



Overview on the audits and related results – Central Alpine Research Audits

The CARA project aimed to support SME's to access professional consultancy for research and innovation-transfer projects and to encourage participation in EU research and innovation projects.

1. Aims

The structure of the alpine economy is largely dominated by SME's which do not generally have the relevant resources, networks and skills for initiating, planning and conducting mid- to long-term research projects and to search for commercial and research partners for innovation-transfer projects.

2. Implementation of audits

The CARA project aimed on implementing research and technology development audits to identify areas of strategic need for research development funding and support and to raise awareness of funding opportunities. The strategy was to enhance the competitiveness of alpine SME's and to contribute toward an increase in R&D activities in the alpine region.

In the course of the CARA project an audit methodology has been developed and implemented as a transferable, replicable tool that can be used in a modified version for other projects in the future as well. The development of the CARA methodologies was performed by the selection of appropriate features and topics of relevant technology audit methodologies in literature and by designing a completely new structure and approach for the audit process and reporting. In the course of the implementation phase gained experiences were used to redesign and improve the check in order to make it more efficient and significant and to address further target groups.

The following three-stage framework was defined for implementing the audits:

- Acquisition of SME's and Companies
- Audit Implementation
- Follow-up Actions

After the selection of the SME's, the audits were either performed with the help of external consultants or internal experts. Each Auditor had the task to follow the audit methodology and to receive information regarding the company's potential in

Research & Development and to identify potential funding, innovation and programme participation opportunities. Another aspect taken into consideration in the audit is the responsiveness of each individual case regarding its interest in further follow-up activities.

The auditor received as an inherent part of the audit strategic management support and training and support for network opportunities for strategic alliances and partnerships from the project partners.

Subsequently the project partner analysed the material provided by the auditor with the aim at outlining an objective and further follow-up actions of the individual case study.

Through continuous promotion of follow-up actions to foster activities at SME level concerning e.g. the development of projects, partner search and promotion of funding programmes all audited companies were encouraged to participate in innovation transfer. Continuous project support was offered to those companies that have already had an audit and further consultancy for funding and cooperation was given.

For what concerns the audit methodology as a common approach it represents a shared tool within CARA project building upon a participatory process through an exchange of information, good practices and networking.

3. Main sectors

In terms of sectors, the project was non-discriminatory between industrial sectors and or between institutions participating in the audit procedure. Therefore executives from SME's and R&D institutions, which are strongly engaged in technologies and innovation, were defined as general target group irrespective of the specific sector. Taking into account alpine specific business and research structures relevant SMEs and institutes were identified through regionally performed target group analysis. Furthermore contacts were acquired through marketing activities or direct acquisition.

The audits were scattered throughout the Alps in order to cover different contexts and various sectors in the regions. As a result the CARA project spans a whole range of commercial development and research issues and the proposed actions will help to reduce the disparities between the levels of development of the alpine regions.

To outline the main sectors concerned were:

Information- and Communication Technology (Telecommunications, IT Services, Software...), Mechanical and civil engineering (incl. Mechatronics, Automation), Energy (Environment, Waste management), Wood/furniture, Food Sector (food industry, agrofood, food production), Construction (Building industry, Plant construction in renewable energies), Plastic and R&D services.

In an overall conclusion it can be stated that CARA audits were mainly performed in the field of information- and communication technology and mechanical and civil engineering.

4. Outcomes of the audits

CARA promoted sustainable industrial and R&D development as an important factor of economic competitiveness. To assert this, research audits were carried out as a support measure for companies and institutions to identify financial and funding opportunities that will foster innovation activities and provide vital additional financial resources. The implementation of research audits proved to be an effective tool to identify potentials of SME's in:

- participating in funding programmes on a European, national or regional level
- accomplishing international technology transfer
- establishing transnational innovation and R&D projects.

Achieved audits: Total (215)/foreseen (235) for each single PP involved in the project: ITG (39/45), CATT (32/ 30), BEP (20/20), Anvar (25/ 25), Sviluppo (21/25), Veneto (32/30), Maribor (15/30), EU-Research (31/ 30).

In many cases SME's were supported in ways such as finding relevant R&D-organisations, getting to know about suitable funding programs and requirements for project proposals, getting skilled human resources for innovation related projects and activities or determining the technology transfer potential and initiating contacts to potential partners from Europe via various media/platforms. Numerous audits led to activities in the European Network of "Innovations Relay Centres (IRC)", to applications in regional and national funding programmes. Some companies entered technology profiles into the IRC database to find new technologies or commercialise own technologies with partners.

Impact on the partners and stakeholders

The CARA audit has permitted the project partners to acquire a deeper knowledge of:

- the local distribution of the companies on the territories;
- the relationships existing among companies;
- the skills of the companies in doing research activity;
- the vocation of the entrepreneurs to the internationalization;
- the difficulties of the SMEs to be competitive and innovative in the global scenario, because too busy in the daily activities.

