

# Empowering SME to Participate in Collaborative Projects

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**Abstract:** SMEs make up the majority of companies in Europe and are increasingly instrumental in the development of innovations, yet they continue to face challenges on the road to successful business innovation. Specific efforts have been made to increase the participation of SMEs in collaborative projects funded by national or European programs. While the results are promising, an SME to research gap continues to exist, particularly throughout the innovation process and later during the exploitation phase. The smE-MPOWER approach takes these challenges into account and empowers SMEs to initiate self-defined, long-term international RTD activities of which they have ownership. This paper explains the context in which smE-MPOWER has been implemented and presents the main results of the project, which not only benefit SME but also the coaches interacting with and supporting them. Lessons learned conclude this paper.

**Keywords:** Cooperation coaching, SME support, collaborative projects, innovation

## 1. Introduction

### 1.1 Empowering SME to Participate in Collaborative Projects

SME account for two-thirds of the GDP and two-thirds of the employment and generate half of all new jobs in the European Union [1]. Thus, they are a key structural element of the European economy [2].

Innovation is a key driver of competitiveness. Economic growth and employment in Europe is increasingly dependent on the market launch of innovative products and services and the development of innovative business practices. Sustained innovation raises productivity, adds value and fosters prosperity.

Europe's 23 million SME are playing an increasingly important role in the development of scientific and technological breakthroughs [3]. This is especially true in young, dynamic sectors. Nonetheless, SME face persistent challenges on the road to successful business innovation [4]. These challenges include:

- Bureaucratic hurdles when accessing funding,
- Insufficient access to training and expertise,
- Insufficient access to new markets or international partners and
- Difficulties securing intellectual property rights (IPR) and exploiting research results.

The EU's Seventh Framework Programme endeavors to provide focused support for SME innovation and research activities. Enterprises involved are able to gain experience and knowledge, expand their networks of research and business partners and commercialize their projects by collaborating internationally with complementary organizations.

## *1.2 The SME to Research Gap*

Despite numerous efforts and some evidence of improvement, serious barriers still bar SME from accessing schemes and funds designed to support their innovation and research efforts [5]. The success rate of SME proposals is still surprisingly low [6]:

A number of issues explain why SME consistently exhibit a low propensity to take advantage of FP7 and other research opportunities [7].

- SME are little aware of and lack information needed to effectively access and assess the suitability of FP7 schemes.
- The application process takes a long time [8]. Moreover, RTD&I projects can sometimes be counterproductive in a turbulent market [9].
- Human and financial resources are limited, especially in small and micro businesses.
- Joining or assembling a strategic, competitive consortium and clarifying the conditions of related IPR is difficult.
- Managerial expertise to exploit RTD results in a multi-actor scenario is lacking.

## **2. Objectives**

The smE-MPOWER project (ETI-023401) focused on integrating SME in collaborative projects. A consortium of SME intermediaries and business networks provided SME the support to pursue long-range research interests with appropriate funding by identifying and analyzing the innovative potentials of the SME. Companies with a clear strategy were coached on developing innovation projects around their innovation interests.

The following outlines the support services currently available to SME and addresses remaining gaps. It additionally describes the results of the project as well as the lessons learned, recommendations for improving support for SME and the further approach to continuing smE-MPOWER.

## **3. Developments**

### *3.1 Steps Taken*

The EC has taken several steps since FP5 to bridge the SME to research gap. In particular, ETI [10] and SSA [11] actions provide SME improved access to scientific and technological information as well as a range of other services intended to facilitate SME participation in framework Programs. The initiatives supporting SME participation have been integrated in the thematic areas of FP7 to eliminate problems of thematic isolation. FP7 “also includes a number of other incentives for SME participation, such as the increased upper funding rate, and the new CIP Programme [12] offering better conditions and support to SME” [13].

Various European actions and initiatives are aimed at facilitating innovation in European SME, individually addressing the different stages in the process of innovation: Formulation of an idea and the respective concept, management of an innovative project and exploitation of the results. A few these initiatives are presented in more detail below.

