



LEONARDO NEMESI PROJECT

CONTENTO TRADE SRL

Technological innovation for the environment

95 - 850

01.01.96–31.12.97

Network for monitoring the environment with the support of data processing technology



BRIEF DESCRIPTION:

Partners:

Vila, Salerno, Italy
Enea, Italy
Salerno Province, Italy
Unione degli industriali Benevento, Italy
Contento trade srl, Campofornido, Italy
Cgil Campania, Naples, Italy
Consejo superior de investigacion cientificas apartado de correos, Murcia, Spain
Logotechnics c.p.c., Sheffield science park, UK
Zeus group, Patras, Greece
Institut catalan de tecnologia, Barcelona, Spain
Selfin ibm, Naples, Italy
Take off, Naples, Italy

Objectives:

The project aims to spread the professional profile of an expert on eco-balance and environmental audit through the production of a multimedia system of training/aid, so that it could be introduced in consulting firms and in manufacturing industries.

It includes:

The development of new qualifications in work, through the creation of plans of continuous training, and the spread of teaching works of self-education and of multimedia open-learning.

OBJECTIVES:

The objectives of the project are:

- ✓ Achievement on the work market of new qualification and occupation
- ✓ Development and the delivery of training modules for forecasting needs methods.
- ✓ Qualification and core skills development
- ✓ Development of training plans



- ✓ Adapting the methodology and content of the nonstop training

NEMESI main aim is to spread, by the production of a multimedia training /participation (as "open learning"), the professional outline of the eco-balance and environmental audit, to be employed both in the consultancy companies and in the manufacturing industries.

The main output of this project will be a multimedia training system able to transfer to the users the following knowledge:

- ✓ introduction of the policies, the programs and the environmental managing systems in the company (eco-managing);
- ✓ systematic evaluation procedures for the above mentioned practices efficiency (eco-efficiency);
- ✓ compiling methods of the environmental audit and balance documents , with the aim to inform the public on the environmental efficiency achieved by the company and to gain a certification by the external validation organizations. NEMESI aim is not only to train the experts but also to supply an effective method, through a tool with which it's possible to execute a correct and permanent monitoring of the eco-audit and eco-balance procedures.

So, thanks to NEMESI will be realized: (i) a CBT; (ii) a paper-report for the self training; (iii) a video describing some European case studies.

STATE OF THE ART

The subject of the environmental audit and eco-balance, that represent the heart of the NEMESI project, is a chief matter in the scientific, politic and economic words-wide debate.

The starting point of this debate can be found in the campaign "Sustainable Europe", through which the Association Friends of Hearth (AdT) of the European Union, of the EFTA area and of the eastern Europe intend to demonstrate how an environmental sustainability in our continent can be reached, starting ideally from the year 2010. The project, coordinated by Milieudedefensie (AdT Holland), is based on the fact that production and consumer models must completely change in future, depending on the natural limits of the planet to the raw material collection and the absorption capacity in terms of emissions and wastes.



The campaign is divided in three annual phases:

- (i) in the first step, ended in 1994, some sustainability objectives for the 2010 were proposed,
- (ii) in the second step, that ended in the 1995, the themes were examined thoroughly in a national field, examining the possibility of a reorganization aimed at the reduction of the use of the environmental space and starting a discussion with political, economical, cultural, social groups in all the 25 countries supporting Friends of Hearth;
- (iii) finally in the third step (1996) the single national works at European level will be integrated at European level, making the proposal for a common economical environmental policy and for the setting up of useful projects.

To aid the conceptual elaboration of this campaign, an international "steering committee" has been instituted. The ENEA representative participates from the Italian side.

Other suggestions can be taken from the national and European studies performed and from the regulation issued. Among these regulations we must cite the Sustainable Development Document, elaborated by the European Commission and the "Agenda 21", published in our country. In those documents it's asserted that, to achieve the sustainability of the economical development a real cultural revolution is needed, thanks to which every discipline and activity must review its methodologies and rule regarding the decision that lead to the economic and social choices.

Due to all this, there will be many changes in the way the companies will plan their political and management strategies: the environment will not be anymore an external question and an avoidable constraint, but is getting more and more an internal problem for the company and, somehow, a real marketing opportunity (the "green marketing" discipline was born not by chance). The systems and methodologies for the environmental audit are then the main way to reach a permanent environmental efficiency in the companies, and the starting point to compile the eco-balance to obtain the eco-label.

The training proposal is essentially based on the CEE regulation n. 1836 dated 29/6/93, concerning the voluntary agreement by the industrial companies to a Community regulation of environmental management and audit. This regulation will have a great impact on professional training and on corporate structure in the consultant companies and in the industrial sector.



In this regulation, in particular, it's written:

"(...) considering that the industry is responsible regarding the management of its activities environmental impact, (...) considering that to apply the environmental management methods the companies must assure the awareness and the training of the workers concerning the devising and the carrying out of these methods, (...) that the companies must be encouraged to draw up and spread periodically environment statements containing information for the public, regarding the environmental status of their industrial sites, their policies and their program, goal and devices in the environmental field, (...) that the transparency and credibility of the companies in the present field can grow when their environmental programs, management systems, audit methods and environmental statements are checked out to verify their accordance with the pertaining requirements of the present regulation and when the environmental statements are ratified by reliable environmental supervisors, (...) a communitarian system of eco management and audit for the evaluation and the improvement of the environmental efficiency of the industrial activities and for the presentation to the public of the concerning information is instituted".

This regulation must be related to two fundamental communitarian documents : (i) the V° Framework Program for the Environment, that confirms the guidelines of the environmental policy concerning the joint responsibility, prevention, integration and systematic approach; (ii) the CEE regulation n.880/92, that establish "a communitarian system to assign an ecological quality label".

In brief NEMESI, by spreading over the territory the expert profile, concerning eco audit and eco balance knowledge, anticipates a professional need that, because of the legally binding character that the regulation will acquire in short time, is particularly felt by the European SME's.

MAIN INNOVATIONS

NEMESI, intends to operate to encourage the adaptation of the European SMEs to the innovations that progressively are involving the environmental efficiency management.

Acting on the "management of the change", that is necessary also because of the rich communitarian regulations, the project aims to adapt and develop new professional qualifications to be realized also through the planning and setting up of new training programs. NEMESI, to introduce training practices of the SMEs,



intends to produce and diffuse multimedia educational materials for self-training and open learning.

RESULTS OBTAINED

NEMESI planned, produced and tested a multimedia system for the training of eco-balance and eco-audit experts, made up of three main products:

- (i) a CBT, based on a EPSS system (Electronic Performance Support System), that is able both to satisfy the training objectives of the users and to support the decisions related to the introduction and control of the eco-audit procedure in the companies;
- (ii) a paper handbook of self training and assistance to the operators involved in the management;
- (iii) a video describing the "best practices" adopted in at Communitarian level to set up the eco-audit system in the companies.

To create a transnational product to be used all over Europe, the material have been realized in three languages (Italian, English, French).

MARKET PERSPECTIVES

NEMESI project is mainly dedicated to junior staff of service companies and manufacturing industries. Particularly it intends to spread over the territory the professional outline of eco-balance and environmental audit that can be developed:

- (i) within consulting firms, mainly in those involved in the energy management field, equipment installation, VIA and management consulting;
- (ii) within manufacturing industries, characterized by highly polluting production systems, introducing a new company role "ad hoc" that should interact with the responsible in charge of production, operation management and R&D.