ORGALIME

Position Paper

Brussels, 3 November 2010

European R&D and innovation policies, including industry demands for Framework Programme 8

1. The engineering industry is committed to R&D and innovation activities at European level

The engineering industry is the largest manufacturing sector, employer and exporter of Europe and over the long term has provided growth and regular increases in employment. The industry plays a strategic role in the economy of Europe: it is both a major purchaser of materials produced by the primary transformation industries and of services, as well as a supplier of capital goods and services to all sectors of the economy:

- the energy sector, the primary transformation industries - foundry, steel and non-ferrous metals sectors
- the transport industry including the automotive, aeronautics and rail sectors
- agro-industry, agriculture and the food industry in general
- the major processing industries including the chemical, petrochemical and plastics industries
- the housing and buildings sector
- and also the engineering industries themselves.

In brief the engineering industries are at the core of Europe's industrial fabric: all other production and service sectors depend on the equipment, technology and innovations of the engineering industry to flourish and to develop. The engineering industries thus play a key role in the competitiveness of the European economy as a whole.

Research, technological development and innovation are essential to maintaining the worldwide technological leadership that our industry has acquired in many areas. European Research Policy plays a significant role in underpinning this position.

Many companies can benefit from taking part in the European Research Framework Programme. One of the programme's key strengths for the business community comes from the possibility to improve a company's own R&D by means of external resources, and by gaining a knowledge-based network across Europe.

Orgalime, the European Engineering Industries Association, speaks for 33 trade federations representing some 130,000 companies in the mechanical, electrical, electronic, metalworking & metal articles industries of 22 European countries. The industry employs some 10.6 million people in the EU and in 2009 accounted for some €1,427 billion of annual output. The industry not only represents more than one quarter of the output of manufactured products but also a third of the manufactured exports of the European Union.

www.orgalime.org

ORGALIME aisbl | Diamant Building | Boulevard A Reyers 80 | B1030 | Brussels | Belgium
Tel: +32 2 706 82 35 | Fax: +32 2 706 82 50 | e-mail: secretariat@orgalime.org
Ass. Intern. A.R. 12.7.74 | VAT BE 414341438

Although we have witnessed a decline in industry participation in FPs (the downward trend has continued steadily from FP4 to FP5 and FP6, slipping from 39% in FP4 to 31% in FP6), the engineering industry is nevertheless of the opinion that it is still worth investing in European R&D and innovation projects and looks optimistically to the future: FP7 brought a number of improvements and simplifications to legal issues, implementation rules and processes. Some measures have already contributed to reduce the time-to-grant and the effort to manage projects. However, as mentioned in the Communication "Simplifying the implementation of the research framework programmes", access to programmes and preparation of proposals are still too difficult, especially for SMEs and newcomers.

Furthermore through the creation of European Technology Platforms (ETPs), industrial involvement has increased in all road mapping and priorities setting activities. Since the launching of the recovery plan in 2008 and the associated Public Private Partnership (PPP) initiatives, another big step forward has been achieved. The results of the first Factories of the Future (FoF) PPP calls show that topics proposed are of clear interest for industry and in particular for SMEs. A more reasonable success rate, a better balance between industrial and academic participation, and less oversubscription were also identified as improvements. Future calls in FoF will hopefully confirm this trend.

The creation of long-term partnerships such as public-private partnerships with participation of innovative multinational companies, SMEs, academia, government research agencies and government sectors is a step in the right direction, and the EU needs to build upon these positive experiences. For industry such initiatives are considered as attractive, not only because they will hopefully work in a more flexible manner compared to traditional instruments, but also because they provide a framework with long-term objectives that should lead to quasi-permanent infrastructures.

2. Orgalime concerns about past EU Framework Programmes and suggestions for future European R&D and innovation policies

2.1 Current discussion about the overall guiding principles for spending public money for R&D and innovation

Orgalime strongly supports current discussions regarding the "grand societal challenges" which will be reflected in the negotiations on FP8. From these discussions on (i) energy security, (ii) climate change and environmental protection and lastly (iii) the ageing society and healthcare, one can expect that some restructuring of the 'Cooperation' theme and other themes within the Programme will take place.

However, a central challenge which Europe must overcome over the following decade is overlooked in current discussions: maintaining the standing of European industry in a globalised world and especially in the face of fierce competition from Asia and America. "Staying competitive and ensuring employment" is therefore a grand challenge in itself and successful accomplishment, based on innovation and commercialisation of research results would automatically benefit and enhance the grand societal challenges.