#### *3.1.1 Finding and Developing Innovative Ideas*

Though innovation is essential to the competitiveness of SME, they often lack the resources needed to initiate innovative projects. The EC is well aware of the need to provide SME assistance identifying needs for innovation and respective funding opportunities. In order to raise awareness and to foster the participation of SME in collaborative projects, many initiatives actively provide support during the first phase initiating projects that correlate with past and current EC objectives to increase the participation of SME in programs and projects.

The Enterprise Europe Network (EEN) combines the former Euro Info Centre (EIC) and Innovation Relay Centre (IRC) networks. In the past, EIC informed, advised, and assisted businesses in EC issues. IRC, on the other hand, focused on supporting innovation and transnational technological cooperation in Europe with a range of specialized business support services. Both EIC and IRC services primarily targeted SME. Launched by the EC in 2008, the Enterprise Europe Network (EEN) combines and builds on the strengths and experiences of both centers. The new integrated network provides a “one-stop shop” to meet all the information needs of European SME and companies, help them develop their innovative potentials and increase awareness of opportunities for EU innovation funding [14]. The network has bundled as well as increased its range of services including assistance to SME to raise their capacity for innovation by participating in collaborative EU projects. Formerly, only IRC in Germany acted as an extended arm of the SME NCP, offering advice on particular funding schemes for SME, now known in FP7 as “Research for the Benefit of SMEs/ SME Associations”.

In the former FP6, the Economic and Technological Intelligence (ETI) project scheme was funded to build bridges between SME, researchers, entrepreneurs and investors. Rather than by the SME themselves, mainly intermediary organizations with good access to dissemination channels ran these projects [15]. In FP7, the ETI project scheme has been integrated in the form of Specific Support Actions in the thematic areas to create direct synergies with collaborative projects in future calls. Lessons learned and outcomes of these actions are currently being gathered by the EC and not yet available.

The National Contact Point (NCP) network is the main provider of guidance, practical information and assistance in all aspects of participation in the FP7 in all Member and Associated States. However, since NCP are national structures, the type and level of services they offer varies from country to country. Some NCP are closely tied to projects in FP7, integrating particular partner search facilities that are then offered to clients.

In addition, a number of other services solely provide information (e.g. SME TechWeb sites) or only complete proposal writing (e.g. specialized consulting companies).

### *3.1.2 Implementing and Managing a Project*

The EC provides SME far less support during the implementation phase. Assistance to SME to overcome problems with project management and implementation is thus a weak point in the EC’s innovation support strategy.

Although the IPR Helpdesk provides potential and current contractors taking part in EU funded research projects assistance on issues related to IPR, e.g. protection of IPR in preliminary stages and resolution of potential IPR conflicts, this is but one of many issues that emerge during the implementation of collaborative projects [16].

### *3.1.3 Exploiting Project Results*

Little assistance is provided in the last phase too, the exploitation of results. The lack of support for mature innovation projects reflects the European inability to implement and commercialize innovative ideas. If allowed to continue, this gap between having innovative ideas and marketing them will seriously threaten European competitiveness in the long run.

Among others, critical success factors for the market launch of products and services developed in collaborative projects are:

- Professional project management with clear roles for each partner and strict supervision of resources, which is not always the case in EU funded projects
- Allocation of sufficient resources for market assessments and analyses
- Involvement of customers in the development process, e.g. in user groups;
- Clear processes for exploitation rather than just product and service development

- Acquisition and preparation of additional funds for marketing and market launches
- These factors need to be already considered during the planning phase of innovative project and measures to address these factors ought to be part of any project plan. Moreover, rather than scientific and technological excellence alone, these factors deserve to be acknowledged when such projects are being evaluated for funding.

#### *3.1.4 The Solution*

Improving the access of SME to funding opportunities continues to be a key issue in Framework Programmes. SME need better assistance to transform scientific and technical advances into marketable business innovations. Given the statistically low odds of receiving funding, reducing the burden of self-financing on SME to develop proposals represents another major challenge that has to be addressed on internationally, nationally and regionally. Nonetheless, the next step ought to be to encourage SME to take a long-term and strategic view of the benefits of collaborative research. Professional cooperation coaching to develop innovation projects accordingly provides one suitable approach.

