



RESEARCH DRIVEN CLUSTERS

Project's brochure



Lifelong
Learning

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About the project

Modernizing Europe's skills base is one of the main aims of the flagship initiative "An Agenda for New Skills and Jobs."¹ Improving access to lifelong learning, to help people move to high-value added sectors and 'white jobs' is a major component of the EU flexicurity. Acquiring the right skills is necessary for the establishment and development of the research-driven clusters (RDC) as a driver of the modern EU industrial innovation. Therefore the guidelines for the development and management of cluster initiatives in different EU member states consider vocational training as one of the major tasks for cluster development. Training policies to upgrade skills and competencies especially of SMEs (e.g. strategic management capabilities) proved to be an important area of RDC operation.

RDC training is required in all the stages of cluster development – emergence, set-up, growth, sustainability and adaptation. In the first stage the training needs are focused mainly on encouraging the open culture of the participating organizations, trust building, idea-sharing, identification of talents, relationship building. In the next stages the training needs are based on the necessity of sustaining an open learning environment, motivation of cluster members, cluster team building, balancing interests, focusing on results, etc. A recent study on cluster managers' training needs identified that both cluster managers and cluster stakeholders have training needs in the fields of 'innovation management tools', 'project management tools' and 'leadership capacities, team management. Cluster managers show greater training interest regarding communication skills and knowledge management techniques, while cluster stakeholders have keen interest in business consultancy know how and strategy development tools. International training environment context is also an identified need as well as the knowledge of the relevant national and EU policies².

The InnoSee project assumes that the training needs in RDC will vary from the traditional clusters due to the key role of higher education institutions and research centres, their sector focus, typology, aims, openness, and geographical coverage. The identification of RDC management needs and the development of tailor-made training is a new field in cluster management training building upon the existing national and EU training practice (EU Cluster Observatory) enriched with better understanding of the right type of human capital skills. Based on the needs analysis the partners will develop training materials that satisfy them. The translation of the toolkit from English into the national languages of the partners will broaden the opportunities for training the local RDC staff.

The project capitalises on previous experience of partners in cluster research and VET training. All members of the team have a long international experience and have coordinated or participated in different projects related to either research or higher education. Transnational RDC clusters have been developed among organizations of the partner counties (RAF-REGIONS: food research clusters, TOUREG - Competitiveness and Knowledge in the Tourism sector, etc.) and their training needs will be taken also into consideration in InnoSee activities.

1 An Agenda for new skills and jobs: A European contribution towards full employment, COM (2010)682, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52010DC0682:EN:NOT>

2 CMQ – CLUSTER MANAGER QUALIFICATION Results of a comprehensive survey on tasks, skills & training needs of European cluster managers, <http://www.clusterobservatory.eu/system/modules/com.gridnine.opencms.modules.eco/providers/getpdf.jsp?uid=48deac15-c9b0-4b73-a1cd-2859bf382960>

InnoSee project will contribute to key competences development and harmonization of common educational standards in the field of research-driven clusters. Such competences are not defined yet in the EU. Learning modules will be developed and tested. They will be based on the specific RDC needs and will provide the necessary skills and competencies for successful RDC planning and implementation in six countries of Europe.

The main innovating elements of the proposed project are:

- Development of key competences and common educational standards for RDC training
- Development of e-based learning modules for RDC managers and staff based on the specific RDC needs
- Networking of RDC trainers
- A new area for vocational training advance that will offer a starting point for further transfer of practices in a specific VET field

The long-term objective of the InnoSee project is the enhancement of life-long learning, exploitation of the Competence framework and Curriculum on research-driven clusters training, better quality of research-driven clusters proposals submitted to authorities managing the EU funds, improved planning, implementation and coordination of related projects.

The specific objectives achieved at the end of the project are: Created platform for harmonized and improved quality of education of research-driven clusters managers and staff. The trainings provided by different institutions offer uniform set of knowledge and skills.

The concrete aims achieved during the project implementation encompass:

- 1) Elaborated and harmonized content of individual modules within the Curriculum for training of research-driven clusters manager in languages of all participating countries.
- 2) Documented teaching and training methodologies in Tool Kit for individual modules using best practice examples of all participating institutions.
- 3) Pool of quality trainers in different topics, specialized on the various content and methodology of training modules.
- 4) Courses are tested and included in portfolio of participating educational institutions in each participating country.
- 5) Created quality brand mark for harmonized training and initiated European Association of Trainers of Research-driven Clusters

The achievement of the project aims and objectives will contribute to the improvement of the entrepreneurial culture of RDC managers and staff in the project participant countries, to the development of RDC knowledge and managerial skills among students that are future RDC cluster employees and will enrich cluster training culture in the EU.

The partnership

The project partner consortium contains 7 organizations from 6 EU countries.



The Institute for Postgraduate studies (IPS), Bulgaria

IPS acts as applicant and coordinating institution of this project.

The Institute for Postgraduate Studies (IPS) studies was established 40 years ago.

It is a Division at the University for National and World Economy (UNWE), where 20000 students study economics, management, public administration, law and international relations. IPS at UNWE provides postgraduate training: vocational qualification, specialization and continuous training of foreign and Bulgarian citizens. The Institute is certified under ISO 9001:2008 with a Quality management system certificate covering postgraduate studies and project management.

IPS at UNWE is a leader in postgraduate studies in the areas of business, management and law and offers high-quality training services according to European standards. Its qualification diploma is recognized and approved by the Bulgarian Ministry of Education, Youth and Science. IPS works with students, managers in private and public sectors, entrepreneurs, public administration officers, as well as individual trainees.

The main tasks set by the management of IPS at UNWE are focused primarily on the organisation of training meeting practical needs of its customers and development and implementation of international projects. The priorities of the Institute include transfer of skills and knowledge, adaptable to the changing environment, through the creation of flexible and effective environment of the training process. The individual approach to the Institute's customers allows for the establishment of a direct relationship between research, teaching and training, managed as projects.



The Institute for training of Personnel in International Organization (ITPIO), Bulgaria

The Institute for training of Personnel in International Organization is a private non-profit organization – NGO with the status of Association. Members of the Association are currently several leading Bulgarian universities and colleges, the most powerful trade union in Bulgaria, local authorities, companies, NGOs and many individuals – prominent experts in the social, economic and academic spheres. ITPIO is a partner of one of the leading business clusters in the country – The Bulgarian ICT Cluster.

