series of good practices that show how it is already possible, to live one’s own everyday life (or at least some of its activities) in a more sustainable way. To facilitate this function, the cases have been presented in a highly communicative format and are freely accessible on a purpose built website (in addition, given these characteristics, they constitute the main content of a display system used in numerous exhibitions).

Likewise, as a side effect, a network of schools was built to undertake field research, which has shown its capacity to develop a life of its own. This leads us to suppose that there is every chance of it continuing to exist after the conclusion of EMUDE activities.

From creative communities to the diffused social enterprise (DSE).

From the base of knowledge acquired through the activities described above, the EMUDE programme developed a series of deeper observations on creative communities, highlighting their special characteristics and implications on different grounds. Particular focus was put on the social and environmental value of these cases and the way they were taking shape as the initial stage in a new generation social enterprise. A new kind of enterprise that, in its maturity, can be named: *the diffused social enterprise (DSE)*..

The concept of DSE is one of the EMUDE theoretical results and, therefore, it has to be better explained. We have just said that, to all intents and purposes, creative communities are the invention of new ways of living and doing. Like any invention, if it is really to be an innovation, or a social innovation as in our case, they must stabilise and consolidate their structure. EMUDE has identified this stage in the transition from a nascent heroic state, the true creative community, to a more mature, lasting state where they take the form of a social enterprise reaching into the everyday life of a large number of people. The diffused social enterprise where people organise themselves to achieve results of common interest, and in doing so, produce not only individual benefits, but also sociality. I.e. they regenerate the social fabric of which they are a part.

The introduction of the concept of the DSE enables us to confront important issues in contemporary society in a new way. When read in the perspective of DSE, the promising cases considered by EMUDE appear as forerunners of a new, promising idea of well-being, social justice and citizenship. In particular, they bring an interesting contribution to two important issues currently under discussion: welfare (after the crisis in the welfare state), and new models of local development.

Creative communities and the DFS, seen from the Central East of Europe.

As previously mentioned, EMUDE's observations and reflections have mainly focused on Europe as a whole. However, special attention has been paid to the specificities of Central Eastern Europe (i.e the 8 Central Eastern European countries that joined the EU in 2004). It is clear that the difference in their recent history has its consequences in the way the phenomenon of creative community appears, or does not appear, in these countries.

The outcome of this observation is a reflection on how such differences make themselves felt. The first and most basic is due to a heritage from past regimes: in these countries civil society is still (re-)emerging and its manifestations are still (relatively) weak. A second specificity is the different mix of motivations that lead people into play: in Central Eastern European countries in the majority of cases economic issues are perceived to be more important and influential than environmental ones. Finally, a third significant specificity is the different mingling of tradition and modernity, between cases that present an almost linear continuation of the traditional ways of doing things, and cases that show a higher level of innovation. On average the influence of tradition is greater than in the rest of Europe.

European creative communities and the “Global South”.

Though focusing on the European situation, the EMUDE programme also sought to find out whether, and roughly to what extent, the phenomenon of creative community could also be seen outside Europe, and whether there could be a fruitful exchange of experiences between European and non-European countries. Considering the vastness and multiplicity of conditions we refer to as “non European country”, EMUDE decided to concentrate on urbanised societies in the global south (the *Global South*).

What emerged repeats the some of the observations made for Eastern Europe: the predominance of economic need over social and environmental motivation, and the dominant role of tradition and existing social networks. I.e. cases that look like an adaptation of traditional ways of being and doing to new living conditions. As far as the latter tendency is concerned we must underline that the meaning of “community” and “creativity” in European countries, where traditions and conventions are considerably weakened, differs from their meaning in societies where such traditions and conventions are still very strong. On the other hand, the changing conditions of life effecting increasing proportions of the population in the Global South means that some European experiences may also stimulate analogous activities in their living contexts. Vice versa, it may be that the persistence of traditional ways of thinking and doing in the Southern metropolises will constitute an extensive reserve of social and cultural resources that give rise to new, sustainable ways of living, possibly adaptable to other contexts, among which the European one.

Creative communities, the DSE and active welfare.

Creative communities and the DSE they can give rise to, could bring a notable contribution to welfare issues. In face of the growing demand for welfare and the crisis in ideas about this field dominant up to now, creative communities point to a possibility of a new path. They put forward a different idea of welfare, *active welfare* where people directly involved take direct part in achieving the results they want and in so doing, as we noted with reference to the characteristics of diffuse social enterprise, they “produce sociality”. However, since those directly involved become an active part in planning the service and then putting it into operation, they are also able to obtain the desired results in the way that is most economical and closest to their ever more changing and variegated needs.

The possible connection between the emerging phenomenon of creative communities and the problems of welfare and social cohesion is maybe EMUDE’s one of the most meaningful outcome. A point of arrival for EMUDE that could and should be the starting point for future activities.

Creative communities, the DSE and new forms of sustainable economic development.

The complex nature of creative communities and diffuse social enterprise opens the way to other promising lines of development. One of the most significant lies in considering them as forerunners of *sustainable production models*.

As a matter of fact, creative communities have invented unprecedented cultural activities, forms of organisation and economic models that are characterised by the balance between localisation (they are rooted in a place and in the community

related to that place), and connection to the larger networks, i.e. to the global flows of ideas, information, people and things. All this indicates sustainable ways of valorising existing resources and proposes production and consumption networks based mainly on direct and neighbourhood relationships: a new economic model based on a strong social fabric and on a low ecological footprint.