On the other side, CARA has given the project partners the possibility to improve its capability to:

- carry out auditing visits;
- perform SWOT analyses;
- put into contacts different realities, from the research and entrepreneurial world;
- enter the company as a complex system, and analyze the problems and opportunities with a global view on the organization;
- work with micro companies, completely different from larger ones.

Furthermore, the direct knowledge transfer between the partners has led to further collaborations that are growing in the framework of other networks, like Innovation Relay Centers, encouraging collaborations among Italian, Swiss, Slovenian and Austrian companies.

All the knowledge acquired during the CARA audits will be used in order to improve the services provided by the project partners in their regions to local SMEs and research organisation for increasing international technology and research collaborations.

One of the main results of the audit activity was the involvement of some of the SMEs in cooperation activities related to research project proposals. The collaboration has been addressed to other companies and university.

Critical aspects

After having completed 215 audits in all eight participating regions it may be stated that there is a certain necessity in supporting SMEs in their search for commercial and research partners for innovation- and technology transfer activities. Moreover it is observable that often SMEs are not able to exploit their innovation potential.

Nowadays, science and technology research groups and other organisations fail to collectively work with SME's.

The four main hurdles are:

- SMEs lack information about European and regional research and innovation public policies
- Deficit knowledge about active scientific and technological capacities abroad
- Missing “technological mediators” that would help increase SMEs participation and act as the contact point promoting research initiatives
- Lack of mechanisms to draw in interested SMEs in research initiatives

Consequently, CARA project has been initially targeted to the evaluation of these hurdles and to the identification of the technical needs and expectations of the SMEs. This “bottom-up” approach was very effective and allowed to focus the creation partnerships on themes really interesting for the involved SMEs, assuring their commitment. Everyday problems due to the specific market (concurrency, EU regulations) often reduce the perception of the importance of technology research and innovation and transnational collaborations as competitive tools.

Lessons learned

In spite of the fact that SMEs in the production and processing sectors (such as food and plastic) are significantly active and stimulate the socio-economic setting, a fundamental problem does come to light: the level of competitiveness is low because of the pressures wrought by the European internal market and globalisation. What is clear is that competitiveness can be strengthened if certain capacities are implemented, such as management and scientific. But securing these capacities is impossible if private and public partnerships at trans-regional level are nonexistent.

It was corroborated that SMEs very often do not have the relevant resources, networks and skills for initiating, planning and conducting mid- and long-term research projects or technology transfer activities. In many cases SMEs could be supported in ways such as finding relevant R&D-organisations, getting to know about suitable funding programs and requirements for project proposals, getting skilled human resources for innovation related projects and activities or determining the technology transfer potential and initiating contacts to potential partners from Europe via various media/platforms.

Especially at SMEs from the IT-sector a need for skilled staff to perform and support RTD projects could be located. This is due to the fact that in IT business innovative products and technologies have to be launched to market more often and faster than in all other sectors.

Transferability of audit methodology

Internal exchange of audit methodology and good practice on the implementation of CARA audits in the individual regions took place within the 7 transnational meetings. Additionally, the meetings were used as a platform for the exchange of information on audited companies and as a platform for potential SME co-operations, which were distributed as well on the community platform. The individual partners disseminated their results and activities within their regions and various models on the implementation and acquisition of audits were discussed. Sharing of good practice materials and workshops were organised internally to promote the activities within the project, such as to support follow-up activities.

The aim of this exchange of information was at finding common issues, methodologies and outputs among the local audits included in the CARA project.

Through transnational co-operation the partners developed a shared methodology and established a transnational network of SME-consultants and SMEs to promote transnational co-operations in research, development and innovation-transfer through the network built between the project partners. The objective was that according to the regionally developed strategic focus all partners involved in the audit procedure were networked to enhance direct access to appropriate partners.

The CARA Audit methodology can and will be used in the future:

- Within CATT the results of CARA have been used to redesign the CATT Innovations-Check in order to get a streamlined methodology for getting relevant information from clients concerning the core business and services of CATT. With the new version support measures of CATT (and connected network partners) shall be provided to clients in a more targeted and efficient manner.
- The audits of CARA will be available to industrial sectors in Slovenia through the portal of Slovenian CARA partner, where companies will be able to search synergies with the companies in alpine space. Information about Slovenian audits can be transferable and potentially used by Euregio Steiermark-Slowenien.

Therefore active participation in innovation actions and co-operations within the project's network was enforced within companies and institutions in the alpine region. These project's activities will foster the R&D and innovation capabilities and will increase commercial competitiveness and cross-border commercial co-operation beyond the life cycle of the project.