The main activities of the Institute are related to the conduction of adult training and the realization of research activities and analyses in the field of adult education, strengthening the dialogue between different stakeholders in all areas of social life – education, culture, local development with the emphasis on human resources development through dissemination of information, organization of trainings, discussion forums and by improving the interrelations among national, regional, local authorities and the non-governmental sector, while following the modern trends in civic society development, respecting the different positions and points of view of the key actors in society – citizens, non-governmental organizations, educational

institutions, local and national authorities, professional associations, trade unions, enterprises.

The Institute organizes seminars, conferences, debates, training courses on various topics, participates in a number of academic activities such as research, analyses, creation and optimization of curricula and programs, related to the teaching in Bulgarian universities and many other training institutions and organizations.



The Foundation for Development Innovation and Technology (FUNDITEC), Spain

The Foundation for Development Innovation and Technology is a not for profit public body with a team of more than 25 highly skilled professionals. Its main mission is to contribute to economic and social development via technology and innovation promotion. FUNDITEC develops and implements different national and international projects for improving the skills of managers, employees and entrepreneurs:

Territorial instruments and Innovation Policy: Promotion of innovation-support mechanisms by strengthening the role of business incubators and Science and Technology Parks and developing case-specific managerial tools; conducting research initiatives on funding instruments and networks (seed funds, ...); designing, monitoring and evaluation of Regional Innovation Plans, etc.

Social Innovation: Design, monitoring and evaluation of measures aimed at ensuring the sustainability of the welfare state; development of R&D activities; promotion of Information and Communication Technologies as a moving force for economic development.

Awareness raising and Life Long Learning: Professional training initiatives, encouraging lifelong learning and employment, targeted at enterprises and public administrations. Improving European SME's innovation capacity in products and services through the application of creativity techniques, encourage entrepreneurship and innovation by providing professional business training and advisory services for students, graduates, people at research and education agencies and developers, etc.

Business and Economic Innovation: In addition to designing and promoting measures to support business development and entrepreneurship, FUNDITEC also focuses its efforts on the development and encouragement of a more sustainable economy, using innovation and R&D mechanisms, to foster environmental, RSC and gender-equality schemes, respond to energy and sustainable development needs and support standardization initiatives.



Swedish TelePedagogic Knowledge Centre AB (STPKC), Sweden

STPKC has extensive experiences of pedagogic development, unique competencies in methodology development and production of practical solutions matching vocational and professional development needs. STPKC is actively coordinating and contributing to many e-learning services, including those that are extensively worksite, learner-centred, problem-based/focused and virtual community-anchored, plus facilitates virtual communities like Leonardo Virtual Community and other LLP-based communities, networks and projects, which gives unique capabilities to generate impact on both

national and European levels, provide overviews and experiences from on-going and already developed solutions and services. STPKC has also a wide experience in developing and coordinate user-centred online services, collaborative online work, as well as for employment/work-related learning services that both motivates and retains the dignity of the learner.



Empolese Valdelsa Development Agency (ASEV), Italy

ASEV has been created in 2002 with a mixed public private capital by the municipalities and social partners of the Empolese Valdelsa district, to promote the economic, cultural and social development of the area. ASEV is officially recognised as a adult and vocational training and career guidance centre. Its activities, that so far have involved 7000 people, include also planning and managing courses and activities related with university education; services to promote employment in cooperation with local PES; cooperation with local schools in education activities and teachers' training. ASEV manages an ODL centre and an intercultural Centre that organizes courses of Italian as second language, training of teachers in intercultural issues, welcoming projects for migrants, field research on immigration, mediation of intercultural conflicts. ASEV is certified ISO 9001:2008 and has 20 employees for a turnover (2009) of about 3 millions €.



INTELSPACE Innovation Technologies SA, Greece

INTELSPACE INNOVATION TECHNOLOGIES SA is a spin-off company founded in 2005 by members of URENIO. The company offers engineering, IT, and consulting services in the field of intelligent and smart cities. INTELSPACE is working with interdisciplinary teams and brings together expertise from the fields of city development and planning, knowledge and innovation management, and information and communication technologies. Main areas of services provision are:

Innovation ecosystems strategic planning and management: Planning for innovation-led agglomerations. Innovation strategy elaboration, including smart specialization strategies (RIS3). Management of regional systems of innovation. Management of innovation-led clusters. Planning of technology and science parks, innovation centers, technology districts, and incubators. Planning and management of Living Lab environments.

Development of web platforms and applications for innovation: Strategic intelligence based on collaborative intelligence and information crowdsourcing. Technology transfer and web-based learning environments. Collaborative innovation, new product development, crowdsourcing solutions and Living Lab platforms for user-driven innovation. Marketplaces and web-based product marketing and promotion. Location-based applications for marketing and promotion.

Intelligent cities development, planning and governance: Intelligent city / smart city strategy development. Planning for intelligent cities at the level of city sectors, districts and networks. Smart city solutions for (1) the innovation economy and competitiveness, (2) the quality of life, (3) transport, energy, and utilities, (4) city governance and decision making. Deployment of Future Internet technologies, sensor networks and urban embedded systems. Intelligent city governance and business models. Intelligent city monitoring, measurement and asses-

ment. Training on intelligent / smart city development, planning and governance.

FH JOANNEUM

FH JOANNEUM, Austria

FH JOANNEUM is one of the leading Austrian universities of applied sciences. Additionally to its teaching activities (roughly 3.500 students) the university has well developed R&D centres, which work - in cooperation with international partners - on a multitude of projects. The R&D centre of the department of international management currently is successfully active in 11 EU projects

The highly qualified and experienced staff of FH JOANNEUM is involved in a wide range of research projects, continually generating knowledge for the university, business and society. FH JOANNEUM takes an inter- and transdisciplinary approach in tackling key research issues of the future in cooperation with partners from business, industry and public institutions. FH JOANNEUM draws on a wide range of cross-border partner networks as well as university and company consortia to transfer its expertise to partners, especially small and medium-sized enterprises, thus supporting them in planning and implementing product and process innovations. The university has vast experience in clustering for Vehicle technology and namely in Automotive Engineering & Railway Engineering. FH JOANNEUM has an accredited testing laboratory in accordance with EN 17025. It has also a lot of joint activities with enterprises which participate in clusters from the Electronics & Technology industry.

The expertise acquired through research and development is fed into teaching, providing a sound knowledge base for university of applied sciences. Students become involved in research-related project activities early on in their studies, ensuring that they receive a career oriented and practical education. Many students write their final theses as part of projects carried out in cooperation with partner companies and thus provide a creative impetus for a mutual exchange of knowledge and experience.

