

**EUROPEAN COMMISSION DG EDUCATION AND CULTURE**  
**Lifelong Learning Programme**

**WP3: Training needs assessment**  
**Analysis on training needs of Research Driven Clusters in**  
**Tuscany**



INNOSEE PROJECT

Empoli, March 2012



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## Analysis on training needs of Research Driven Clusters in Tuscany (Italy)

### 1. Introduction: overview of survey and methodology

The present survey on training needs of Research Driven Clusters has been conducted in two phases:

- **Data collection** through a specific questionnaire, sent to the most innovative companies of our reference territory and other stakeholder interested to the theme, through e-mail or regular post.

Those data have been processed and analyzed, providing interesting guidelines on training needs of highly innovative enterprises.

- **Two focus groups** with the stakeholders involved, in order to deepen and better detailing the findings from questionnaires.

In this case, the undertakings have had the opportunity to clarify their training needs through a useful comparison of opinions with the other participants and stakeholders.

INNOSEE project has been presented during the focus group, where we worked to stimulate an animated discussion around the main focus of the project.

*The first part* started with the translation of the multiple-choice questionnaire in Italian. This questionnaire has been originally edited by WP3 leader partner. The questionnaire, consisting of 18 questions, has been sent to a sample of 500 companies, strongly interested in Research and Development.

50 questionnaires were sent by regular post to the enterprises directly in contact with our organization. The rest of the questionnaires was sent by e-mail, allowing to answer online.

Considering the simplicity and clarity of questions, the response rate has been rather high, reaching the 8% (41).

The results obtained have been organized into graphs and charts and accurately interpreted.

*The in-depth Focus Groups*, however, were held on Thursday 23rd February and Monday 27th February 2012. The participants were a total of 105.

The stakeholders have been invited through e-mail. The meetings were led by a moderator, who conducted the discussions and presented issues of reflection.

At the beginning of each Focus group, the local project manager of INNOSEE project, presented the objectives and different phases of the project. Subsequently the result of the survey carried out



through questionnaires was presented to the participants, who have been called to express their personal considerations.

The discussion was heated and lively. Thanks to these additional appointments, it was possible to better focus on specific training needs of the RDC.

## **2. Training needs at the level of the RDC cluster Management**

Analyzing the answers provided by the only managers and directors the emerging situation is quite clear: they all claim the need for a generic training on leadership, team building and problem solving skills.

To have success on top positions, sometimes the only technical skills are not enough but certain behavioral and individual skills are necessary in order to implement better relationship processes with the employees and the business partners (motivate, coordinate, direct, control).

For this reason, from the companies discussion, the following training courses appear particularly useful:

### *LEADERSHIP AND TEAM BUILDING*

#### *Assertiveness.*

It means to affirm the person's rights or point of view without either aggressively threatening the rights of another at the same time.

#### *Listening skills.*

It is not enough to lead the team in its work performance but it is also important to listen to any discrepancies or suggestions for improvement of the employees, then establish specific methodologies for conducting a workgroup.

#### *Motivational skills.*

Motivate the employees doesn't mean only using certain strategies aimed to achieving business objectives, but also knowing how to evaluate their real capacities, individual attitudes, motivation and business potential, identifying the correlation between the individual and company "needs".

#### *Communication.*

Have good communication skills means being able to have stable interpersonal relationships with the employees, based on the clear transmission of necessary information. An effective communicative style also consists of having an adequate feedback on transmitted messages.

#### *Decision-making capacity.*



It means to be able to make a careful analysis of the elements available, before making the appropriate choice. Decision-making corresponds to the ability to rationalize all the competing factors and choose the best strategies to achieve some objectives.