This last point has to be underlined. In fact, if the DSE social advantages are sufficiently clear, the environmental ones have to be better focalised and analysed. At the moment, we can only observe that, being at the same time highly localised and highly connected, the new DSE related economic model presents several environmentally positive aspects in terms of energy, materials and transport intensity (in particular, given its specific local nature, it is totally coherent with the most advanced views in terms of distributed economies and distributed power generation).

Obviously, this is not yet a complete, mature model. Creative communities do not tell us how a whole sustainable production system could work. However, their very existence offers experiences of great interest and operational indications with notable potential, to the general debate and experimentation in this field. The possibility of verifying the extent to which such potential may turn into concrete fact and spread through European society goes beyond what EMUDE has been able to do. However, the indication of this possibility and this ground for experiment can still be seen as one of its most significant results.

Bottom-up strategy and top-down interventions.

The consolidation and dissemination of creative communities and diffuses social enterprise, is put forward as an original way of attempting to experiment intrinsically more sustainable ways of living and producing “from the bottom”. To be more precise: ways of living and producing that are able to merge social justice, environmental quality and a new sense of active citizenship, in the framework of a new idea of welfare and sustainable local development.

At the same time, observation of these cases tells us that, to be successful and bring about the great changes in orientation required, this bottom-up strategy also requires suitable “top-down” intervention: the cases realised by creative communities are in fact as fragile and difficult to repeat as they are promising.

Obviously the reasons for this fragility are numerous. Some have to do with the wider context (such as the rigidity of the norms or the inadequacy of the infrastructure). Others depend on the lack of specific support tools, able to support all the peculiarities of each case.

To overcome these difficulties an intervention strategy is required that is able to foster both a favourable environment and a new generation of support tools. More specifically, it is a question of knowing how to combine the freedom required for creative activities with the implementation of top-down normative actions (that create more favourable conditions for developing and steering a new generation of diffuse social enterprise). It is therefore a question of developing product-service systems, know-how and framework conditions that, taking in account social knowledge, makes individual promising cases more effective, accessible and replicable.

Conditions for self-organisation.

The issue of developing tools of governance that leave space for citizen participation is not in itself new. However, what is new in the case of EMUDE, is that in referring to creative communities and DSE rather than participation we are talking about *self-organisation and changes in everyday being and doing*.

However, these forms of enterprise appear only in precise conditions: first of all the motivation must be very strong and clearly orientated. But it is also necessary that the appropriate skills and tools be available to implement the desired project. Consequently, in order to promote and repeat an activity like the ones we are concerned with here, as well as a favourable context three basic ingredients are needed. We need a set of tools that make the project really feasible (working on the technical, economic and functional aspect); we need communication that makes it recognisable and attractive to those who must set it up (working on its communicative attraction and value); and we need to have an in-depth knowledge of user-actor (his point of view and his particular motivation mix).

On the other hand the ability to propose something new, combining these three aspects (technical, communicative and subjective) is typically a prerogative of design culture and practice. It follows that – and this one too is an EMUDE result – given the need to increase the skills and will-power of single user-actors to get themselves going, the promotion of creative communities and diffuse social enterprise requires (among other things) a design activity. More specifically, it requires a *strategic design* activity able to define, case by case, the most appropriate facilitation and communication tools.

1.1.5 Methodologies and approaches employed

A specific characteristic of the EMUDE programme is that it combined a system for gathering original information on the dynamics of social innovation, with activities that elaborate and communicate the data collected. In other words: it did not only seek to build up a new database, but also to activate a set of tools and communication channels that enable optimum use of its findings.

Another original aspect of the EMUDE programme came from the decision to use teams of research students and undergraduates from design schools as antennas.

The decision arised from the availability of researchers, i.e. the young designers, endowed with a special enthusiasm for, and sensibility towards, a kind of innovation that has been, at the same time, both behavioural and technical. Furthermore, as a spin off, this choice could mean that the issue of social innovation, with the sustainable solutions they put into action, would be concretely introduced into design schools. Consequently, the possibility would arise of forming a new generation of designers able to recognise such solutions and develop their implications for design projects.

Interdisciplinary and strategic design approach.

EMUDE has been a highly interdisciplinary programme that was carried out on the basis of a *strategic design approach*. Obviously, adopting a strategic design approach when we deal with cases of social innovation does not mean that social phenomena in themselves can be designed. It simply means a particular way of looking: to look at cases of social innovation to identify what could be done to improve their potential, to maintain and/or re-new their qualities and to reduce their limits. That is, in our specific case: to look at creative communities and to imagine a strategy to reinforce them and to support their evolution towards a mature diffused social enterprise. And to do that maintaining the (most of the) qualities and values that triggered the original creative communities' ideas.

Work organisation.

The EMUDE project had been articulated in two periods. In the *first period* had been devoted to consolidate the initial hypotheses and to collect the information thanks to the network of antennas (i.e. to create a common knowledge; to collect already existing cases; to create a network of antennas; to create a web based infrastructure; to collect and validate the promising cases), the *second period* had been devoted to assess the selected cases, to bring to light their most promising aspects, to clarify the demand for products, services and solutions they give rise to and to elaborate these findings both in stronger concepts (scenario, proposals and policy recommendations) and in highly communicative artefacts and initiatives.