Clusters and RDCs: typology and added value

Cluster development represent an established strategy for addressing challenges of competition, productive restructuring, and innovation-led development. This is largely due to favourable environments they offer to participating organisations for collaboration, innovation, and market access.

Michael Porter introduced the term in 1990 reviving the discussion on economics of agglomeration, and defined clusters as geographic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions (i.e. universities, standardization agencies, trade associations, chambers of commerce and industry) in a particular sector of the economy, which compete but also cooperate¹. A few years later he characterised a cluster “as geographically proximate group of interconnected companies, suppliers, service providers and associated institutions in a particular filed, linked by externalities of various types”².



Figure 1: Porter's Diamond Model
Source: Value Based Management Net
http://www.valuebasedmanagement.net/methods_porter_diamond_model.html

Research Driven Clusters

Research Driven Clusters (RDC) can be defined as clusters that rely predominantly on research and technology as a source of innovativeness and competitiveness, and relatively less on other resources and externalities. They usually differ from standard clusters by the fact that they have a stronger science / research base, and by their ability to generate a greater frequency of innovative enterprises which are able to exploit and commercialise research. In a RDC higher education institutions and research centres play a central role.

There is huge diversity among RDC types: they differ in terms of their stage of development (cluster life cycle); some are just networks of SMEs; some are organized around key research and development organisations; and yet others have customer or technological market needs to sustain their development. In all cases, RDCs embody the characteristics of research and innovation activity can be considered as small-scale innovation systems. Their specific nature,

¹ Porter, M. E (1990) The competitive advantage of nations. New York: Free Press.

² Porter, M. E (2003) The Economic Performance of Regions, Regional Studies, Vol. 37.6 & 7, 549-578.

including their spatial coverage, differs according to technology and market conditions which influence the geographic extent and relative strength of linkages.

Research clusters display different characteristics than usual business clusters. The main difference relies on the fact that business clusters concentrate in building up vertically and horizontally related economic partnerships in a certain industrial sector, while research clusters have their main focus on the exploitation of research and technological competences. At the same time, they should not be considered as equivalent to Science Parks, which are top-down planned initiatives, though their presence constitutes an additional asset for the development of RDCs and for exchange of knowledge that can sustain their growth.

RDCs are often based on a partnership between businesses, public research organisations and the public/semi-public bodies along the so-called triple helix model: the public sector, the business community and the higher education institutions. Technology intermediaries and funding organisations can facilitate the interaction between these three key groups of players. They often develop in the proximity of universities or other public/private research organizations, fostering the exchange of knowledge and human resources. Nevertheless, we can distinguish different drivers for the creation of research-driven clusters: (1) RDCs based on triple helix relationships between industry, research and local public authorities or government agencies (i.e. regional development agencies; science and technology agencies); (2) RDCs based on R&D co-operation between companies and research organisations; and (3) RDCs based on co-operation among companies and spontaneous, bottom-up collaboration networks.

Apart these differences, we can identify two main RDCs typologies:

- Spontaneous bottom up clusters, which have started from a few companies wishing to address a well identified need or opportunity through sharing knowledge and experiences in an informal network. This bottom-up approach is essential for a well-functioning RDC, whereby local stakeholders can identify strengths and key players, enhance their knowledge-base, find external complementary expertise and agree on a strategic agenda. It is also important to make determined efforts to drive the RDC agenda across the government and administrative sectors. In this context, the need of strategic co-ordination between different players and between national and regional levels becomes evident.
- Top down RDCs born thanks to a strategy or program initiated by national or regional authorities or business associations in order to facilitate the grouping of companies and their working together.

Added-value

The emphasis given on ‘interconnected companies and organisations’ underlines that clusters are localised systems created by proximity conditions and offering various kinds of competitive advantages. Spatial proximity is sine-qua-non driver of clusters creation, but institutional factors (policy and management), and social factors (trust, risk sharing) offer advantages also.

Clusters as localised systems of interconnected activities create competitive advantages related to cost and innovation. The popularity of clusters as development instrument is largely due to these effects.

- **Cost-related** advantages emerge because of risk sharing, external economies, and cooperation in production and markets among the organizations constituting the cluster.
- **Innovation advantages** are created because of specialization, tacit knowledge flows, trust and knowledge spillovers, and aggregation of learning and expertise that takes place among the organizations of the cluster.

Both types of advantages benefit from proximity, locality and geographic agglomeration that enable external economies and knowledge sharing. Such competitive advantages lead companies and regions into a development spiral in which clustering is the propulsive force: company competitiveness is propelled by clusters, and flourishing companies sustain the competitiveness of clusters and their region.

Porter proposed a universal explanation how clusters contribute to competitiveness and innovation. “Recent academic and practitioner literature has placed increasing emphasis on industry clustering as a basic feature of regional and national economies, with important influence on innovation, competitiveness and economic performance” he wrote in 2003. In his Diamond Model outlined the positive environment that companies find within the cluster, a synergetic convergence of demand and supply conditions, knowledge flows and strategy. The five elements of the ‘Diamond’ describe different dimensions of competitive advantage: (1) factor conditions refer to inputs such as labour, land, natural resources, capital, information, and infrastructure, (2) a sophisticated domestic market is an important element to sustain local production, (3) related and supporting industries include suppliers, upstream and downstream industries and offer advantages for knowledge and technology spillovers, (4) strategy, management styles and rivalry spur innovation, and (5) the government’s role is as a catalyst and challenger, encouraging companies to raise their aspirations and move to higher levels of competitiveness and performance. However this universal explanation of a competitive advantage is oversimplified as it doesn’t take into consideration the diversity of clusters forms and types. The five ‘diamond’ elements can be traced in any cluster, but competitive advantages differ substantially from one type of cluster to another. Therefore it is more accurate describing competition and innovation advantages with respect to cluster’s types and collaboration.

Typology and competitive advantage

The European cluster observatory (<http://www.clusterobservatory.eu/>) lists various types of organizations and institutions as clusters or contributing to cluster development: business incubators, cluster organisations, professional organisations, regional agencies, science parks, universities, research organisations, technology brokers, university transfer offices, venture capital firms. This large collection of cases illustrates the variety of cluster forms and types and the multiple purposes of clusters establishment and mandate.

