



Evidence from MIRA

Research and Development Call for Evidence Questions

Impact on the national interest

1. Where has EU action had a **positive impact** for the UK on research, technological development, innovation or space? What evidence is there for this? Has EU action encouraged national action in any areas?

The European automotive industry has an excellent track record in innovation investing 4% of annual turnover in R&D (€20billion). It is the largest private investor in R&D in the EU, covering approximately one fifth of Europe's total private R&D expenditure. In vehicle design, the numerous innovations leading to increased functionality, safety and reliability whilst reducing costs are dramatic.

Co-ordinated EU action such as the framework collaborative research programmes and legal frameworks have become key drivers of this innovation in the industry resulting in the EU automotive industry becoming a global leader in technological development. For example the European Emissions Standards which first came in to force in 1993 to control vehicle exhaust emissions and by 2014 will reach their 6th generation (EURO6). Since their introduction these standards have led to dramatic reductions in most exhaust emissions from vehicles through technological development and innovation. The UK has benefited significantly from this European scientific innovation eco-system.

The need to innovate in order to meet such demanding legal frameworks within the EU has been a key factor in fostering a close co-operation between car companies, their suppliers and the EU with large sums of public money committed to joint, pre-competitive strategic research via EU programmes.

2. Where has EU action had a **negative impact** for the UK in these fields? What evidence is there for this? Has EU action prevented potentially useful national action in any areas?

European state aid regulations applied in the UK can sometimes act as a blockage to innovation by hampering the opportunities for existing industry players (which have the competences and value chains established) to secure capital grants for higher risk technology projects. Too often this seems to default to capital grants for universities rather than industry.

3. How, and where, has UK engagement with partner countries or international bodies, both within and outside the EU, been helped or hindered by EU involvement?

Example EU instruments where UK engagement with partner countries has been helped are "Networks of Excellence (NoE)" and "Co-ordination and Support Actions (CSA)". NoE's have developed strong linkages between areas of excellence across the EU focussed on emerging trends (which will form future grand challenges). They have also stimulated the exploratory activities needed to prepare for research and innovation to address these emerging trends. CSA's support activities have helped with awareness building and knowledge management on the results of EU research and technology development projects.

4. What benefits or difficulties has the objective of a European research area (ERA) delivered for the UK?

UK Engagement with partner countries has benefited significantly from the EU Framework Programmes (most recently FP7) for research and technological development which bundle all research-related EU initiatives together in a common framework and are the main EU instruments for funding research in Europe. These programmes have been instrumental in creating a scientific base for tackling pan-European (and global) grand challenges and, together with EU policy instruments have driven innovation needed to tackle them and generate the economic growth opportunities for EU companies.

5. How has the EU sought to coordinate the policy instruments at its disposal across different policy areas to create an enabling environment for researchers and innovators? How successful has this been?

In our sector (road transport) what is particularly impressive is the creation of a coherent and dynamic strategic framework for advancing research and development, driving deployment, informing and guiding policy and raising awareness. The EU has successfully introduced organisational "instruments" to achieve this level of strategy and these include various EU industry organisations (with significant involvement by UK companies) such as EUCAR, ERTICO, EARP and many more. The effectiveness of such organisations is seen in their co-ordination activities focussed on achieving the level of strategy needed not just to focus the EU funding but the much greater amounts of industry funding leveraged by the EU funding. By developing effective frameworks and processes these organisations have helped ensure that EU research planning and exploitation is not sub-optimal and is closely linked to deployment and policy development.

Future opportunities and challenges

6. What could the EU most helpfully do to promote scientific and technological progress and innovation (including in the space sector)?
- How could the EU use its existing competence differently to deliver more in your area?

Increase the focus on research, development and innovation as a driver for economic growth in the application of EU Structural Funds such as ERDF.

Accelerate the simplification process of the EU research and innovation programmes to help increase industry engagement.

- How might a greater or lesser degree of EU competence deliver more in your area?

Greater focus on improving linkages between EU research and policy instruments to rapidly drive deployment of technologies to help deliver advanced technology competencies in the EU in time for developing global markets. A good EU template for this is the use of emissions directives (EURO6) another is the EU consumer organisation EuroNCAP both of which have had a major influence in driving innovations to improve vehicles. There are opportunities for a similar approach to be taken with technology areas such as Intelligent Transport Systems for example.

- How could improvements to existing EU activities make them more effective and efficient?

Increased exchange of information and more coordination between RTD projects would result in a better leverage of the public funds invested – for example this could be achieved by increasing budget share for NoE's and CSA's

7. Where might future EU level action be detrimental to your work in this area?

Reduced or diluted funding for collaborative research and innovation activities.

8. Where might action at national rather than EU level be more appropriate / effective?

There are perceived barriers to entry at an EU level for SME's to engage directly with EU innovation instruments. A nationally led approach for SME innovation, linking through to EU instruments as appropriate, would be most effective.

9. How could EU and national policies and funding streams interact better?

Raise profile of UK instruments for facilitating the involvement of UK companies in EU research projects, industry associations and networks of excellence.

10. What impact would any future enlargement of the EU have on this area of competence?

There would be a greater level of competition for already limited EU research, development and innovation funding

11. Are there any other points you wish to make which are not captured above?

No