A review of the different initiatives and support services clearly demonstrates that SME need to be empowered to engage long-term in international RTD activities. Experience shows that support only at the outset is insufficient and further assistance is needed, especially during exploitation. Therefore, what is needed is a holistic approach that integrates initiatives or extends particular services throughout the entire innovation cycle.

smE-MPOWER offers a solution focusing on SME and developing their interests in need-demand business innovation. smE-MPOWER coaches work one to one with client SME and share relevant “open knowledge” within the community of coaches.

## **4. Methodology**

### *4.1 The smE-MPOWER Approach*

The smE-MPOWER approach is configured as a standardized system and incorporates the complexity of innovation systems that include various actors such as industry, intermediaries and regional policy makers.

- SMEs are key innovation drivers in the European context but struggle to realize the potential benefits of European Framework Programme Funding because of external and internal barriers. smE-MPOWER addresses these barriers through a highly personalized approach that provides assistance to develop and exploit SME innovation potential.
- Cooperation coaches who guide SMEs into strategic innovation and international partnerships have a complex but poorly defined job profile. Insufficient best practice guidelines and limited support to promote international relations can severely impede their effectiveness. smE-MPOWER provides a common coaching job profile, best practice know-how and access to an international learning community of coaches.

An important side benefit of the smE-MPOWER approach is its stimulation of business cooperation between SME on the one hand and large or multinational enterprises on the other. The global significance and scale of such “open innovation” schemes is expected to grow dramatically in the future. As a highly desired resource in RTD consortia, research organizations and institutions of higher education also profit.

The novelty of the approach is its empowerment of SMEs to initiate self-defined, long-term international RTD activities of which they have ownership. As opposed to other initiatives, smE-MPOWER provides companies assistance to define a strategy and select the most suitable funding opportunity. Exploitation channels and long-term effects resulting from collaboration are taken into account when a project concept is being developed.

## 5. Results

### 5.1 The smE-MPOWER SME Mobilizer

Several job profiles critical to the innovation support process were created during the smE-MPOWER project. Two are of central importance. The smE-MPOWER Mobilizer brings SME to a stage of “readiness” to consider engaging in or initiating international RTD projects. Mobilization was identified as a crucial need and a bottleneck to involvement in many European regions. The job’s key activities are outlined below. The COROM method designed by CEGOS was applied to also define expertise required for the activities.

Table 1: Key SME Mobilizer Activities

<b>Mission</b>	The smE-MPOWER Mobilizer encourages SME to innovate and raises their awareness of the opportunities that international collaboration and related smE-MPOWER services hold for them. The 7th Framework Programme is a major but not the only opportunity for collaboration. The smE-MPOWER Mobilizer identifies emerging needs of innovative SME and initiates international RTD partnerships that could meet these needs, create synergies and add value to SME.
<b>Key activity 1</b>	Relate to company managers and other employees in face-to-face coaching sessions in a manner that builds trust and is reliable while considering the issues of business strategy, SME challenges and innovation opportunities.
<b>Key activity 2</b>	Analyze potential for business innovation, eligibility for international collaboration and appropriateness of FP7 funding opportunities suggested by the smE-MPOWER Strategic Information Management team.
<b>Key activity 3</b>	Organize multi-company awareness events to raise awareness of the value of international RTD collaboration for business innovation. Also communicate support available through FP7 and smE-MPOWER. Collect, classify and cluster information from attendees and provide them with a roadmap for action.
<b>Key activity 4</b>	Establish SME relationships and raise awareness of business opportunities created by FP7. Follow up on a growing database of interested SME.

### 5.2 The smE-MPOWER Cooperation Coach

The smE-MPOWER Cooperation Coach is the main job profile in smE-MPOWER and embodies the philosophies of SME orientation, business focus, one on one interaction and open knowledge. Taking over where the Mobilizer leaves off, the coach guides a company through a process of strategic decision-making that culminates in the development of a project concept for internationally collaborative innovation.