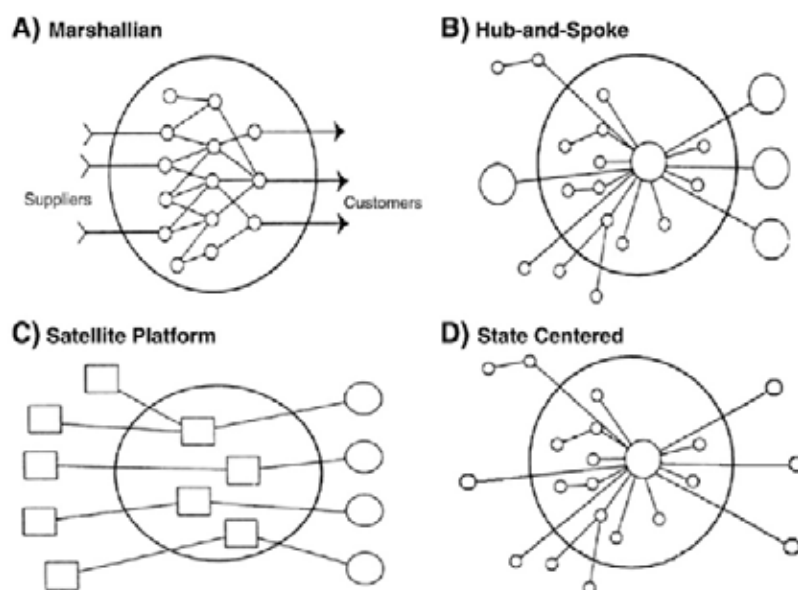


Figure 2: Clusters typology
Source: Markusen A. (1996) “Sticky Places in Slippery Space: A Typology of Industrial Districts”, *Economic Geography*, 72.3, 293-313. Online <http://www.hhh.umn.edu/img/assets/3728/districts.pdf>

A rich literature in this field shows that different types of clusters actualise different enablers of cost reduction and innovation, thus different types of competitive advantage:

- *Marshallian clusters* are characterised by dense company networks, mostly among small companies in traditional sectors. Companies cluster for taking advantage of external economies. Co-location produces plenty of production linkages and advantages of specialisation, reduced transaction costs, and strong information flows.
- *Industrial districts or system-areas* are bottom-up agglomerations of manufacturing companies specialised in different segments of the same production. Supported by trading associations and strong social relationships of collaboration, companies organise flexible production networks after receiving a contract or market order. Advantages emerge from company specialisation, flexible supply chains, agglomeration of skills, and leading organisations (buyers) initiating new production activities.
- *New industrial districts* are agglomerations of high tech industries, a mixture of small and large companies, advanced technological know-how, competitive producer-supplier relationships, and presence on global markets. Advantages spring from non-traded externalities, knowledge spillovers, and sophisticated consulting services, and venture capital funding.
- *Star-type clusters* are created by a leading company which brings other companies and organisations around its activity through subcontracting and technology agreements, polarising an entire production landscape. Advantages stem from technological and organisational leadership and know-how of core companies.
- *Satellite districts* are mainly created by multinational companies establishing branch plants – in offshore locations in many cases – around which flourish local networks of subcontracting companies and service providers. Advantages stem from the leading company.
- *Institutional or state-led clusters* are created by public initiatives for setting science and technology parks, collaboration networks around research institutions, and other forms of technopoles and top-down clusters. Public institutions or infrastructures offer the platform for linkage, collaboration, and production capacity building. Advantages stem from public support and the strength of public research institutions.

Among those clusters many are traditional – based on external economies only – and other more innovative with embedded capability for learning, research, and new product development. Innovative cluster is a type crossing vertically the above typology. All the cluster typologies referred can produce innovation clusters accelerating the innovation process. However, innovation clusters are “born global” taking advantage of international markets and resources at extraordinary early stages of development.

Clusters, as systems created by bottom-up processes dispose inherent sustainability mechanisms that secure their life and growth. In top-down clusters sustainability becomes a critical factor of survival. Such clusters should be anchored on a strong constituting element, identifiable from first instance, such as R&D institution, property development or land estate, resource of prime materials, natural advantage, creating conditions for linkage and sustainability. When this initial grounding element is missing or substituted by some kind of external (usually public) support the life of cluster is in danger and probably it will not survive in the long run.

Objectives of the training

The main objective of the INNOSEE project is to develop key competences and common educational standards for European Research-driven Clusters (RDC).

The INNOSEE Project's partnership identified 9 learning modules, based on the specific RDC needs and providing the necessary skills and competencies for successful RDC management in six European countries.

Moreover, this new area of vocational training will constitute a starting point for further transfer of practices in a specific VET fields, allowing the creation of a Network of RDC trainers.

In order to improve the competitiveness and innovation, the European RDCs need to invest and highly trained people, as a key factor of their success.

Though RDC clusters differ from each other, systematic training and tools towards cluster management excellence and best practice are strongly needed. An increasing number of studies, in fact, show the relationship between their presence and a strong economic performance, growth and prosperity.

This crucial training need, which is identified at EU level in the flagship initiatives of Europe 2020 “Innovation Union”, “An Integrated Industrial Policy for the Globalization era” and “An Agenda for New Skills and Jobs”, concerns both RDC cluster managers and personnel of the companies belonging to the RDC.

RDC training is required in all the stages of cluster development – emergence, set-up, growth, sustainability and adaptation.

The Innosee training modules are therefore aimed to:

- Give a complete overview on the main relevant issues concerning the RDC management.
- Develop new competences for the identified target groups.
- Deepen and improve the pre-existing skills of RDC managers and belonging companies' personnel.
- Create a learning network between RDC managers.
- Elaborate an harmonized training course model, which can be exported in other European countries.
- Raise the interest of local authorities and other stakeholders towards Research driven clusters' training needs.



On long perspective, the modules will also allow the general enhancement of life-long learning and the further exploitation of the Competence framework and the Curriculum for research-driven clusters training.

Training modules

The training modules produced by the InnoSee project (have been / will be) defined and developed following a previous process of needs identification that counted with the participation of several stakeholders (including cluster managers from all the regions involved in the process). The aim of the training content is to produce a harmonized set of training materials that, although taking into account the likely differences existent in the territories, will allow its implementation, usability and transferability to all European regions.

Following, thus, this needs identification process, the training content has been organised following a multi-strata modular structure, with each module addressing one specific topic that the consortium has considered relevant for the efficient management of a research driven cluster.

In order to allow users more flexibility in following the course, the InnoSee training materials will be provided in a two-option model; these options will permit users to follow the course in the training format they find more convenient.

