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TRAINING NEEDS ANALYSIS

A. Introduction

The definition of a training need is directly linked to the closing of the existing gap between the skills needed to perform a given activity and those that a subject has initially.

The gap which the training should close refers to the real standards of skills of the workers in the building sector identified in the Italian regions of Lazio and Abruzzo and in Bulgaria and the objectives of the project:

1. holistic approach to sustainable building;
2. network of those involved in the building sector.

The training needs indicated how the different people's competences had to be updated to the project goals.

Training architecture has defined the methodological approach, the technical competences, the problem areas and training modules so that the gap may be closed.

Training needs analysis has been considered as social research aiming at competence in the building sector:

- structural and dynamic features of the country (firms, industry, education and institutions);
- features of production and work processes for sustainable building;
- state of the art of the professions and employment situation for sustainable building;
- needs expressed by participants for technical competences and motivation;
- system expectations among existing organisations and their members.

B. Statistical Methodology

ESEL's and its partners' statistics, each in his own field, concentrate on the following:

- a) Concrete answers to sustainable building already offered by the local building sector
- b) The role of local governments
- c) financial support system (credit and financing)
- d) competence of those involved in the planning, design and building process regarding competence and methods necessary for long-term sustainable building.

The statistical survey was planned as follows.

1. Locating sectors interested in sustainable building .
2. Locating people to express training needs (individuals, groups of workers, firms)
3. Defining statistical survey approach for training needs.
4. Survey (questionnaire and data input)
5. Survey analysis



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C. Locating sectors interested in sustainable building.

Project partners ESEL, ESECH, ESCOLAZIO e ATER mapped out the sectors interested in sustainable building. DEAMALTA, Bulgarian partner, used the same approach in that country.

The mapping came out as follows:

- institutions (provincial and town governments and building associations)
- building firms (builders, systems installers and maintenance firms)
- technical and professional training bodies (technical colleges, universities and building association schools)
- realtors (estate agents and condominium administrators)
- credit (banks)
- building design (professional bodies and planning firms)

The sectors identified were included in the needs analysis in point D. Stakeholders were chosen from each sector.

D. Identification of those expressing training needs: individual workers or groups of workers or organised groupings.

Each stakeholder selected personnel interested in PCD and they were contacted by ESEL. The area of those interested was extended to include:

- Project design professionals (engineers and architects)
- Public bodies and institutions and technical managers
- Builders and their personnel
- Technical systems installation firms and their personnel and craftsmen
- Technical and professional trainers – teachers and students
- Realtors etc
- Bank managers etc

The people involved completed a questionnaire designed to lead to the training needs.

E. Defining statistical survey approach for training needs

Training needs were not always evident nor immediately available so it was necessary to use a more direct approach (preliminary research) also by documentary analysis etc related to the specific country. A later step was carried out on the people involved in the project.



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The results are as follows:

- structural survey relating to previous analysis processes:
 - a) data collection from local bodies (Chamber of Commerce, Confederation of Industry, Unions, provincial and town governments, educational bodies)
 - b) reports from local bodies (Chamber of Commerce, Confederation of Industry, Unions) involved in the building industry.
 - c) interviewing, questionnaires and/or analysis and/or focus group.

F. Survey

1. Relative to sectors interested in sustainable building

In the training needs survey phase it is important to bear in mind the reports prepared by local bodies which intervene in the fields of labour policies and which represent not only employees but also employers (studies and research carried out by regional or national bodies or associations of employers/employees)

Identification of the sectors interested in the project's goals meant we were able to get an overall picture of the territory with its strong and weak points and its critical areas. The survey method is outlined in points a and b above and covers the period 2000 to 2008. Local data goes back to 2006 and includes census information from 2001.

a.1. Public Institutions (provincial and town governments)

Reference data:

1. Council decisions:
 - town planning
 - traffic
 - noise
 - alternative energy supply
 - energy saving incentives
 - CO2 reduction pacts
 - recycling of refuse
 - residential and land register

a.2 Builders

Reference data:

1. Databanks of:
 - Chamber of Commerce
 - confederation of industry
 - Cassa Edile
 - C.N.A. – Confcommercio

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a.3 Professional and technical training

Reference data:

List of institutions from:

1. Regional and provincial education boards.

Regional training agencies

2. Training programs from:

Professional, industrial and technical institutions

Universities

a.4 Realtors – credit - consumers

Reference data:

1. Databanks of:

Chamber of Commerce

Associations (Confcommercio, Adiconsum)

a.5 Building design

Reference data:

1. Databanks of:

Town planning offices professional bodies (ANCI etc)

2. Consulting:

Ideas competitions for public works (regional and town authorities ATER)

Private interventions

2. Relating to those interested in PCD

In the phase of data collection for training needs it was important not only to get information regarding initial competences but also their needs regarding sustainable building.

This study is useful also to answer the 2 main aims:

- incrementing awareness in these people of the dynamics and requirements of the socio-economic fabric in which they operate,
- making a contribution to awareness of latent training needs and requirements which may not be perceived by the system.