Table 2: Key Cooperation Coach Activities

<b>Mission</b>	The smE-MPOWER Cooperation Coach empowers SME and provides them support to successfully participate in (international) RTD project consortia.
<b>Key activity 1</b>	Formalize a common project vision, coherency of goals, expected benefits and contributions of the emerging core consortium (Strategic Interest Group) and design a preliminary project concept in order to assess (EC) funding options and decide how to develop the project proposal.
<b>Key activity 2</b>	Facilitate the project development process by providing support to devise the project structure and project organization, clarification of partners’ roles and budgets and strengthen the position of the SME interests in an IPR agreement.
<b>Key activity 3</b>	Identify and recruit complementary project partners for the core consortium (or emerging project consortia) in order to ensure the project consortium possesses all the necessary competencies and resources to achieve a project’s objectives.
<b>Key activity 4</b>	Mentor the SME during the contract negotiation phase (documents related to EC contracts and Cooperation Agreement) in order to ensure they will start their project under optimal conditions, especially with regard to collaboration and the exploitation of project results.

This standardized approach is based on several reference processes that have been developed and correlate with the job profiles created. The reference process for the smE-MPOWER Cooperation Coach is one example.

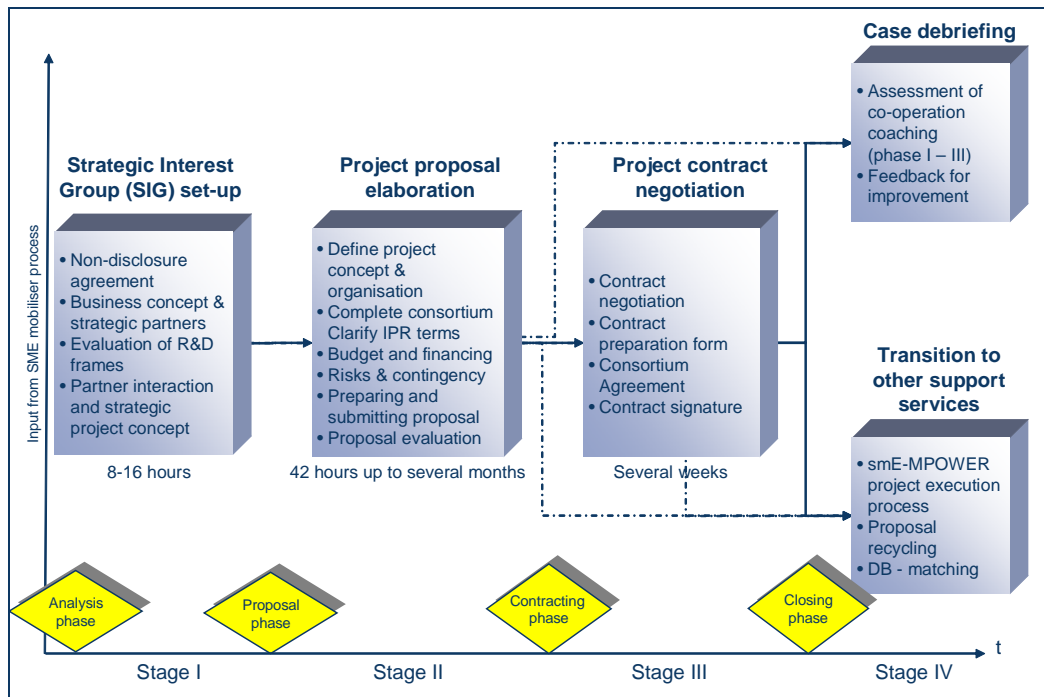


Figure 1: smE-MPOWER Cooperation Coaching Process

Apart from the reference processes and job profiles, an additional asset that was created is the smE-MPOWER community. This is a network of SME coaches who share knowledge and self-developed pragmatic tools based on a common approach to innovation coaching while allowing regional modifications.