Whereas the first option will guide users through a comprehensive completion of the training modules understanding the several sections as a unified syllabus, the second possibility, based on an initial questionnaire identifying the users' main requirements, will direct users to the modules and training topics more appropriate to their needs.

After organising several meetings with agents of the sector, participating in international workshops and conducting a concise deliberation process, the consortium concluded that the most relevant topics to be addressed by the training contents were the following:

Introductory module
RDC Strategic Planning
RDC Project Management
RDC Market Intelligence
RDC Technology Transfer
RDC Open Innovation
RDC International Networking and Cooperation
IPR and Patenting Issues
RDC Innovation Funding

The convenience of addressing these modules was subsequently validated by relevant agents of the sector.

The main purpose of the training modules is described as follows:

M0. Training Programme Overview

As an introductory module, this module will be aimed at offering a general overview of the training process and of its contents. Thus, its structure will diverge from that of the following and more specific modules.

The purpose of this module is to present a programme overview to the participants; identifying learning modules and each methodology. At the end of this introductory module, participants will be the opportunity to follow a self assessment process highlighting those areas in which specific training appears to be more convenient to them.

M1. RDC Strategic Planning

The purpose of this module is to provide participants with the theoretical and practical knowledge needed to define an RDC strategy; this will be done by raising awareness on how to analyse the RDC environment, how and where to invest resources and how to gain knowledge on the internal nature of the RDC. The module contents must allow RDC managers to make informed strategic choices and to monitor their strategy implementation.

M2. RDC Project planning

The purpose of this module is to provide participants with the theoretical and practical knowledge needed to develop, execute and close a project in RDC; this will be done by learning to formulate, to plan a project, to manage it during the executing phase in terms of activities and resources, to establish internal and external communication and to close the project efficiently. The module contents must allow RDC managers and employees to develop an inter-organisational project and to coordinate it throughout the project period.

M3. RDC Market Intelligence

The purpose of this module is to provide participants with the theoretical and practical knowledge needed to understand the current consumption and innovation market trends. Successful clusters, in fact, mostly distinguish by their in-depth knowledge of their customers and competitors. The careful assessment of the reference market is a critical aspects for the success of a RDC. The module content allows the manager to learn how to define the characteristics and the size of their reference market, the positioning of the RDC products/services, analyze buying trends, allowing confident decision-making on sales and R&D strategies.

M4. Technology Transfer

The aim of the module is to provide understanding of the RDC as a knowledge community, to acquaint RDC managers with the opportunity technology transfer provides for the internal RDC development and for outward cooperation, to assess the financial and non-financial benefits of technology transfer, and to develop the knowledge and skill for technology exploitation via spin-off development or licensing as well as the services that Technology Transfer Office (TTO) can deliver.

M5. RDCs and Open Innovation

The purpose of the module is to train RDC managers in the rationale, strategies and methods of open innovation and how opening the innovation process within and outside cluster limits.

M6. International Networking and Cooperation

The aim of the module is to give theoretical and practical knowledge for the international market and technological environment in which the RDC operates, to help RDC managers to take the right decisions concerning the RDC internationalisation, to provide the cluster with resources and capacity that are international, to assess the importance of the RDC for regional development and to understand the importance of the knowledge-intensive services for the RDC development.

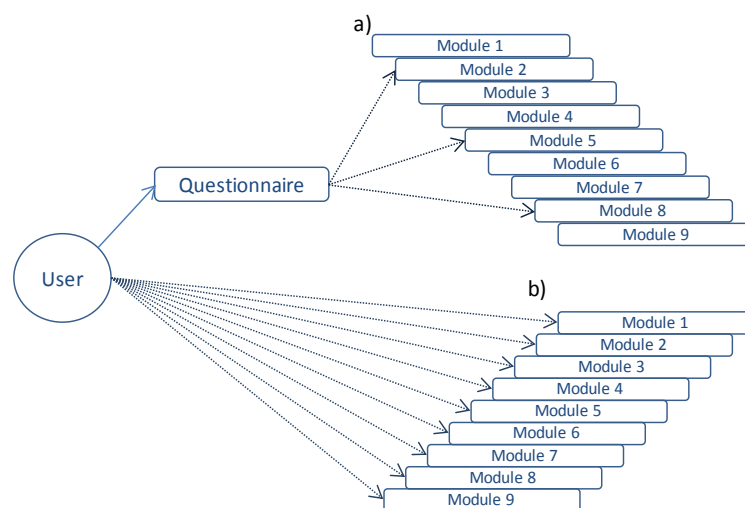
M7. IPR and Patenting for RDC

The purpose of this module is to provide participants with the theoretical and practical knowledge needed to understand and strategically manage the assets and properties the RDC venture is using as its foundation for value creation. The module contents help RDC managers to perceive strategic implications of IPR management decisions.

M8. Innovation Funding

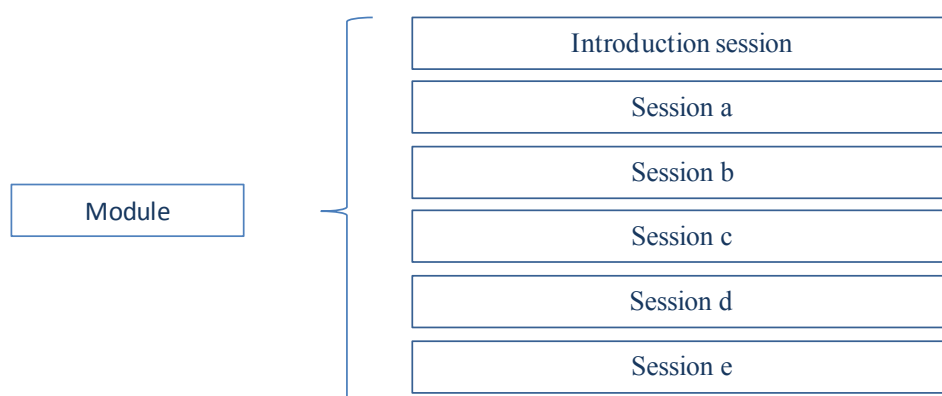
The purpose of this module is to provide participants with the theoretical and practical knowledge needed to understand opportunities for innovation funding. The module contents help RDC managers to perceive strategic implications of funding through risk capital. In a competitive free market perspective RDC members need to better understand how to attract investors and to be familiar with the stages of the investment process.

As it has been mentioned above the training structure provided by the platform is made available in two formats, a) one based on a previous questionnaire to identify the user's specific needs, and b) the other following a comprehensive approach to the materials.