More precisely, the EMUDE workplan had been conceived according to the main actions of the project itself, i.e. the activities of the antennas, the re-elaboration of the results by the Consortium and the dissemination of these results.

These three actions took place in WP 2, 3, 4, 5, where each partner contributed according to his own specificity: WP1 *Sustainable consumption in Europe: the state of the art*; WP2 *Detecting the promising cases*; WP3 *Assessing the promising cases*; WP4 *Trends, scenarios and R&D roadmaps*; WP5 *Communicating the outcomes*.

WP 1 aimed at creating a conceptual framework, which had to be the base for the activities of the design schools, taking place in WP2. In WP1 all the partners had to give their contribution, through an interdisciplinary approach. WP 6 was made up of the management and coordination activities.

1.1.6 Achievements of the project to the state-of-the-art

A list of technologies and organisation forms.

The first contribution that EMUDE brings to the state-of-the-arts is a better understanding of how creative communities actually work and what they require to work better and to become more easily replicable and/or up-gradable. This research has led to the identification of certain prevalent organisational typologies, and to the explicit or implicit demand for support technologies.

So, the concrete result of this part of the EMUDE project is a list of technologies and organisation forms that, if developed in the direction indicated, could serve to facilitate the DSE application and diffusion. And its orientation towards social and environmental sustainability.

This list is at the same time both an intermediate result of the EMUDE programme, in so far as it is functional to the building of specific operational tools (scenarios, solutions and enabling platforms), and a *final result*, in that it indicates possible, promising lines of research and development for new technology and new families of products and services (see the following paragraph on the enabling platforms).

The micro and macro scenario.

The second contribution that EMUDE brings to the state-of-the-arts is a specific scenario: the *scenario of creative communities and the diffused social enterprise* and its articulation in a series of proposals (solution ideas) and experiences (on the part of different hypothetical users). This scenario offers an overview of what everyday life could be like in a society where the idea and practice of the DSE is widespread and where the proposed activities are supported by appropriate *enabling solutions*. In other words: solutions conceived integrating the technology for which there was found to be (an explicit or implicit) demand.

This “micro” scenario, on an everyday scale, had then been integrated with a “macro” scenario that offers a dual overview: it both describes what the general economic, social and political conditions should be like to make the development of the micro scenario more probable and effective, and gives an overall vision of what the wider economic, social, and political context might be like in a society where creative communities and the DSE are widespread.

The micro and macro scenarios together should be seen as facilitators of strategic conversation, i.e. as tools that make the meaning and implications of creative communities clearer and diffused social enterprise possibly proliferating. They facilitate dialogue on these issues and the convergence of different social actors towards shared ideas about what we can do and how.

Enabling platforms.

The third contribution that EMUDE brings to the state-of-the-arts is notion of *enabling platforms*: systems of technologies, infrastructures, legal frameworks and modes of governance and policy making.

Considered as a whole, enabling platforms role is to create a favourable environment for creative communities, to facilitate their evolution into diffused social enterprises and to direct them towards more (socially, environmentally and economically) sustainable forms of organisations.

The enabling platform idea arose from various stages of the EMUDE process. First of all the roadmapping activity generated a number of ideas on what kind of “demand for support” the creative communities have and how these could be translated into more stable enabling platforms. Secondly, in the course of the scenario building exercise, it has been understood that, a crucial success factor for all these measures would be their alignment and coordination. And here the platform idea came to life.

1.1.6.1 Potential impact on the policy agenda

The insights from the EMUDE research are strongly indicating that a number of benefits can be expected from the emergence of the DFE and that, in average, the DFE initiatives and their implications are well in line with the current agenda of European policy makers on all levels.

This is particularly true for four policy arenas that form a core part of the European Community policy objectives: *innovation capability in knowledge based economy; decoupling of economic growth and environmental impact; social cohesion and sustainable welfare; new modes of governance.*

Innovation capability in knowledge based economy.

A crucial precondition for the successful transition towards a knowledge intensive economy is the ability of all actors of the innovation system to learn and react to change. As innovation studies have long been pointing out, it is the quality of the whole system of innovation and no longer the excellence of single elements that determines success within a knowledge-based economy.

The emergence of creative communities and the DSE is offering a potential to exploit this pathway towards sustainable knowledge based competitiveness.

- Creative communities and the DSE could become facilitators of transition towards knowledge intensive economy acting as interfaces between innovators and users enabling joint learning and customising of innovation. Furthermore they could help companies to orient their innovation activities towards future demands

The “social entrepreneurs” who are promoting and managing the DFE initiatives will themselves be engaged in a continuous learning process on how to leverage between diverse demands with people with a high diversity of backgrounds.

- Creative communities and the DFE fosters the competencies that are considered as vital for knowledge workers. That is, the DSE fits into the EU policy agenda aiming to build up human resources for the knowledge economy.

Decoupling of economic growth and environmental impact.

To achieve a real breakthrough towards decoupling of economic growth and environmental impact new patterns of production and consumption are required. This implies not only significant improvements in production technologies but in many cases radical transformation involving both social and technological innovation at the same time. However, it is difficult for policy to intervene into this complex co-evolutionary process. One possible approach is to create protected spaces where socio-technical experimenting and learning among users and developers of technologies can take place.

Creative communities and the DFE, as they involve communities of innovative users ready to try out new ways of doing things, has a high potential to provide such spaces where new types of product service systems, new forms of using products but also new forms of achieving quality of life with immaterial factors can mature. Thus, environmental policy can use creative communities and the DFE to initiate the necessary learning processes for companies and other stakeholders that could otherwise not take place.