### *PROBLEM SOLVING SKILLS*

Problem solving is a mental activity aimed to achieve a desired condition, from a given condition. It includes the set of processes of analyzing, addressing and resolving problematic situations positively. The training course will include the following topics:

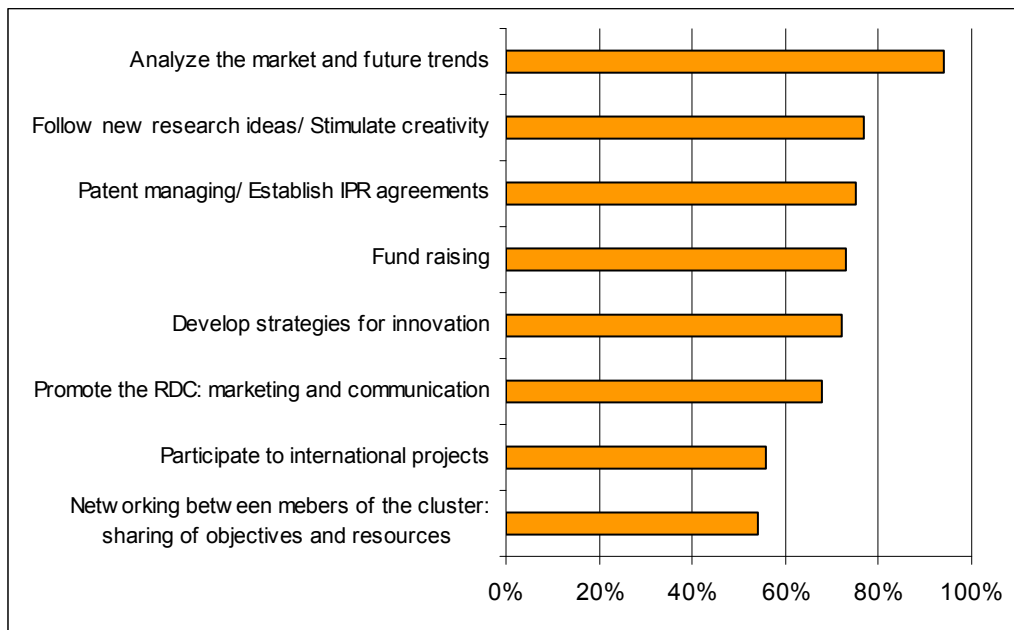
- Setting priorities,
- Simplification of the situation (breakdown of complex situation into easily manageable situations),
- Identification of the reality (analysis of the actual issue),
- Identification of the "optimal" solution and decision making
- Prevention of potential problems and risks.

### **3. Training needs at the level of participating organizations: Main areas**

The companies participating to the survey belong for the 45% to the innovation poles. They are predominantly small businesses (61%), with up to 250 employees. The 22% of the target are multinational companies, the rest is composed by medium-sized enterprises.

The interviewees are mostly executives or managers, 36-45 years old, graduated in engineering or scientific/technical areas. They declare from 10 to 14 years of experience.

The enterprises express some common training needs, which transcend the type of company, size and manufacturing sector. The most important functions for a successful development of the DRC seem to be the following:



Source: Elaboration of data from the survey results (ASEV-February 2012)

#### 4. Training needs in the area of Technology and market watch and foresight

Successful companies distinguish themselves by their in-depth knowledge of their customers and competitors.

In order to obtain an accurate and specific information on the customers and competitors, the first crucial step is the developing a of market investigation Plan. The careful assessment of the market and the developing an effective plan are critical aspects for the success of new enterprises as well. The market conditions regulates all aspects of the business and can determine to the success or failure of the enterprise.

Analyzing buying trends of our customers allows us to accurately define the size of the market and the factors determining their choices. This provides precious information to determine the characteristics of our the product/service, fix the price and schedule a sales strategy.

From the analysis of participating companies' training needs, emerges the clear needs of training course focused on the analysis of future purchase trends (94% of the answers to question 12). The requested courses can be structured as follows:

##### *ANALYSIS OF THE MARKET AND BUYING TRENDS*

The course aims to provide students with the conceptual and methodological tools to understand the current consumption and market innovation trends.

At the end of the course the student will:

- be able to cross the excellence of their RDC with market opportunities, select projects, define pricing policies and strategies.



- know the main competitors of the DRC and their potentials
- Evaluate a product/service and adapt it to the changing characteristics of the market
- know the techniques and methodologies of the most innovative market analysis as: one-to-one marketing, the meeting point, experiential marketing, tribal marketing or the cool hunting.

## **5. Training needs in the area of Technology learning and transfer**

Technology transfer from research centres to enterprises is an essential step for the growth of competitiveness, in particular for SMEs, which generally don't have their own research facilities.