This structure has been provided thus so as to ensure the maximum flexibility, both in terms of the content development and of its presentation.

To produce a more comprehensive approach, the training modules will be subdivided into six different sections that will address in detail the components of the module. Each module will be headed by an introductory session that will advance the issues and topics dealt with in the module components.



For each specific module the following sessions have been identified:

M0. Training Programme Overview

Due to its informative character no sessions are related to this module.

M1. RDC Strategic Planning

- Key concepts of Strategic Planning
- RDC Strategic Analysis
- Strategic planning and choice
- Implementing the strategy
- Assessing and evaluating the strategy

M2. RDC Project planning

- The starting phase in RDC projects
- The project implementation phase in RDC projects
- Project conclusion phase in RDC projects
- Communication and coordination in an inter-organisational project

M3. RDC Market Intelligence

- Key concepts of Market Analysis
- Identify your positioning and customers
- Techniques of Market Research
- Implementing the Market Analysis
- Assessing and evaluating the market analysis

M4. Technology Transfer

- Technology Transfer Value Chain in RDC
- Technology Audit in RDC
- Spin-out Route of Commercialization
- Licensing in RDC
- Technology Transfer Office and RDC

M5. RDCs and Open Innovation

- Understanding open innovation
- Open innovation and research-driven clusters
- Open innovation and Living Labs
- Open innovation, social media and clusters
- Applying open innovation in RDCs: A roadmap

M6. International Networking

- International Technology and Market Foresight
- RDC internationalisation strategy
- RDC Networking
- Supporting RDC for Regional Development
- Knowledge intensive services for RDC

M7. IPR and Patenting for RDC

- Intellectual assets and properties
- Tools for intellectual property rights protection in the RDC
- IPR strategy development
- Choosing the best route for IPR exploitation

- IPR in EU research programmes

M8. Innovation Funding

- Getting to know the local innovation funding environment
- The EU programs for financing RDC innovation
- Venture Capital and Private Equity funding for innovation
- Learning from good practices in RDC innovation funding

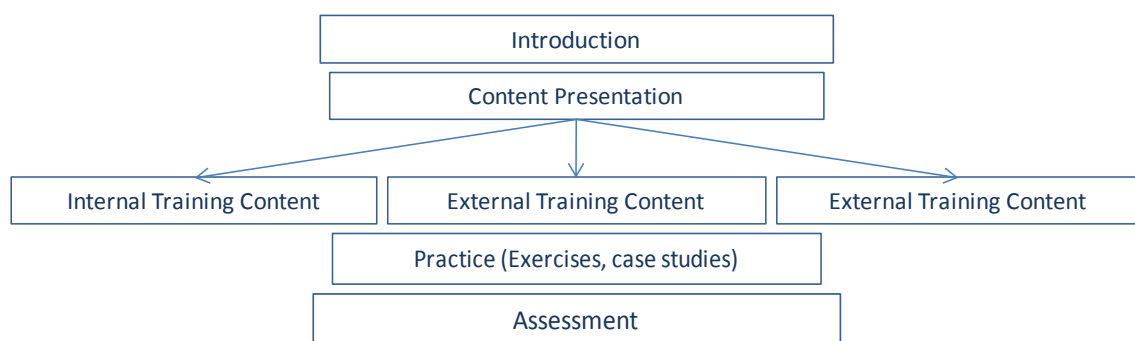
The materials and contents that will be provided in the training sessions will include power point presentations in which the main issues of the modules will be addressed, a glossary of the main terms related to each module, the main theoretical background behind each topic, specific exercises and a self assessment section.

After an introductory presentation aimed at rising the interest among the users and that will highlight the sessions' contents, the main concepts and the purpose of the module, the users will then proceed to access the training sessions "*per se*".

These sections will include the bulk of the training material. In them the users will be provided with internally produced materials (ppt. presentation, adobe professional slides, textual information, etc.), audiovisual elements (most of them integrated into the internally produced materials, such as adobe professional presentations) and the training-specific adaptation of external content.

In order to assess the users' comprehension of the training content, an additional section will be provided including exercises and case studies that will allow the former to put into practice the issues dealt with by the module. The content to be included in this section can be based on basic exercises, specific case studies, role situations, etc.

A final part of each session must include a self assessment methodology that will allow the trainees to evaluate to what extent they have apprehended and assimilated the information received during the training session. This last stage will be based on a simple questionnaire comprising the main topics dealt with in the session.

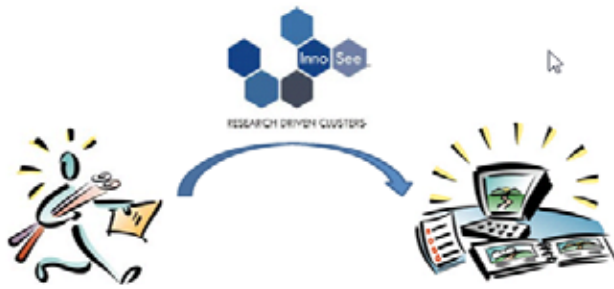


It is expected that the required time for the completion of each module will be of 5 to 6 hours, with each session expected to be completed by the users in approximately 50 minutes.

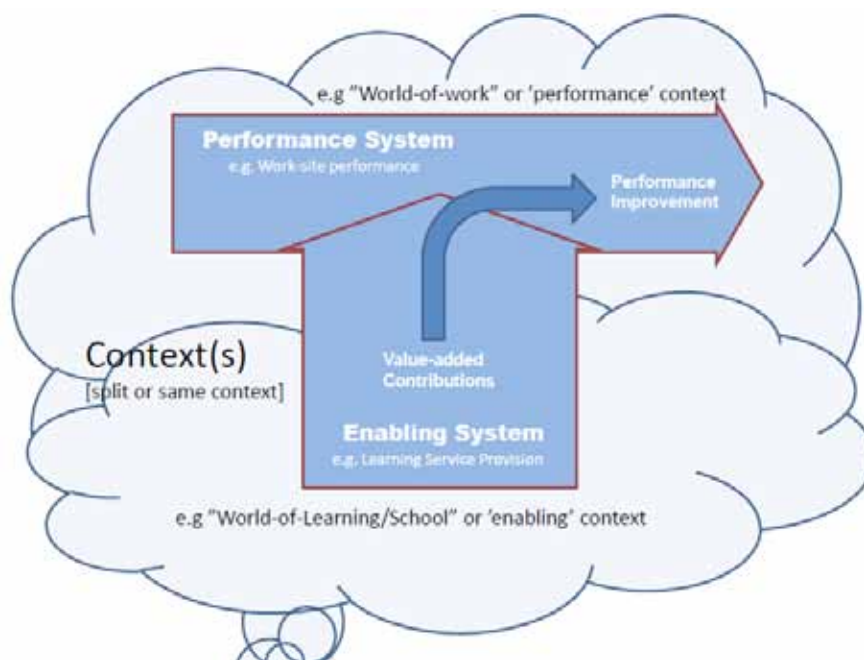
The main objectives of the training contents are to ensure that the users:

- Know and are familiar with the key issues dealt with in each topic.
- Identify, under any specific situation, the most valuable tools and mechanisms.
- Identify the main requirements and outcomes following the implementation of any specific action.
- Define the major steps to be taken in any particular action.