ORGALIME aisbl | Diamant Building | Boulevard A Reyers 80 | B1030 | Brussels | Belgium
Tel: +32 2 706 82 35 | Fax: +32 2 706 82 50 | e-mail: secretariat@orgalime.org
Ass. Intern. A.R. 12.7.74 | VAT BE 414341438

2.2 The overwhelming bureaucracy and complexity of different intervention mechanisms

Past Framework Programmes have suffered from high levels of bureaucracy and complexity and were considered by many companies as generally unfit for industrial participation. We welcome the commitment of the European Commission to simplify administrative procedures and fully support efforts that lead to speeding up the entire process from the definition of research priorities to the application phase, the evaluation process and the negotiation of the terms and conditions of project-related funding in regard of upcoming FP8. It is with the intention of suggesting concrete ideas that we provide the following comments and concerns of companies regarding European R&D and innovation policy.

Today, the current institutional system seems caught up in itself, paralysed by the political need to avoid risks rather than managing them in a modern way. It is no surprise that such an environment does not encourage an increase in the effectiveness of the Framework Programme by, for example, increasing speed and reducing transaction costs. Economically speaking, the transaction costs associated with the FP approach have grown completely out of proportion, with the marginal costs of controls, checks and balances exceeding their marginal benefits.

Key constraints hampering breakthroughs in simplification lie in the Financial Regulation. The currently observed zero-risk, zero-trust attitude may stem from the provisions on personal financial liability for staff officers. Use should therefore be made of the forthcoming revision of the Financial Regulation to create a partial exemption for research and innovation, in order to account for a certain degree of risk that is inherent in these research activities. Furthermore, the provisions on personal financial liability for Staff officers in the Financial Regulation and the Staff Regulations need to be eased.

Furthermore, companies report that at present the divergence between the various programmes within the different EU research and innovation programmes managed by different DGs is too wide. A great variety of application procedures, cost eligibility and cost reporting rules exist . Although each programme must be able to work according to its own goals and may have instruments that are specific to it, a standardised set of financial rules and procedures used with the same interpretation by all EU RDI programmes would help.

The question concerning advantages and disadvantages of a “one size fits all” versus a “tailor-made” approach is not easy to answer. The solution needs to be a balanced approach between the two extremes. Going too far towards a tailor-made approach would lead to a system that is too complex and fragmented, and going too far towards the one size fits all approach would be too inflexible. From an industrial point of view, the aim must be to create a system that is as transparent and simple as possible and, at the same time, is flexible and adaptable. It is paramount importance to reduce complexity as far as possible and, where different instruments exist, they should be complementary.

2.3 Collective research and the research for the benefit of associations

Our member associations have reported that Collective research and the new research for the benefit of associations have turned out to be a disappointing instrument. They require substantial financial input from the associations, the financial model of the instrument is complex, and information is often misleading (it is often not clear whether the contribution would be “in kind” or in form of money transfer). A better financing mechanism that is established in consultation with the associations would improve the efficiency of this instrument.

ORGALIME aisbl | Diamant Building | Boulevard A Reyers 80 | B1030 | Brussels | Belgium
Tel: +32 2 706 82 35 | Fax: +32 2 706 82 50 | e-mail: secretariat@orgalime.org
Ass. Intern. A.R. 12.7.74 | VAT BE 414341438

2.4 Dissemination and exploitation of R&D results

An important gap still remains between project results and their potential industrial exploitation on the European market, even in very successful projects. A comprehensive approach is needed in FP8, in which research activities and clear steps towards industrial exploitation are integrated within the same project. We would therefore welcome if call topics would be launched where demonstration should represent a minimum of the project's activities.

A better exploitation of the potential synergies between the FP and CIP should be put in place in order to address technical and business objectives at the same time. A better channelling of research projects funded by R&D Framework programmes and by CIP for further innovative work and business exploitation could considerably improve the efficiency and industrial impact of EU R&D measures.