In Italy, the public research system for technological development has a primary position, since it conveys about half of investments and of the personnel employed in the sector. This system includes universities and public research institutes.

In addition to training activities and institutional research, during recent years, universities and research institutes have increased their involvement into technology transfer to companies.

Ad hoc structures has been created to strengthen partnerships with enterprises, such as Industrial liaison Offices and Agencies for the exploitation of research results.

Academic world has also launched a Network for the promotion of the University research, with the aim of increasing the sharing of experiences on patents management and University spin-off societies creation.

The private research has an important function in Italy as well: it includes all the activities carried out by the industrial research centres, usually promoted by big companies which offer their services to external organizations as well.

From the survey emerges the lack of a professional figures involved in intermediating between firms and research centres/universities.

The proposed training course could be structured as follows:

### *TECHNOLOGY TRANSFER MEDIATOR*

The TT Mediator is a new professional figure able to make business talk with researchers, crossing the needs of innovation with the scientific expertise. Upon completion of this course, students will be able to:

- understand and combine the needs of entrepreneurs and research, translating the needs of innovation of the companies into specific projects.
- operate within local public administration and technology transfer institutions, public and private research centres, facilitating the matching of SMEs' technological needs with the scientific expertise, through a continuous mediation and exchange of know how.



-manage and mediate complex processes such as: the editing of Agreements for intellectual property management, the promotion of innovative businesses or building an agreement between companies and researchers.

-prepare and submit proposals for research projects common to most of businesses, exploiting the existing financial and scientific resources.

## **6. Training needs in the area of Innovation Management**

The competitiveness of the enterprises heavily relies on their capacity for renewal and innovation. Technical skills alone are not sufficient to ensure the competitiveness and success of the enterprise, since innovation is also a managerial problem.

Innovate means to operate effectively and to coordinate several complex assets, creating an organizational environment that facilitates the development of new ideas, turning them into real value for the enterprise.

The role of innovator is often played by the entrepreneur, especially in the SMEs, although in an increasingly globalised, dynamic, complex and competitive world it seems not to be the best way.

For the entrepreneur, the risk of being overwhelmed by everyday problems and deadlines is high, but for SMEs is not even easy to predict an internal innovator into their personnel.

For this reason, in the opinion of the interviewed companies, a expert in innovation strategies should exist within the RDC, who can provide consultancy to all companies participating in the innovation pole/cluster.

The training course could be structured as follows:

### *STRATEGIES FOR INNOVATION*

The course on innovation strategies provides technical and operational content particularly addressed to: Managers, Executives and specialists working at various levels in the commercial, technical marketing, design, research and development areas.

The themes indicated are:

- Risk/Benefit Analysis
- Product and service innovation
  - Creativity for new product development
  - Strategic planning of products
  - Portfolio management
- Organizational innovation
  - Project Management
  - Performance measurement through the model of Balanced Scorecard
  - Analysis and redesign business processes according to the logic of Lean Office
  - Models of organizational excellence



## **7. Training needs in the area of innovation Marketing and promotion**

The Innovation marketing a promotion sector is one of the most important for the success of the RDC. It often happens that many technologies fail to become and transform into a new product because the companies are not able to transmit their value to the audit.

A lot of great technological innovation and initiative, sometimes carried out with big efforts a by an enterprise, are not supported by an efficient business model and a clear value proposition.

The technology itself does not guarantee success. Identify the correct marketing value proposition and how to obtain real value from a product is instead the key factor for innovation companies.

### *MARKETING INNOVATION*

The course aims to provide students with conceptual and methodological tools for the drafting of a strategic marketing plan for the innovative company. The Marketing Plan is the operational translation of the objectives and strategies and contains all the operational tools to interact with stakeholders.

At the end of the course the students will be able to:

- 1) optimize the relationship between Marketing and Research & Development areas
- 2) identify new solutions to meet the customers' needs
  - anticipate new habits and consumer behavior
  - exit the routine: segmenting, modify the rules, push the boundaries of the activity
- 3) edit a marketing plan
  - Analysis of the situation
  - Positioning
  - Marketing mix
  - Price policy
  - Operational plan of action
  - Times of action, responsibility and economics
  - Expected results

## **8. Training needs in the area of IPR Management**

The intellectual property plays a key role in the management of innovative processes.