Training platform



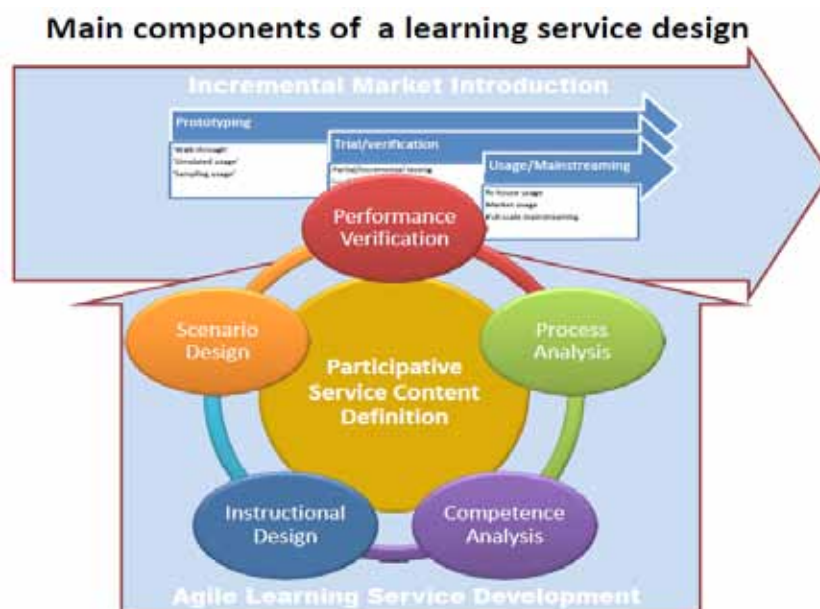
This section will present a summary overview of the development models and design tools that have been introduced to the INNOSEE project partnership and are now being applied for development of the INNOSEE e-Learning services.



An important starting-point for the formulation of a learning service development strategy for the e-learning services that INNOSEE project intends to develop is that the learning services should be adapted and respond to the needs of the context(s) in which the performance improvements are to take place, that the learning services makes concrete value-added contributions to the performance system, and that the learning services being developed as an enabling service for the performance system, and not as an educational activity for its own or diploma-generating sake. With this role defined it is also possible to define design strategies, actions and tools.

Having adopted a performance improvement orientation for development of the INNOSEE e-learning services it is also possible to formulate a design model for the incremental construction of such learning service. In the centre of such model should be a participative approach which is capable to involve in the service development process the full project partnership as well as the stakeholders and end-users affected by the products that is being developed and prepared for.

The participative learning service design process could be seen as progressing from an initial performance verification where the present competence levels and competence gaps are identified and prioritized. Once the potential problem areas have been identified a process analysis is initiated in order to describe the key performance areas (KPAs), where the prioritized performance gaps exist, and being followed by an analysis of the competence requirements that are related to those KPAs.



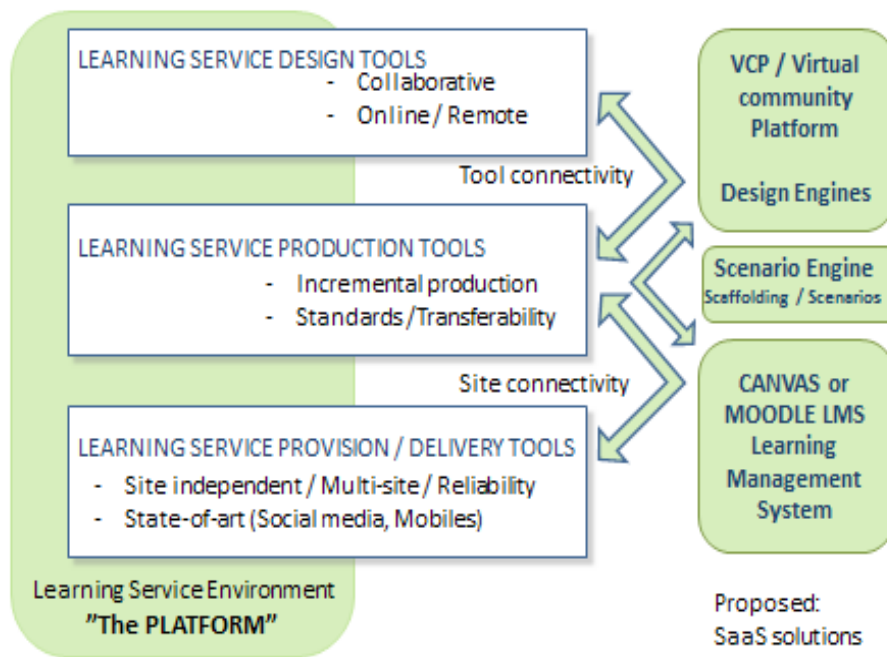
The competence requirements is at this stage converted into specifications of the expected learning outcomes (LOs), which are, together with contextual information and target group profiles, the core input to both the overall instructional design process, e.g. as ‘learning scaffolds’, which is subsequently providing the structural inputs to a more detailed module and learning scenario design.

This phased learning service design process is then followed by both a learning service production phase, where the actual learning services and associated learning materials are being constructed and prepared for, followed by a usability validation during early implementation parts of the delivery phase for the learning services. This delivery phase can in itself be carried out as a staged process, going from prototyping to mainstreaming, or be a direct market introduction process. For the INNOSEE project it is recommended and planned that the delivery takes place as a staged process.

For each of the above stages and developmental actions it is also required to have a set of tools which both enables collaborative work and that such collaborations can take place online, not only in delivery of the e-learning services but also for early analysis/design as well as for service production.