- Creative communities and the DFE initiatives, by functioning as a “niches of change”, can become strong enablers of socio-technical transition towards decoupling of economic growth and environmental impact.

Social cohesion and active welfare society.

Social cohesion is one of the prime objectives of European Union as laid down in the Lisbon strategy and emphasised in the Sustainable Development Strategy. In this perspective the concept of “active welfare society”, as a positive vision for European welfare system, has increasingly been discussed, intending an intelligent active state where public authorities continue to play a key role but where also citizens participate in an active way, exerting their citizenship.

The emergence of creative communities and the DFE might offer an entry point into such a society as they point to a new kind of active engagement of people in solving their own problems together with others. Not only because functions that are part of the welfare realm (such as care of elderly and children) form a substantial part of its activities, but also because creative communities and the DFE might offer an alternative pathway for social inclusion beyond classical employment schemes.

- Creative communities and the DFE might become core elements of an “active welfare society”, i.e. a society better suited to address the enormous future challenges to our welfare systems.

New modes of governance.

The White Paper on European Governance for the EU (COM 2001) defines the main principles of governance as: *openness, participation, accountability, effectiveness and coherence*. In a report from the Commission (2003), the discussion on European governance has also included *democratic legitimacy and subsidiary* as other important principles. However, the success of such concepts relies heavily on citizens becoming active and exerting their citizenship to engage in open governance processes.

Creative communities and the DFE initiatives are indications of an active civil society where this is the case. As the scenario of the “diffused social enterprise society” clearly indicates, the DSE is likely to become, as a whole, a major actor within such a system of open and participatory governance.

- Creative communities and the DFE are part of the social fabric needed for the concept of open governance to succeed.

1.6.1.2 Impact of the project on the industry and research

New policies and market opportunities.

The reflections developed by EMUDE have an immediate first interlocutor in policy makers, in welfare and social service institutions, in non-profit associations operating in this area, in innovative companies who aim to base their long strategies on evolving demand patterns and obviously in creative communities themselves and in whoever is prepared to follow their example. However, these are not the only possible interlocutors.

The demands brought to light by the promising cases and the prospects of active welfare and new forms of local development they indicate suggest that these issues may rapidly become very important for private enterprise and, in general, for all economic operators interested in developing products and services for new markets. Indeed, if the forerunners of new ways of being and doing highlighted by EMUDE mature and grow – as is both possible and to be hoped for – substantial demands may be revealed that now appear only potential. This means that depending on the success of the new ideas of welfare and local development they propose, new markets will emerge for a new generation of products and services: products and services (and product and service systems) specifically conceived and developed to promote and support creative communities and diffuse social enterprise.

Implications for manufacturing industry.

The EMUDE vision of a new social fabric made of diffused social enterprises as enablers of sustainable production and consumption and the vision of competitive

highly agile knowledge based manufacturing are well in line with each other and even mutually reinforcing.

The scenarios drawn by EMUDE researchers on micro and macro scale clearly indicate that the possibility to learn from innovative, creative and active consumers and users can become a competitive advantage for European manufacturing industry. Hence, it might well be worthwhile for industrial research funding to take measures to enable manufacturing companies to engage into this learning process.

More precisely, *referring to the European industry*, the development of a new family of enabling technologies opens various possibilities to derive some benefits through targeted EMUDE-related activities in Europe. A first list of proposal is the following:

- Fund research on production processes and organisational skills needed by manufacturing companies to flexibly interact with creative innovating users
- Spread the EMUDE results to manufacturing industry e.g. via the “Manufacture platform” to support them in their efforts to understand how societal changes might affect them.
- Include the EMUDE “technological meta-demands” and the “enabling platforms” into research funding criteria wherever applicable (e.g. suitability for collective use, multiple use, semi-professional version etc.).
- Encourage consortia applying for R&D funding to take into account the emergence of the DSE and its demands in their guiding visions.
- Include new forms of using products into manufacturing foresight and other long term planning activities
- Include creative communities and DSE initiatives as relevant possible user groups for product innovation.
- Support manufacturing companies to take into account the impact of emerging societal changes into their strategy building.

New directions for the European research programs

From what has been said until now, it appears that there are the following main needs for further EMUDE type research activities:

- Better understand the specific conditions for the DSE to flourish and help transition in various cultural contexts e.g. specific needs in new member states
- Collect more examples in order to get a better understanding of the scale of development of the diffused social enterprise in Europe
- Actively feed the results into the relevant debates such as new welfare concepts, sustainable development, diffused economy, transition towards knowledge economy.
- Evaluate quality of life improvements/social benefits identified by the most promising cases, develop indicators for social aspect of sustainability..
- Create “niches”, i.e. protected learning spaces, where a creative communities and/or DSE promoters come together with local companies to experiment with joint innovation towards a special need.

1.2 Dissemination and use

1.2.1 The exploitable achieved results

Emude results can be articulated in 6 categories:

- concepts
- tools and methodology
- collection of cases
- scenarios
- enabling platforms
- networks of antennas

Concepts. The concepts we are referring to here are the ones that emerged from the EMUDE field research, assessment and discussion. They are: *creative communities* and *diffused social enterprises*; *enabling solutions* and *enabling platforms*. These concepts (that have been presented in other parts of this final report), considered as a whole, are the main theoretical EMUDE contribution to the discussion on social innovation and on systemic transition towards sustainability. Thanks to them it is possible to interpret an emerging social phenomenon, and develop a strategy to promote social innovation from a bottom-up perspective. More precisely, they permit a better understanding of how creative communities actually work and what they require to work better and to become more easily replicable and/or up-gradable. I.e. to become diffused social enterprises (DSE).

