

Brussels, 20 March 2017

Orgalime preliminary views on shaping the future FP9

Orgalime is the prime voice of the EU engineering industry as whole. This is a growing industry both in terms of jobs and turnover, with turnover reaching 1,900 billion euro and employment 10.9 million people in 2015. Growth in our industry arises from the innovative products, processes and systems which our companies develop in the EU and then market worldwide.

Our sector is at the heart of the transformation currently taking place in the manufacturing industry, which centres on the merging of manufacturing and data technologies supported by new business logics and models. Additionally, our sector is an enabler of growth and competitiveness in other industries. We are at the core of strategic European value chains and of the crucial challenges, such as sustainability and energy, which are facing the EU today.

European engineering companies are still maintaining and even developing their market shares in many market segments; however, competition in particular from Asia and America is fierce. The high level of investment in research, intangibles and innovation in these regions puts the European engineering and manufacturing industries under high pressure.

Massive European R&D investment, both private and public, notably in **applied research** is one of the key answers to keep up with global competition. In this context, the European Framework Program plays a crucial role.

That is why Orgalime believes that the upcoming **Framework Programme 9 (FP9) needs to concentrate on the competitiveness of Europe's manufacturing and specifically engineering industry in a globalised world**. FP9 should contribute to **making the EU once again a top destination for manufacturing investment**, leading to an increase of sustainable and advanced manufacturing in Europe.

FP9 needs to be a magnet for global research and innovation forces and contribute to **transforming Europe into the world's innovation centre**. Catalysing these global energies will support the engineering industry's success in creating a leap in value for its customers and society and stay highly competitive.

Orgalime, the European Engineering Industries Association, speaks for 41 trade federations representing the mechanical, electrical, electronic, metalworking & metal articles industries of 24 European countries. The industry employs some 10.9 million people in the EU and in 2015 accounted for more than €1,900 billion of annual output. The industry accounts for over a quarter of manufacturing output and a third of the manufactured exports of the European Union.

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Orgalime has identified the following requirements as aiming to make **European Research Policy, notably through FP9, a key supporting instrument for the EU's growth and jobs strategy:**

- **Industrial collaborative research must be continued under FP9** and should aim at increasing the competitiveness of European companies. Excellent research and innovation cooperation at a European level is needed more than ever before to make the ongoing technological transition a success for both the European industry and society. The European Commission should notably **support production technologies** and the implementation of digitisation into all products, services and processes and the beneficial shift towards new business logics.
- **The three pillars structure of Horizon 2020 is appropriate and should remain that way in FP9 with a fair balance between the three.** Keeping LEIT independent and even reinforcing it in the coming years will send a strong message to the global market players, showing a strategic ambition for Europe and a real vision for the future of manufacturing in the EU. This is perhaps an element which is lacking today compared to our main competitors which have all developed clear manufacturing strategies as a core part of their policy vision. Consequently, Orgalime strongly opposes any merger of the Leadership in Enabling and Industrial Technologies (LEIT) and the Societal Challenges pillars. We think that for Societal Challenges, the industry's important role in contributing to resolve current and future challenges should be further recognized. Additionally, excellent research and excellence in people in Europe are fundamental for our industries. We need to keep strong and competitive universities in Europe in order to guarantee globally leading research and the future supply of highly and adequately skilled people.
- **The excellence principle should be kept.** The European Commission has many other programmes for example to support capacity building. Only with excellence can we ensure that future products and solutions will win in the face of global competition, allowing companies to continue growing and creating jobs in Europe.
- **Member States also need to pursue the objective of the Lisbon strategy and provide sufficient research funding in their countries. FP9 must not replace national Research and Innovation budgets but act as a multiplier.** Member States can best fund certain research at national level: SMEs (when being a sole beneficiary) will benefit more from national funded research than from EU funds. FP9 must focus on activities with a substantial European added value and not compensate for insufficient national funding.
- **The European added value which is generated through consortium dynamics, should be kept. FP9, therefore, should foster the European added value by enabling European consortia and cooperation. The intangibles created thanks to the cooperation of FP consortium members are significant and unique.** Consequently, the EU should limit single-beneficiaries support measures in FP9. The cooperation of SMEs and midcaps, large companies, universities and RTOs is the most important asset of European Framework programmes. Larger industrial European companies should continue to be funded in their research and innovation efforts and should be part of projects, as they are an integral part of the industrial value chain.