2.5 Orgalime suggestions regarding challenges of the SMEs and "mid-range" companies

Unfortunately we see very little improvement in providing SMEs with easy access to EU R&D funding:

- Projects are becoming too big for SMEs; the consortia are too large (SMEs are reluctant to participate under these conditions). Joining a large group and sharing knowledge is not straightforward, especially for newcomers.
- In the different work programmes the topics address exclusively breakthrough innovation issues. Access to the topics of interest to SMEs has not been improved; the programme parts are not "transparent" enough.
- In addition to technological innovation, market innovation should also be considered (transferring existing technologies to new applications).
- The time span between approval of the project and the receipt of money is still too long. Final payment after submitting the project reports is also too long.
- The documentation and amount of information required to participate in the projects is overwhelming for SMEs.

Recently, some crucial questions have been raised on maintaining the SME-specific measures in the FP8 programme. An impact assessment of these measures was performed by DG Research. Experts highlighted some recommendations (*"Impact assessment of the SME-specific measures of the Fifth and Sixth Framework Programmes for Research on their SME target groups outsourcing research D6 – Final evaluation report"*):

- There is a real need to keep an SME-dedicated R&D support measure at EU level even though the channels for transferring new technologies and knowledge are very often managed at regional or even local level. It is especially important to address:
  - technological needs which are common to a community of SMEs and which require a critical mass at European level
  - technological problems which cannot be solved with available capacities at national or regional level
- The bottom-up approach of the SME measures should be preserved because the problems encountered by SMEs are very specific and cannot be addressed by a directive approach as for thematic programmes (NMP, ICT…)
- Various SME policy tools exist today (FP-Capacity, Structural fund, Competitiveness and Innovation Programme (CIP), EUROSTARS-Art 169, SME related Eranets) with some overlaps. Consistent and better alignment of these policy tools will improve their visibility for SMEs.

ORGALIME aisbl | Diamant Building | Boulevard A Reyers 80 | B1030 | Brussels | Belgium
Tel: +32 2 706 82 35 | Fax: +32 2 706 82 50 | e-mail: secretariat@orgalime.org
Ass. Intern. A.R. 12.7.74 | VAT BE 414341438

We also encourage the testing of new methods. For example, technological development and demonstration activities in the field of production technologies for sustainable and competitive European factories could be integrated in the FoF programme. A new instrument could be developed based on a bottom-up approach for industrial research needs and 10% to 20% of the funding dedicated to FoF calls (open calls) could be dedicated to it. This additional opportunity should help to integrate the specific research needs of SMEs within FoF.

Another topic which is of great concern since many years for industry is the rigid SME-definition of the EU. Mid-range companies with between 250 and 1,000 employees are often neglected in public policies that promote research and innovation. Unfortunately, this is also the case in FP7. We encourage the Commission to review the parameters of the SME definition, which were drafted many years ago and do not take into account that the business environment has changed. We urge the Commission to allow companies that employ up to 1,000 employees to participate in these projects. The rigid SME definition causes also many practical problems: regularly there is for example a lack of clarity regarding joint ventures (if for example one single company, which is part of joint venture, would like to participate in a project).

2.6 The problem of low success rates

Contrary to the high success rates of many R&D programmes at national level, continuously low rates in EU research funding could be among the biggest obstacles to greater participation of industry in European Framework Programmes.

In the case of production technologies, which are mostly supported through the thematic priority "NMP", the situation is particularly difficult. A review of FP6 by the Centre for European Economic Research[1] in May 2009 reveals that the thematic priority NMP suffered from the lowest success rates of all areas in European research funding. Only 10% of the requested aid was paid out to projects in this field. This level is in stark contrast to the success rate within FP6 in total (23%) and some single thematic priorities such as energy (33%), space (36%), aeronautics (39%), nuclear (43%) and environment (44%).

FP8 topics and money allocation should be more focused and better managed in order to reduce the current oversubscription of the various calls. Oversubscription, lack of clear focus and low success rates are the major factors which lead to the reluctance of industry (SMEs) to participate in European research activities.

It is also of paramount importance to strive for a healthy balance when developing the EU's financial perspective for the years 2014-2020. If the EU is serious about developing a smart and sustainable economy, R&D spending should not be affected by other policies, for example agriculture. On the contrary, a major budget increase for FP8 and CIP is necessary. Furthermore, the importance of Regional funding for R&D cannot be neglected: for example, in some EU member states regional funding finances 30% of all research projects, whereas only some 6% are coming from the Framework Programme.

With regard to having easier and greater access to funds, we believe that Member States should work together in order to overcome the fragmentation of their venture capital market. This fragmentation prevents European industry from taking full advantage of the possibility to raise funds for creating innovative products.