In an economic environment where the creation of partnerships and strategic alliances is essential for the success, companies must learn to spread and defend their knowledge, in order to compete.

The companies participating to the survey complained about a lack of training on this issue, which often causes problems between the companies of the cluster and other companies holding patents.



Another theme strongly felt by the majority of entrepreneurs is that innovative products forgery, often executed by foreign companies and rarely prosecuted.

Participating enterprises require, in conclusion, further information on the following topic:

#### *MANAGEMENT OF INTELLECTUAL PROPERTY*

Upon completion of this course, the student will be able to:

- propose and advise companies the most adequate form of protection of their intellectual property
- conduct all activities related to the management of corporate patents (preparation of technical and legal dossiers, submission of the application, defense in case of attempts to counterfeit and illicit marketing).
- consulting on legal issues, ensuring that the development of new products is not covered by patents of other companies
- formulate agreements establishing strategic alliances on innovative contents.

The companies are demanding not only strategies and policies for innovation, but also programs and investments encouraging the flow of creative ideas within controlled management processes and appropriate techniques to foster creativity and innovation.

Creativity is considered a strategic lever for development. While innovation is an economic and social phenomenon that results from a specific business strategy, creativity is an individual competence, requesting flexibility, expertise, talent and focus.

Most creative companies, such as Diesel or Google, seem to have some common characteristics: an informal, pleasant, welcoming but highly challenging environment, an incentive system not only based salary, listening time available to anyone who has a good idea.

Creativity, in fact, needs to be encouraged and promoted, then transformed into innovation from an adequate industrial process.

The main objective of the proposed course is, in fact, to teach methods that encourage creative thinking and the translation of the ideas into products/innovative processes.

#### *PROMOTION OF CREATIVITY IN BUSINESS*

The course is designed as a real Creativity Lab where it is possible to test several techniques that are directly applicable to the company.

- The guiding principles of creativity;
- individual creativity techniques:
  - improve awareness and safety;
  - improve the creative imagination;
  - awaken intuition;
- Group creativity techniques:
  - define a problem;



- get absolute originality;
- generate new ideas;
- the Association of ideas;
- Select and develop new ideas;
- Personal improvement plan: build a concrete action plan to work on improvement areas
- Create conditions for the development of creativity:
  - working environment
  - incentive systems
  - motivation
  - listening to the creative ideas

## **9. Training needs in the area of Innovation Funding**

The main funding channel for Research and innovation are often public organizations or private entities and foundations.

It is crucial, therefore, to maintain an updated information system on funding instruments, keeping track of the main public and private incentives on the theme of innovation and technology transfer, making them available to each enterprise of the RDC.

### *TECHNIQUES OF FUND RAISING*

The fundraiser is a person who collects the money for an organization or a specific project.

The fundraiser must be able to manage the relationship with the lender, have expertise in preparing the application for funding, have an extensive knowledge of all ways to raise funds (direct marketing, telemarketing, e-mailing, web marketing, direct meetings).

Although fundraising typically refers to efforts to gather money for non-profit organizations, it is sometimes used to refer to the identification and solicitation of investors or other sources of capital for for-profit enterprises.

The themes touched on by the course in question are:

- Financing instruments
- Public Incentives
  - o at regional level
  - o at the national level
  - o internationally
- Private financing
- Manage public relations

## 10. Conclusions: recommendations for a training curriculum in RDC management

In conclusion, the interviewed companies give clear indications on their training needs.

All respondents have a pretty solid base of technical expertise (chemistry, physics, engineering etc.), but they mostly need to acquire some **managerial and organizational skills**.

They all would like to learn methods to **stimulate creativity** and to turn these new ideas into products. The RDC's **resources should be shared** among the various members of the cluster, and the interviewed think it is useful to have **joint research projects**, in order to save on operating costs and to share the equipment.

It is therefore necessary to have **high capacities of mediation** between companies, between companies and research centres and, finally, between companies and the market.

**In-depth knowledge of market** trends is inevitably linked to entrepreneurial success, along with the **ability to obtain funds** for the research activity.