



Promotion and support of SME research and innovation in the Surface Finishing and Printed Circuit Manufacturing sectors

BREAKING NEWS...

December 2008

Dear Reader and prospective project partner within PROSURF,

At the end of this year we would like to thank you for your interest in the objectives of PROSURF to enhance technological developments in the fields of surface engineering and printed circuits.

The EU supported period for PROSURF has now ended and the project has completed its final deliverables. A number of features and studies have been set up and we aim to proceed with the realisation of the most interesting topics that have been defined.

In particular, we aim to continue with the following items:

1. Research ideas & Partnering platform

The main FP7 areas of interest to PROSURF are Research for SMEs and NMP, but there are also occasional topics in other themes and programmes such as Energy, Environment and Innovation. The Eurostars programme could also be highly relevant in the future. The main current open call is NMP. A Research for SMEs call, probably the most relevant of all, will be published in 2009. A summary of the most relevant calls expected in 2009 is included with this newsletter.

2. 'NEW R&D OPPORTUNITIES'

This feature on the website will link to the relevant pages on CORDIS and those topics elaborated within PROSURF on the Surface Finishing and PCB sectors, as well as relevant topics within current calls.

3. Promotion of the partnering platform and more research ideas based on the needs of SMEs.

From discussions with SMEs, ideas will be formulated and developed by discussions with research institutes and the relevant calls will be identified, from EU to regional funding possibilities.

4. Continued collaboration

With other Coordination Action like CLEANPROD and the Clean Environmental Platform (sub-platform, chaired by University of l'Aquila) it is intended to influence and submit further topics in the relevant areas for the coming 2010 Calls within Manufature JTI.

We would like to invite you to continue with the work of PROSURF for the benefit of the future development of surface technology.

We wish you all a happy and successful new year,

The PROSURF Team



A summary of the EU funded research programmes of relevance to Small and Medium Enterprises (SME) in the Surface Finishing and Printed Circuit manufacturing sectors is given.

SMEs employ fewer than 250 persons and have an annual turnover not exceeding EUR 50 million, and/or an annual balance sheet total not exceeding EUR 43 million. This definition must take into account any partner and/or linked enterprises.

- **RESEARCH FOR THE BENEFIT OF SMES**

Research for SMEs supports small groups of innovative SMEs in solving technological problems and acquiring technological know-how. Projects must fit into the overall business and innovation needs of the SMEs, which are given the opportunity to subcontract research to RTD performers in order to acquire the necessary technological knowledge. Projects must render clear exploitation potential and economic benefits for the SMEs involved.

This programme is aimed at SMEs that need to 'acquire' research by outsourcing (subcontracting), such as low to medium technology SMEs with little or no research capacity; or research intensive SMEs that need to outsource in order to complement their core research capability. Projects are intended to create new knowledge or produce results with clear potential to improve or develop new products, processes or services for the SMEs taking part.

The SME participants outsource most of the research and demonstration activities to RTD performers and receive in return the technological know-how they need to develop new or improve existing products, systems, processes or services.

The projects may address any research topic across the entire field of science and technology.

Research and technological development activities (RTD) form the core of the project with a major contribution from the RTD performers. SMEs focus on specifications, testing and validation of project results and the preparatory stages for further use.

Demonstration activities (DEMO) are designed to prove the viability of new technologies that offer a potential economic advantage but which cannot be commercialised directly (e.g. testing of product-like prototypes). This is the last development stage before products or processes enter production.

For further information on the 'Research for the Benefit of SMEs' programme, visit:

http://cordis.europa.eu/fp7/capacities/research-sme_en.html

- **EUROSTARS**

A Eurostars project is a European research and development project. It can address any technological area, but must have a civilian purpose and be aimed at the development of a new product, process or service. A Eurostars project is collaborative, meaning it must involve at least two participants (legal entities) from two different Eurostars participating countries. In addition, the main participant must be a research-performing SME from one of the 31 European countries participating in Eurostars.

The role of the SME participants in the project should be significant. At least 50% of the project's core activity should be carried out by SMEs. This percentage can, however, include minor contracting. The consortium should be well balanced, which means that no participant or country will be required to invest more than 75% of the total project costs.

A Eurostars project should be market-driven: it must have a maximum duration of three years, and within two years of project completion, the product of the research should be ready for launch onto the market. The exception to this rule applies to biomedical or medical projects, where clinical trials must be started within two years of project completion.

If you are an SME and investing 10% or more of your full-time equivalent or annual turnover in research and development activities, the Eurostars Programme may well be for you. Participation in



the Eurostars Programme is through the EUREKA network of national offices. In each participating country, different national funding rules apply.

EUREKA's Eurostars Programme is open for funding applications on a continuous basis, with an average of two application submission deadlines each year. The deadlines for 2009 were not available at the time of distributing this newsletter.

To find out who is your local contact and for further information on the programme visit the Eurostars website www.eurostars-eureka.eu/

- **ECO-INNOVATION**

Eco-innovation is a fairly recent business & technology area which may be described as the production, assimilation or exploitation of a novelty in products, production processes, services or in management and business methods, which aims, throughout its life cycle, to prevent or substantially reduce environmental risk, pollution and other negative impacts of resources use (including energy use).

Eco-innovation is at the heart of the Environmental Technologies Action Plan that helps bridge the gap between research & development and the market place for eco-friendly products, technologies, services, processes and management methods across Europe.

Within the framework of the Competitiveness and Innovation Programme, Eco-innovation supports the first application and further market uptake of some of the best eco-innovative products and services in Europe, and helps overcome those critical barriers that still hamper their commercial success.

Submission deadline for the 2009 Call for proposals is envisaged for September 2009.