## 6. Business Benefits

### 6.1 The smE-MPOWER Message to SME

For an SME to develop a long-term commitment to RTD and innovation it is of paramount importance to focus every effort on the company's priority innovation needs and its potential to innovate. smE-MPOWER empowers SMEs to pursue their self-defined research interests by cooperating internationally. The SME oriented philosophy of smE-MPOWER rests upon the following cornerstones:

- **Business innovation:** Support is focused on developing a company's capacity to generate value through technological or organizational innovation. Innovation could include a company's products and services, processes, customer relations and methods of distribution. The smE-MPOWER service starts by spreading awareness about the need for and scope of innovation as well as analyzing innovation opportunities in an SME.
- **Need-demand driven philosophy:** smE-MPOWER provides a "focal SME" support to strategically organize an innovation project and international consortia around its innovation interests. FP7 is a preferred but not the sole framework for action. Every action starts and finishes with the business interest of the SME.
- **People-to-people approach:** Mobilization and coaching follows an approach geared toward individuals. An smE-MPOWER coach guides a company through a series of customized, small-scale workshops and personally facilitates international partnerships.

This personalized partner search is referral system based on a mutual trust and utilized by the international smE-MPOWER community of regionally established cooperation coaches.

- Open knowledge: When fulfilling their role, smE-MPOWER coaches freely utilize and distribute operational support tools, checklists, templates and decision frames available in the shared knowledge base. An open knowledge license enables all parties to use, modify, share and profit from this open knowledge.

## **7. Conclusions**

### *7.1 Lessons Learned*

European SMEs clearly have innovation needs. They also constitute the foremost breeding ground for new ideas with potential for commercialization. While some SME are aware the FP7 can support their visionary projects, very few believe they can easily access these funding opportunities and rarely pursue them. Empowering SME to strategically think about innovation and their own business innovation is the key to mobilizing them to engage in long-term and self-defined RTD activities. When facing the complexities of international RTD collaboration, SME usually need assistance from professionally equipped and qualified coaches. Such cooperation coaches need to speak the language of SME and therefore build all their support around value creation through business innovation.

While many SME have become reluctant to seek out professional consulting, they tend to be very open to client-centered coaching. Openly sharing knowledge and network resources with a company is a central element of the value provided by a coach. Since coaching to promote cooperation and business innovation only constitutes one element of a complete innovation system, the smE-MPOWER approach should ideally be structurally integrated into existing regional support frameworks. It would then hold potential to empower the regions to achieve the goals of the European knowledge economy.

### *7.2 Exploiting the smE-MPOWER Approach*

Since the EU funded phase of the project has convincingly demonstrated the success of the smE-MPOWER approach, it will be taken forward into the future by the smE-MPOWER community, which is the sole owner of the project's IPR. The community is able to utilize and further develop IPR on an "open knowledge" basis, i.e. all practical know-how generated by the project is freely shared among the community members in a modifiable format.

This community consists of two layers: a growing, distributed, multi-actor network and a lean central support unit. Community members generate value on the regional level by offering services to SME and the regions themselves. The central unit supports the growing circle of regional smE-MPOWER entities that have access to open knowledge generated within the community as well as other services and related training. Structured competence development, training modules and an accreditation system for smE-MPOWER coaches represent a major avenue of future value generation.

Eight of the original ten project consortium members have committed to continue collaboration within this framework. Membership is open to interested parties and subject to an annual membership fee. Business intermediaries with an interest in improving their face-to-face coaching services to SME are the community's target group.

### *7.3 Recommendations*

The EC's intensive incentives and substantial efforts to foster innovation in European SME have led to the emergence of a wide range of SME innovation intermediaries. However, hardly any SME support action has so far developed into a financially independent

autonomous organization or initiative. Rather, a complex middle layer of networks and projects between SME and the EC has emerged, which consumes great shares of EC funding while leaving parts of the innovation project stages uncovered. Thus, better coordination between the various actors and a clear separation of tasks would appear to be a desirable and above all beneficial EU policy objective.

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