[1] Centre for European Economic Research (ZEW):"German participation in the Sixth European Framework Programme for Research and Technological Development", 2009, page 22.

ORGALIME aisbl | Diamant Building | Boulevard A Reyers 80 | B1030 | Brussels | Belgium
Tel: +32 2 706 82 35 | Fax: +32 2 706 82 50 | e-mail: secretariat@orgalime.org
Ass. Intern. A.R. 12.7.74 | VAT BE 414341438

2.7 Fragmentation of Commission departments responsible for production research

A strategic European approach to supporting the development of next generation production technologies is hampered by an organisational fragmentation of Commission departments that are partially, although never fully, responsible for production research. Within the Specific Programme COOPERATION alone, responsibility for the promotion of production research is shared by eight different Directorates that belong to three separate Directorate-Generals.

Cross-DG involvement of the EU Commission is necessary and the establishment of a subgroup of EU Commissioners with a stake in research and innovation policy is a step in the right direction.

3. Exploring new ways: Public-Private Partnerships and JTIs as complementing initiatives beside traditional instruments

Orgalime welcomes the Commission's decisive willingness to explore new funding and managing models at European level, notably the launch of JTIs and PPPs. So far our experience with PPPs is very good. The 'Factories of the Future' public private partnership, for which we have, together with ManuFuture, founded the European Factories for the Future Research Association (EFFRA), has already attracted many interested European partners from industry and academia. EFFRA is communicating the research priorities of its members to DG Research and DG INFSO by means of an Ad-hoc Industrial Advisory Group (AIAG) created by the Commission. Analyses of the first call for proposals suggest a quick processing of research proposals, a high success rate and strong involvement from industry and SMEs. Industry is eager to work closer with the Commission on developing the industry-relevant work programmes and interesting calls.

We are however concerned that the current Financial Regulation appears less suited for dealing with such PPPs. We welcome that a JTI Sherpa Group has been put in place at the request of the Commission President. The group developed suggestions for creating the ideal environment for public-private partnerships. If adopted, the proposed changes to articles 53 and 185a will give greater flexibility to public-private management bodies to which the Commission is outsourcing the management of EU funds. This will allow the establishment of a framework that fits the purposes of setting up and implementing future PPPs and JTIs. Speed is crucial, therefore we urge the Commission, the Parliament and Council, to implement the JTI-Sherpa report suggestions without delay.

We very much welcome the Commission Communication "Europe2020 Flagship initiative Innovation Union", which confirms that the Commission's intention is to engage further in public private partnerships. The Commission announced the launch of European Innovation Partnership. We hope that the engineering and manufacturing industries will be reflected in many European Innovation Partnerships and we are eager to provide input and our networks for these new initiatives. Orgalime also very much welcomes that the European Commission recognises advanced manufacturing technologies as a "key enabling technology".

4. Education

Research, innovation and education need to be addressed together. The EU needs to stimulate an interest in Maths, Science and Technology among the youth. Also mobility between industry and academia needs to be stimulated and we would welcome if programmes that facilitate the international and inter-sectoral mobility of students and researchers (ERASMUS, Marie Curie actions) would be further developed.

ORGALIME aisbl | Diamant Building | Boulevard A Reyers 80 | B1030 | Brussels | Belgium
Tel: +32 2 706 82 35 | Fax: +32 2 706 82 50 | e-mail: secretariat@orgalime.org
Ass. Intern. A.R. 12.7.74 | VAT BE 414341438

We also welcome the establishment of the European Institute of Innovation and Technology and see it as a step in the right direction in order to integrate the three sides of the “knowledge triangle” which are education, research and innovation.

5. Conclusion

Orgalime believes that European research, technological development and innovation policies should focus on developing framework conditions that stimulate innovation, entrepreneurship and thus growth and employment. If Europe’s goal is to achieve sustainable growth and competitiveness, this can only be accomplished by improving *the entire research and innovation system*. This includes not only the capacity to create new knowledge (research), but also an understanding of when, where and how this knowledge can be used and applied on the market (innovation). We need a cultural change in Europe towards a society where innovation is encouraged. That is why joint work that involves industry, public authorities and academia is essential. In this respect, the EU must strengthen its leading role.

For questions and comments please contact:
Željko Pazin, Senior Adviser
firstname.secondname@orgalime.org
Tel: +32 2 706 82 38