The consortia are part of and crucial for the industrial ecosystems: indeed, they enable risk sharing between participants. If FP9 would not have a strong focus on industrial collaborative research, there is a risk that industrial companies turn away from EU programmes and focus on national systems only, thus harming the creativity generated out of the collaboration between people of different cultures and knowledge. It might

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also undermine the support from one of the core stakeholders that industry represents in the Commission's jobs and growth agenda.

- **Working in Public-Private Partnerships (PPP) is an efficient way to tackle challenges affecting industry and society.** The concept was established as a response to the economic crisis in 2008 that hit industry, employment and the sustainability of the EU severely. The PPP model is considered as a success and Orgalime firmly believes that the PPP concept is an efficient and effective model which provides demonstrable European added value.
- **The Factories of the Future (FoF) PPP, which is open and proving attractive to a very wide range of manufacturing companies, including small companies, is adding value to both the engineering industry and all manufacturing sectors of Europe's economy and should be kept in FP9.** This instrument supports the development and integration of enabling technologies, such as innovative technologies for adaptable machines or ICT for manufacturing. FoF has demonstrated as being instrumental to manufacturing companies in their strive to modernise. Even more important, FoF is providing a bridge between more traditional manufacturing technologies and digital technologies, which are at the heart of the renaissance of manufacturing in the EU. Work at the European level on the FoF PPP has triggered the creation of similar PPPs at national level. These activities are serving to strengthen Europe's industrial competitiveness and sustainability at a time when it is particularly needed.

This instrument is very much valued by industry and it should continue receiving financial support from both budget lines, those managed by DG RTD (NMPB) and DG Connect (ICT). FoF and its large community stand ready to collaborate with the European Commission and Member States to speed up the modernisation of European manufacturing industries.

- **Grants and loans do not fulfil the same goals and are not exchangeable.** Indeed, grants are needed as a boost for excellent research and innovation; this applies to demonstration and development activities as well as to basic research. Loans and equities are important sources for financing development projects, however at another stage. Whereas grants enable research and innovation in a consortium, loans make it almost impossible to finance a consortium.
- **Europe needs a strategic approach around how to enable/ accelerate the use of and access to crucial/important test and demonstration facilities.** The possibility to test and demonstrate research results, new solutions or concepts is, and will be even more decisive in the future, to meet the needs from customers and society as a whole. FP9 should include a strong focus on supporting the use of such facilities across the programme with significant funding reserved. Activities would include higher Technology Readiness Levels (TRLs), therefore they should be flexible enough to accommodate short-term needs of industry and the agility needed in the fierce global competition. Therefore, **significant funding for test and demonstrations facilities needs to be reserved within FP9.** These facilities must be included throughout the programme. These facilities are a good approach to make use of previous research results. Their dedicated calls are located on higher TRLs, therefore they should be flexible enough to accommodate short-term needs of industry and the agility needed in the fierce global competition.
- **Innovation projects and close-to-market initiatives require more flexible instruments.** Instruments such as the Fast track to Innovation (FTI) are steps in the right direction and

must be expanded. The EU needs to continue looking for flexible instruments that reflect the way innovation works, as long as they are complementary to existing instruments. We appreciate the efforts of simplification and wish to see this dynamic continue.

- Bringing innovation to the market and delivering impact is not a linear process where companies go from A to B with a secure outcome. Innovation is **a risky business**, and this must be taken into account when predicting impact. **Impact reporting is necessary, but it needs to stay realistic.**
- **A more progressive and appropriate approach should be taken in line with the TRL.** Lower TRLs (2-5) should be used for ambitious and risky projects. For lower TRLs, basic research funding schemes as well as instruments like FET have proven appropriate. Higher TRLs should preferably be used for smaller and more flexible projects. However, important and ambitious large scale close-to-market projects with high TRLs should be funded using specific instruments (such as IPCEIs) which can provide more flexible legal frameworks that allow to specifically tailor actions to the specific project's needs.
- **Funding rates should decrease when TRLs get higher**, to avoid market distortion. An additional positive consequence is that a higher financial participation of the organisations involved in the projects will ensure the commitment of these participants.

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