More information on Eco-innovation is available at:

http://ec.europa.eu/environment/etap/ecoinnovation/index_en.htm

- **COOPERATION**

The **Cooperation** Programme is the heart of FP7 and represents two thirds of the overall budget. It is intended to facilitate collaborative research across Europe through transnational consortiums of industry. Research is carried out under ten themes, each of which has its own dedicated SME strategy. At least 15% of the funding available under the cooperation Programme goes to SMEs.

The theme within Cooperation with the most potential relevance for Surface Finishing and Printed Circuits is NMP – Nanosciences, Nanotechnologies, Materials and New Production Technologies.

However, unlike 'Research for SMEs' and 'Eurostars', the scope of the calls is very specific and there appear to be no direct opportunities in the currently open call (with a deadline of 10th February 2009 for first stage outline proposals). Two topics of possible broad interest are given below:

Oxide materials for electronics applications

Research should target the development and use of oxide materials, with a quality comparable to that achieved in semiconductors, to create systems with emergent phenomena or new functionalities, offering potential for a large range of electronic properties.

Reducing the environmental footprint of energy intensive industries

The overall objective is to achieve radical improvements in both the competitiveness and the environmental performance of energy intensive industries. One of the sectors included is non-ferrous metals, where part of the technical scope is to use recycled materials as feedstock, i.e. waste materials from surface finishing and printed circuit manufacture.

Occasional other areas of interest may arise in the Cooperation programme. For further information visit: http://cordis.europa.eu/fp7/cooperation/home_en.html



FURTHER OPPORTUNITIES†

The **ERA-NET** scheme provides another channel: promoting cross-border cooperation and coordination through the networking of research activities conducted at national or regional level.

Given the recognised need to improve Europe's performance in translating research results into marketable innovative products and services, FP7 will also be supported by the '**Competitiveness and Innovation Programme**' (CIP), which focuses on a range of downstream activities and on improving SME access to alternative sources of finance.

WHAT'S IN IT FOR SMES?

The European Commission's Framework Programmes for Research, Technological Development and Demonstration offer important research opportunities to SMEs that want to leverage their research activities, to make them go further and do more while spreading or reducing the risk of failure. This leverage comes from the collaborative nature of EU-funded research, which brings together universities, research organisations and enterprises of all sizes as partners to work on research challenges together. In this way, as well as receiving funding to support research activities, an SME gains access to the necessary leading edge research resources that can offer opportunities for innovation of a scope and scale that would not be available otherwise.

WHAT ROLE CAN I PLAY IN COLLABORATIVE R&D?

SMEs often participate in FP7 projects as end-users that want to develop new products, processes and services or make improvements. Naturally, they will have a role in making prototypes, testing and demonstrating the results of the research. However, it is important that end-users contribute from the start of the project to ensure the requirements of the end-user are clear and can guide research and development activities. In addition, there are roles in the dissemination of the findings and the management of the project. SMEs should lead appropriate work packages and in some cases will be the lead coordinator of the whole project.

The following table summarises the opportunities offered in Framework Programmes – but of course this is not definitive and your role will be greatly influenced by your needs

Target Participant	Potential Opportunities
Universities, Public Research Centres, Private Research Centres	<ul style="list-style-type: none"> ▪ Targeted research within multi-partner consortia ▪ Individual basic research projects ▪ Applied research for benefit of SMEs ▪ Scientific networks (exchange, coordination & integration) ▪ Research by public-private partnerships ▪ Incoming & Outgoing Fellowships ▪ Access to research infrastructures ▪ Conferences, studies & exchange of best practice
Individual Researchers	<ul style="list-style-type: none"> ▪ Individual basic research ▪ Fellowship for undertaking research abroad
Large Companies, Industry	<ul style="list-style-type: none"> ▪ Targeted research within multi-partner consortia ▪ Individual basic research projects ▪ Research by public-private partnerships ▪ Incoming & Outgoing Fellowships ▪ Access to research infrastructures
SMEs	<ul style="list-style-type: none"> ▪ Targeted research within multi-partner consortia ▪ Funding of R&D projects outsourced to competent research partners ▪ Incoming & Outgoing Fellowships ▪ Conferences, studies & exchange of best practice

Associations, Chambers of Commerce, Non-Governmental Orgs	<ul style="list-style-type: none"> ▪ Targeted research within multi-partner consortia ▪ Funding of applied R&D outsourced to competent research partners ▪ Conferences, studies & exchange of best practice
Public Authorities	<ul style="list-style-type: none"> ▪ Multinational coordination of national research programmes ▪ Exchange of best practice

TYPICAL SME ACTIVITIES

Projects require a mix of different activities to achieve its objectives and goals. FP7 funds strategic research from fundamental/basic research, through applied research to the construction of prototypes and demonstration. A project should have a clear exploitation and dissemination plan as to how the project results and findings are to be used in the future and whether further investment is required.

SMEs can be involved at any stage but it is more likely that involvement would be greatest closer to market. However, additional steps with further investment will be required to take the results of FP7 research to products for market. The table below gives an example of different SME involvement in a Framework Project:

Attribute	Low Tech SME	High Tech SME
Activity	Innovation	R&D
Potential Role	End User (Exploiter)	Technology Provider
Period of Involvement	Later on in project	From start of project
Type of Project	Trial (applications)	Enabling Technology
R&D Capability	Low	High
Suitability for R&D	Medium	High

FURTHER INFORMATION

Further general information can be obtained at the European Commission Research website for SMEs: http://ec.europa.eu/research/sme-techweb/index_en.cfm

PROSURF invites you to help shape the technological development for future markets and applicants in YOUR sector...

Help doesn't stop here, if you have any further questions or require any advice or assistance relating to the PROSURF project or European project opportunities, then please contact the project team.