Collection of cases. The collection of European good practices that the EMUDE field research has realized (and that is visible on the EMUDE web-site) is a first practical EMUDE result that can be considered as a positive step to promote social innovation from a bottom-up perspective. In fact, showing how it is already possible to live one's own everyday life (or at least some of its activities) in a more sustainable way, this collection of cases becomes an important contribution to make the theoretical concepts of creative communities and diffused social enterprises clearer. And therefore, to promote their dissemination, i.e. the replication/adaptation of the "solution ideas" on which they are based in other, different contexts. To facilitate this possible promising cases role, they have been presented in a highly communicative format and are freely accessible on a purpose built EMUDE website. In addition, given these characteristics, they have had the possibility to constitute the main content of SEP-Sustainable Everyday Project: an exhibition system that in the past year has been presented in several occasions (see the next paragraphs).

Methodologies and tools. During the EMUDE process a precise methodology and some dedicated tools have been developed. This methodology and these tools are now effectively usable in other similar applications. In particular, for what

regards the dedicated tools, here we refer to: the *training guide* (i.e. a set of formats to identify and analyse promising cases of social Innovation: it is composed by a set of definitions, procedures and templates providing the theoretical and practical information that are needed to successfully search, understand and describe the cases) and the *Promising Case Repository* (whose architecture is strictly related to the case-formats and step-by-step procedures proposed by the training guide). Both these tools are intended to be used to support didactic activities (such as school workshops) and research activities (such as applied research with different purposes) in carrying out EMUDE-like activities. In the intentions of the EMUDE partners, the *Promising Case Repository* and the *Training guide* should become the web-site and the methodology of reference for researchers who are, and will be after the EMUDE conclusion, interested in the topic of searching for promising cases of bottom-up social innovation.

Scenarios. One of the main EMUDE result is a specific (micro)scenario: the *scenario of the diffused social enterprise* and its articulation in a series of proposals (solution ideas) and experiences (on the part of different hypothetical users). This scenario offers an overview of what everyday life could be like in a society where creative communities are widespread, and where many of them have evolved in the diffused social enterprises (DSE). i.e. in forms of organisation where the citizens organise themselves, being supported by appropriate *enabling solutions*.

This “micro” scenario, on an everyday scale, has been integrated with a “macro” scenario that offers a dual overview: it both describes what the general economic, social and political conditions should be like to make the development of the micro scenario more probable and effective, and gives an overall vision of what the wider economic, social, and political context might be like in a society where creative communities and the DSE are widespread.

The micro and macro scenarios together have to be considered as *facilitators of strategic conversation*, i.e. as tools that make the meaning and implications of creative communities and diffused social enterprise clearer. And to facilitate the dialogue between different actors and, hopefully, their convergence towards shared ideas on what to do and how.

Enabling platforms. Another relevant EMUDE result is notion of *enabling platforms*: systems of technologies, infrastructures, legal frameworks and modes of governance and policy making the role of which is to create a favourable environment for creative communities, to facilitate their evolution into diffused social enterprises and to direct them towards more (socially, environmentally and economically) sustainable forms of organisations.

The enabling platform idea arose in various stages of the EMUDE process. First of all the roadmapping activity generated a number of ideas on what kind of “demand for support” the creative communities have and how these could be translated into more stable enabling platforms. Secondly, in the course of the scenario building exercise, it has been understood that, a crucial success factor for all these measures would be their alignment and coordination. And here the platform idea came to life.

Network of antennas. A side effect of the EMUDE activities it a network of observatories (Antennas) located in 8 European design schools. Built to undertake the EMUDE specific field research, it has shown its capacity to develop a life of its own. And this leads us to suppose that there is every chance of it

continuing to exist after the conclusion of EMUDE activities and to bring new examples to the collection of promising cases. Furthermore, as another spin off, the EMUDE initiative has concretely introduced into design schools the issues of social innovation and enabling solutions. And, consequently, the possibility of forming a new generation of designers able to recognise such innovation and develop its implications for design projects.

1.2.2 Practical applications

Given the nature of the EMUDE results (concepts; tools and methodology; collection of cases; scenarios; enabling platforms; network of antennas), their practical application has to be considered in 2 different domains:

- the orientation of *policy making* and *business activities*.
- the support to *creative communities* and to the *diffused social enterprise*

Applications in policy making and business activities.

For what regards the first domain, the issue has been discussed in general terms in the section 1.1 of this final report. Here we will summarize this discussion in this way: the insights from EMUDE help to understand that a number of benefits can be expected from the creative communities widespread and the emergence of the DFE. And that their implications are well in line with the current agenda of European business and policy makers on all levels.

This is particularly evident for four policy arenas that form a core part of the European Community policy objectives. They are: *innovation capability in knowledge based economy; decoupling of economic growth and environmental impact; social cohesion and sustainable welfare; new modes of governance*. But their possible relevance appears for the some business arenas too. In fact: the EMUDE vision of a new social fabric made of diffused social enterprises as enablers of sustainable production and consumption and the vision of competitive highly agile knowledge based production are well mutually coherent and even mutually reinforcing.