Most of the needed learning design tools are already available within the VCP-based project web-site, and the same is also the case or the production processes, depending on the learning services modalities to be adopted and the online media solutions intended to be used.

Depending on the formality to be adopted for the e-learning services it will be useful to either make use of a LMS-based learning service platform, or if less formal learning, use an online learning community platform. Such decisions are to be taken at later project stages.



For the initial data collection and analytical stages, including the formulation of KPAs and LOs we have in the INNOSSEE project adopted a combined tool approach where the involved project actors can either document their KPA/LO specifications for respective modules to be developed on either a print-based/electronic form or directly into an online database, all depending on the individuals' level of ICT maturity. Later stages of the design and production processes will however be carried out as an online remote and collaborative e-learning development process, as illustrated in the above models. More about this learning service design process in the project's website and LMS platform.

Target audience

FOR WHOM IS THE COURSE RELEVANT AND THE EXPECTED IMPACT?

The course is intended for professional practicing of people involved in cluster organisations, cluster initiatives and those within the policy arena, who desire to acquire hands-on skills in research-driven cluster management. They need to know which skills are essential for managing such clusters and to have an opportunity for development. The key competences and skills are identified and structured in Competence Framework:

1. (Aspiring) managers and staff of research-driven clusters.

The InnoSee platform will enable them to gain harmonised relevant and quality training with an opportunity to choose from various modules according to their needs. This will increase the performance of staff involved in research-driven clusters management and will directly influence the chances of organisations to put their ideas into practice and make a positive change through their clusters.

2. Managers and trainers from educational institutions providing education and training to people involved as managers in research-driven clusters.

These organizations will benefit from the membership in the training platform. The network will maintain the communication exchanging the ideas and sharing the best case practises. They will be able to provide high quality education on the continual basis and thus gain higher credibility of their clients. The platform is planning to grow and to invite new partners to join.

3. Managers of institutions, supporting research-driven clusters in the EU, who develop, establish, finance and/or co-ordinate cluster organisations within a region or at a national level (e.g., ministries, regional development agencies, banks, business agencies, innovation agencies, employer associations, consultancy companies, etc.)

We expect the communication of the research-driven clusters managers and the supporting organizations to be improved. From long term perspective we aim for better quality of submitted proposals and moreover, into better implementation of the projects of research-driven clusters. Thus the EU funds in support for research-driven clusters will be allocated and used more effectively.

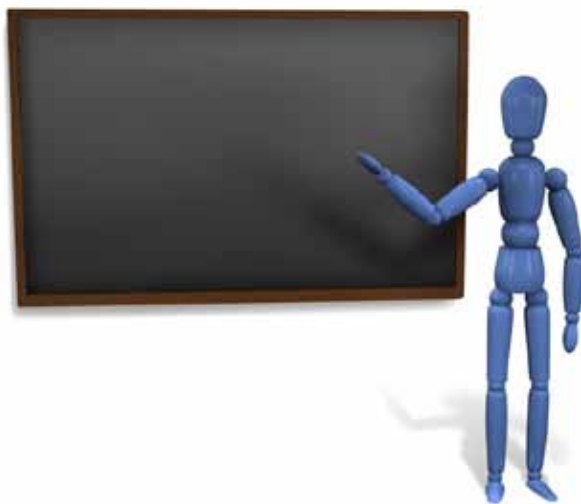
The trainings will be held in English, German, Spanish, Italian, Greek and Bulgarian languages.



Training process

The general goal of the INNOSEE training is to help managers and employees in research driven clusters (RDC) to strengthen their capacity in the field of management of RDCs. It will provide knowledge about different areas in RDC management and will employ modern learning approaches and creative as well as applied techniques in a supportive classroom setting. For this purpose this training will be designed, tested and adapted to augment the knowledge and the competences of the target groups in specific and practically applicable areas of RDC management.

The INNOSEE training aims to transfer recent knowledge from research into practice by means of state-of-the-art teaching methodologies and to improve relevant skills supporting the target audiences to better tackle the challenge of RDC management. The training at hand will undergo a rigorous testing phase, information and feedback will be collected in a joint effort, enabling the consortium to improve and adjust the training programme to best suit the needs of the target groups.



The INNOSEE training is planned as an incorporated solution, combining the processes of self-evaluation, self-based online training, trainer-led sessions with assistance to complete module-based training and assessment of the learning progress. As our target groups are usually restricted in terms of time for face-to-face training time, INNOSEE training employs a blended learning approach. The learning content is developed by experts of the consortium working together on designing state-of-the-art training material using contemporary good practice methods in vocational education and training.

As mentioned before INNOSEE training will be developed in a modular way. Each of the modules can be used individually, but can also be employed in a full curriculum. The training material will be compiled to allow for easy adaptation to different RDC needs. E-learning elements, audiovisual content, self-evaluation tools, assessment tools, problem based exercises, and self study material of roughly the same amount form an integral part of the training.

Training methodology

The INNOSEE training methodology is built on two pillars:

- **Online training:** The modular online training is based on presentations in Powerpoint or a similar format and incorporates audiovisual parts as well. As explained before, the online training is separated in 5 to 10 sessions per module. Each module incorporates a self evaluation, presentations of the training content, exercises and assessment.
- **Trainer-led sessions:** In the trainer-led sessions trainers will provide assistance in the completion of the module-based training. The task of the trainer is to monitor and assess

the learning progress of the trainees.

One of the main conditions for the success of the training modules is that each module should guarantee an efficient interaction between trainers and users and among users in particular. In this sense, the training will need to allow for social interaction to occur, based on the development of face-to-face initiatives and the use of social media tools.

Pool of trainers

To assure high-quality in the INNOSEE training a pool of trainers is established fulfilling criteria such as the ability of teaching at least three modules of the INNOSEE training programme, excellent knowledge of practices in RDCs and profound knowledge of the English language. The involvement of the trainers in the process of the development of the methodology and the training content guarantees a practicable training.

Pilot training

In the framework of the project a pilot training phase is planned in spring 2013. These pilot trainings will take place in 5 of the participating partner countries (These countries are Bulgaria, Greece, Italy, Spain and Austria). Each pilot training will last two days and covers the testing of Module 0 (as the introductory unit) and two other modules selected by the responsible partner after consultation with the work package leader. With this method it is assured that all 9 modules will be tested by both, trainers and trainees. To ensure the required interaction trainings will be held in small groups of approx.. 10 persons. The web-based training will be finalized based on the feedback from the pilot testing phase provided by training participants.



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