With this aim in mind ESEL carried out a survey based on responding to a questionnaire.

The questionnaire was filled in online after a telephone call or fax from those responding in the survey.

The survey covered

- a personal information form requesting:

- geographical location of work
- sector to which he/she belongs
- type of work performed
- educational qualifications

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- type of work contract
 - experience in training
 - age.
- a form to assess awareness of PCD covering:
- legislation in force
 - use of environment friendly materials
 - building technology for sustainable building
 - use of alternative energy sources
 - systems for certification assessment
 - project methodology for environment compatibility
 - personal awareness.

The findings are attached to this document.

G. Survey Analysis

The analysis of the data has led to a reference frame as follows:

a.1 Public Authorities (Towns and Provinces)

From the housing and land register a high density of urban settlements.

In the large historical cities comes from a stratification over time (70% of Italian houses were built before the 1977 law regarding thermal insulation EURIMA), the situation is different in the smaller towns where urban development came in the 1980s.

Private housing is shared among home-owners, public housing involves a number of different bodies.

Due to this there is a lack of town planning for housing although reducing energy costs should lead to correct planning and an improved environment and so a better lifestyle for residents. As the recession gets worse there has been less legislation at town, provincial and regional level for sustainable building and limited to specific sectors and the short term. In this way the approach is that of emergency situations and environmental impact.

In the absence of a national policy local governments improvise solutions without a long term overview necessary for the application of the PCD approach.

a.2 Builders

The data collected shows a large number of firms dealing with specialised sectors e.g. demolition, electrical systems, plumbing and finishing touches.

Builders are generally small firms judging by income and personnel. Work is done in mainly at local level – towns and/or provinces.

There is an important number of craftsmanship firms handling windows and fencing and family businesses handling installation of electrical or plumbing systems and their maintenance.



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The ENERSOL-EU project (in a national context) has shown a lack of specific training for sustainable building despite interest shown by people in the sector.

The presence of such a number of specialist firms with a limited number of people working for them, with limited financial resources has made updating on PCD, which includes the use of environment compatible products and an integrated overview of building, hard.

a.3 Technical and professional training

Technical colleges (ITI) and professional schools (IP) are well spread over the territory and cover many types of specialistic training. There has been a drop in numbers over the last 10 years for both demographic reasons and the change to a grammar school style education.

The standard of technical-professional education has always been high although limited resources in recent years have led to difficulties in updating the methodology and equipment and thus practical competences.

Curriculum is not always aware of the need to find methodology and techniques in line with a sustainable environment.

Universities are mainly in regional capitals even if in recent years there has been a move to start up course in provincial capitals. Sustainable environment theories are included in the engineering faculties and this is leading to more awareness.

a.4 Realtors – credit- consumers

Data collected from the chamber of commerce states that there are many realtors handling sales and letting and administrators of condominiums of a small to medium size based both on income and personnel.

Sales and lettings is not compact leading to high levels of competition which contrary to the laws of supply and demand raises prices and lowers the quality on offer.

The energy classification certificate for housing (introduced in recent years into the final acts of buying a property), building 'by the rule book' (in force for years) incentives to reduce energy consumption have not led to a renewal in the quality of buildings as far as environment-friendly and comfort are concerned.

Banks etc have not put on offer resources to encourage environment friendly building, they have only offered credit at normal rates for specific energy reduction systems guaranteeing payment through government incentives.

The real estate market suffers the low sustainable philosophy which is true not only for builders but also for buyers, as a result there are no incentives nor prizes for building this way.

a.5 Building design

People involved here are freelance professionals (engineers and architects)

Teams of the above.

Building design development firms

These people may work for the public or private sector so the works are much influenced by the local governments and by profit on investment as analysed for public institutions and businesses.

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The technical directives, with no global overview of the problem, issued over the last 10 years must be added to the existing critical situation.

Over the years energy saving was the main worry as well as defining the energy classification of buildings without looking for resources for thermal insulation nor the use of alternative energy sources. The chosen solutions' main concern was to sell without taking into consideration effects on health nor those for the production waste treatment of materials used.

No system of control over the real efficiency of products nor the building methodology.

Therefore in the design sector most cases dealt with partial solutions to problems (thermal insulation, solar energy etc). Each design was limited to one building. Designing a whole area or a wider area, considering total eco-compatibility, has only just started. This is due to EU directives and international lobbies not by choice. Feasibility studies and experiments have been carried out by local organisations (ATER) and regional authorities.

H. Training needs

The in depth studies carried out including the stakeholders show the needs of those operating in the field of sustainable building as follows:

- a serious lack in housing planning for both new developments and re-developing obsolete areas;
- improvisation in solutions with no global overview nor future prospective;
- the need for updating on environment friendly materials;
- the need for updating on building methods that take into consideration future interventions and maintenance;
- the need to rethink and reform educational and professional training;
- a gap in knowledge and use of design skills and of energy and environment certification for buildings;
- little or no experimentation in design and construction;
- absence of round tables among all those involved in sustainable building;
- awareness of being behind in assessing environment compatibility.

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