This last point is in our view a relevant (and rather unexpected) one: the scenarios drawn by EMUDE researchers on micro and macro scale clearly indicate that the possibility to learn from innovative, creative and active consumers and users can become a competitive advantage for European manufacturing industry. Hence, it might well be worthwhile for industrial research funding to take measures to enable manufacturing companies to engage into this learning process.

While large scale benefits from the transition process towards sustainable production and consumption can be expected in the long run a number of *immediate benefits* for the production system, and sepcifically for the manufacturing industries, could be derived already now:

- Learning about product demands that will become ever more relevant in the future
- Learning about new solutions for fulfilling peoples need that might lead to new product service systems or even new business models

- Learning about new modes of operation that might be required of manufacturers in the future such as new forms of localisation new dimensions of flexibility new forms of interaction with customers.

Applications in supporting creative communities and implementing DSE.

For what regards the second domain of possible practical applications, we can observe that methodologies and tools have just been applied during the same EMUDE process and there are several opportunities for them to be applied in other initiatives (see the next paragraphs). Here, we add that, in supporting creative communities and implementing DSE, the EMUDE results have to be considered from 3 different points of view:

- as tools for disseminating creative communities and DSE ideas, thanks to the *Collection of cases*.
- as tools for supporting new networks of antennas, thanks to the *Training Guide*.
- as tools to support new collection of cases, thanks to the *Promising Cases Repository*

For what regards the last one, the Promising Cases Repository, it has to be specified that it is a web site that allows different communities of users (i.e. schools) to collaborate in the building of a common collection of cases, based on the format defined by the Training Guide. The format for describing the cases can also be refined and/or modified by the users, through the “candidate/validate” procedure, that applies to some elements used for indexing the cases (keywords, functions etc.).

According to the research aims, this web tool (and so the knowledge embodied in it) could be (re)used by other schools/institutions, for continuing the collecting process and nurturing the information-base available on creative communities (the promising cases collection).

On-going and future exploitations and researches

At this stage of the EMUDE results dissemination activities there are several promising possibilities to exploit them in different ways and in different arenas. The ones that are operating jus now are:

LOLA-Looking for Likely Opportunities: it is a *on-going* pilot project of a EMUDE-based teaching pack for social innovation cases collection for secondary schools in the framework of the CCN Consumer Citizenship Network.

SEP- Sustainable Everyday Project: it is an *on-going* articulated communication programme, aiming to promote bottom-up initiatives at the daily life scale. In this framework the EMUDE results have just been presented in the SEP web-site and in several exhibitions that took place in the last year (see the list in the next paragraph).

DOTT- Design on time: it is an *on-going* ten-year strategic design initiative in the UK that has been largely inspired by the EMUDE experience. The initiative is funded by the Design Council and by One North East, a regional development

agency. It will provide a unique opportunity for designers, businesses and public service organisations to engage with creative communities in practical explorations of the role that design can play in improving every aspect of people's lives.

Observatory on welfare: it is an *on-going* feasibility study on the possibility to establish in Italy a permanent observatory on emerging welfare ideas. It is based on the concept of *active welfare* that had developed in the framework of the EMUDE activities. As a matter of fact, the research, that is funded by Polidesign (a Consortium owned by the Politecnico di Milano) has to be considered as a direct EMUDE spin-off.

1.2.3 Possible use in further research

As it has been anticipated in the previous paragraph, EMUDE approach and some of its specific results are just now in use in some on-going activities and researches. Some of them will continue for many years in the next future (as SEP and DOT). In parallel to them, there is the concrete possibility for the EMUDE results to be used in some future research projects. At the moment there are 2 research proposals that have been submitted and that clearly are based on the EMUDE results:

Creative community world-wide: it is a *project* that is now under discussion, to be developed in the frameworks of the UN task force on sustainable consumption and production systems, that should extend the EMUDE research approach to non-European countries. This research, proposed by Politecnico di Milano and UNEP/Youth Exchange, if accepted, will start in the second part of the 2006.

Enabling solutions: it is a project of research on active welfare in Italy. This research proposal has been submitted to the Italian Ministry of University and Scientific Research. This research, proposed by a multidisciplinary consortium or university, coordinated by the Politecnico di Milano, if accepted, will start the next year.

1.2.4 Need for further development work and collaboration

Enabling measures: Creative communities and the diffuse social enterprise DSE alone are not a panacea. However, as the EMUDE results indicate, if the weak signals are taken up, strengthened, connected and spread, their benefits can be greatly enhanced. Above that, if they are actively complemented by coherent targeted policy measures (defined as *enabling frameworks* and *platforms*) they can have the possibility to become strong enablers of wider socio-technical transition towards a sustainable society. In this perspective, the EMUDE research focalised a set of these specific enabling frameworks and platforms.

- *Enabling framework*: Participatory Governance; Enabling Working environment; Supportive legal framework.
- *Enabling platforms*: Citizens Agencies; Collective spaces; Connecting platforms; Multi-Use(r) products; Semi-professional equipment; Complementary product service systems; Experimental Spaces

In **ANNEX 1** *Policy measures for creative communities and the diffused social enterprise*, these possible measures are presented in a more detailed way.

Targeted EMUDE-related activities. Specifically referring to the *European industry*, a first list of targeted EMUDE-related policy action in Europe can be the following:

- Fund research on production processes and organisational skills needed by manufacturing companies to flexibly interact with creative innovating users.
- Spread the EMUDE results to manufacturing industry e.g. via the Manufuture platform to support them in their efforts to understand how societal changes might affect them.
- Include the EMUDE “technological meta-demands” and the “enabling platforms” into research funding criteria wherever applicable (e.g. suitability for collective use, multiple use, semi-professional version etc.).
- Encourage consortia applying for R&D funding to take into account the emergence of the DSE and its demands in their guiding visions.
- Include new forms of using products into manufacturing foresight and other long term planning activities
- Include creative communities and DSE initiatives as relevant possible user groups for product innovation.
- Support manufacturing companies to take into account the impact of emerging societal changes into their strategy building

Further EMUDE-type researches: it appears that there are the following main needs for further EMUDE type research activities:

- Better understand the specific conditions for the DSE to flourish and help transition in various cultural contexts e.g. specific needs in new member states
 - Collect more examples in order to get a better understanding of the scale of development of the diffused social enterprise in Europe
 - Actively feed the results into the relevant debates such as new welfare concepts, sustainable development, diffused economy, transition towards knowledge economy.
 - Evaluate quality of life improvements/social benefits identified by the most promising cases, develop indicators for social aspect of sustainability.
 - Create “niches”, i.e. protected learning spaces, where a creative communities and/or DSE promoters come together with local companies to experiment with joint innovation towards a special need.
- EMUDE results express some clear directions where further development work and collaboration with other entities would be needed.

Further technological EMUDE-related researches: EMUDE has led to the identification of certain prevalent organisational typologies, and to the explicit or implicit demand for support technology. As a consequence, it has been composed a list of “enabling technologies”: the technological meta-demands that, if developed in the direction indicated, could serve to facilitate the creative community evolution in diffused social enterprises (DSE), their dissemination and their orientation towards social and environmental sustainability. At the same time, these technological meta-demands indicate possible, promising lines of research and development for new technology and new families of products and services.

Further EMUDE-related researches on creativity, welfare, sustainable local development: EMUDE has focalised some important issues that appear to be relevant for the contemporary society. All these issues should be further developed with specific researches. For instances, some important research questions could be: what is the meaning of creativity in the knowledge society? How diffused creativity, and the DSE, could answer to contemporary challenges, as the crisis of the welfare state and the promotion of the new, emerging examples of active welfare? Are there some links between diffused creativity (and the DSE) and some new advanced socio-economic models, in the perspective of promoting sustainable forms of local development?

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ANNEX 1

Policy measures for creative communities and the diffused social enterprise

The policy measures to support creative communities and DSE could operate on three different levels:

Direct support to creative communities to realise their ideas and become DSE (strengthening the promising signals)

Measures to enable more people to start creative communities and DSE initiatives and to connect them to each other (spreading the promising signals).

Complementing measures creating framework conditions for transition using the diffused social enterprise as enabler (activating the social enterprise for transition)

These three levels of policy action could create a pathway from weak signals of creative communities towards an active civil society with a wide range of diffused social enterprises finally leading to a society that is incorporating the principle of sustainability in its social, environmental and economic dimension. To enhance this strategic perspective we introduce the concept of enabling platforms and enabling framework.

***Enabling framework* socio-economic conditions supporting the diffused social enterprise transition pathway outlined above.**

***Enabling platforms* supportive infrastructure containing elements from different realms (technologies, policies ...) helping the DSE to flourish.**

Each framework and platform involves activities from various policy realms (that are spelt out in more detail in other documents). At the same time each platforms provides specific opportunities within the four main fields outlined in the previous paragraph: innovation capability in the knowledge based economy; decoupling of economic growth and environmental impact; social cohesion and active welfare society; new modes of governance.

Enabling framework

Participatory Governance.

Social enterprise will reweave the social fabric by creating new social and physical spaces. Thereby they will become major stakeholders in governments' activities operating on those spaces from another direction. For this reason they could have a role to play in putting into practice the active engagement of civil society into governance.

Policy benefits

The creative communities and the DSE might function as a mediator facilitating more active involvement of civil society in policy design and implementation.

Policy measures

Implement modes of governance open for stakeholders from civil society and creative communities and the DSE, and actively involve them into decision making and policy implementation.

Implement participatory future oriented vision building processes with the creative communities and the DSE as active contributor.

Enabling Working environment

To be able to participate in the creative communities and the DSE people need to have the possibility to flexibly shape their engagement into working life according to their needs. New possibilities are needed to switch between different levels of engagement in working life, community life and private life as well as training and education phases without putting at risk workplace security.

Policy benefits

Enabling people to actively engage in the creative communities and the DSE thereby bringing about the benefits in various policy arenas outlined above. Use of valuable innovation skills within companies.

Policy measures

Supporting flexibilisation of working patterns (from flexible daily amount of work up to various phases over whole lifetime) governed by the individuals concerned e.g. through legislative framework but also awareness raising campaigns.

Supportive legal framework.

There should be a legal and economic framework that accommodates the creative communities and the DSE activities. In fact, they raise questions that have to be discussed and solved at two levels: the positive changes in the financial support, taxation and juridical matters that have to be done in order to open up for bottom-up initiatives. And the nature of the legal and economic “grey” zone where many of the initiatives promoted by the creative communities and the DSE operate (in fact, the same tolerance that could be considered as necessary for some of creative communities and the DSE initiatives could also be seized by “illegitimate” actors).

Policy benefits

To expand the social enterprise within modern European countries.

To reduce the risk of creating economic and legal “grey zones”

Policy measures

New legislations and economic policies related to: use of public spaces; working at home; family companies; new forms of collective ways of living. New kind of taxes related to: alternative economies (where exchange of labour replaces conventional money systems) and new cooperatives (where individuals are members and not customers).

Enabling platforms

Citizens Agencies

Citizens' agencies are meant to be enablers for any kind of creative communities and the DSE initiatives to be started but also as a facilitator for existing ones to grow, multiply and flourish. Instead of searching for solutions for various demands such as spaces, people, equipment etc. in negotiation with various governmental and non governmental actors the citizens agency would provide the first point to contact for people to embark into a diffused social enterprise.

Policy opportunities

**Facilitate and strengthen creative communities and the DSE initiatives.
Enhance positive effect of creative communities and the DSE in the areas of innovation policy, new modes of governance and environmental policy**

Policy measures

Initiate the citizens' agencies and ensure effective functioning of policy.

Collective spaces

Facilities that can be used by communities for mixed public private functions thus addressing the meta-demand on "sheltering". Collective spaces are not completely public but jointly managed by a group of people either living closely together or driven by a common interest. A number of the solution ideas in different realms rely on the availability of such spaces for their realisation. Therefore they can be considered as a powerful enabler for more creative communities and the DSE initiatives to emerge.

Policy opportunities

**Foster active citizens participation in welfare functions.
Improve flexibility of working and living patterns.**

Policy measures

**Provide the spaces for collective use.
Facilitate management of access.**

Connecting platforms

Connecting people to people, people to products and services and even products/services to products/services is a very important demand within creative communities and the DSE. The connecting platform consists of technological innovations and policy measures to offer the possibility to fulfil these demands as good as possible.

Policy opportunities

**Innovation opportunities are arising from the increased interactions.
Orient technological innovation towards the local scale.**

Policy measures

**Develop an infrastructure for communication and synchronisation dedicated to a local scale.
Focus technological innovation within information and communication technology towards connecting people within a limited physical distance.**

Multi-Use(r) products

These are products that allow for various forms of shared use. Such products address the meta demands for sharing, synchronizing, personalizing, payment, tracking and tracing and, depending on how much private information is needed to fulfil these demands also the meta-demand, privacy-guaranteeing. They are relevant enablers in many of the solution ideas.

Policy opportunities

Orient technological innovation to societal needs that will become even more urgent in the future

Improve resource efficiency and lower environmental impact through more sustainable consumption patterns (use intensification, collective use)

Policy measures

Include use aspects such as ownership concepts and payment modalities into R&D funding.

Explore supporting infrastructure for product sharing.

Semi-professional equipment

Semi professional equipment is used in a non professional environment often even in private spaces to provide a service for a larger group of people. A number of the Emude cases are characterised by this type of situation. The challenge is to have products that fit into this environment which lacks many of the preconditions of professional environment such as ample space, provision for safety, waste disposal etc. and where non professional people might be around but can still be used on a larger scale with some professional characteristics.

Policy opportunities

Explore important future innovation area

Policy measures

Development of guidelines for safe semi-professional equipment and environmental friendly equipment dedicated for social enterprises.

Complementary product service systems

These are professional product service systems specifically designed by companies to complement the social enterprise activities. For instance: flexible mobility services; fluid payment systems; customised an intelligent booking and ordering system, as well as tracking and tracing technologies.

Policy opportunities

New innovative products and services likely to become increasingly relevant in future markets

Policy measures

Incentives for companies offering complementary services and products to creative communities and the DSE users (e.g. fluid payment systems, multi-users products, semi-professional product) through public procurement or research initiatives

Experimental Spaces

The experimental space is meant to facilitate socio-technical experimentation. In fact, to achieve real changes of paradigms in current modes of production and consumption, technological and social innovation has to be aligned. However, it is difficult to find adequate experimental space for both technological and social innovation at the same time. Creative communities and the DSE initiatives could become such socio-technical micro-experimental spaces.

Policy benefits

Create linkages between users and producers and the ability for joint learning thus improving capability of innovation system

Create knowledge and skills (technological and organisational) for innovators enabling them to meet future demands

Policy measures

Actively create experimental spaces with social enterprises

Research initiatives supporting skills and technologies for user producer interaction

ANNEX 2

The EMUDE glossary

Creative communities: groups of innovative citizens organising themselves to solve a problem and/or to open a new possibility, and doing so as a positive step in the social learning process towards social and environmental sustainability.

Diffused social enterprise: form of diffused enterprise that produces social quality. That is: people who, in their everyday life, organise themselves to obtain the results they are directly interested in. And, doing that, obtain the side effect of improving the social fabric and the environmental quality.

Active Welfare: a welfare system where people directly involved have the capacity to take part in the definition and achievement of some results, with the side effect of producing new forms of social quality.

Enabling solution: a system of tangible and intangible elements (such as products, services, communication and procedures) that seeks to support a specific typology of promising cases, and to make them more accessible, effective, replicable.

Enabling framework and platform: a system of tangible and intangible elements (such as technologies, infrastructures, legal frameworks and modes of governance and policy making) that seeks to generate a favourable context for creative communities and the diffused social enterprise.