

AIRI CONTRIBUTION ON FUTURE FP10

Important reflections are underway in EU on Research and Innovation (R&I) in preparation for the next Framework Programme (FP10). AIRI intends to contribute to the debate as an actor in the Research and Innovation ecosystem with more than 50 years of experience. Our contribution is divided into a first part relating to the Strategy, a second on Implementation and a third on Themes/Contents. A short synthesis of a larger and detailed analysis with factual suggestions is provided below.

STRATEGY

Basic and applied research, essential to safeguard European strategic and technical capabilities, is a driver for economic growth and high-quality jobs, providing an important contribution to the trade balance. Research ensures Europe's strategic autonomy in terms of technologies and know-how with relevant societal impacts. Considering growing competition from non-EU countries, **research must have a pan-European scope and be supported with adequate tools and funding. FP10 will be the "place" to synchronize EU technological agendas among and within sectors** and, more broadly to strengthen EU industrial sovereignty, be the European R&I reference for economy and societal choices.

The future EU R&I Strategy shall necessarily make important choices on content and adopt implementation tools adequate and competitive with those available in the rest of the world.

To address the twin green and digital transition FP 10 shall create an R&I eco-system competitive with other regions, going beyond the internal competition within the EU. **Most sectors of EU research are strongly challenged by foreign research initiatives strongly supported by state aid:** United States and China adopted large public funding programs to finance R&I and large research infrastructures for testing and development at high-Technology Readiness Level. **Without strong public support, EU researchers will not be able to compete effectively, especially in the transition phase - essence of innovation - from research to introduction of research results in a new product,** idea or process, as extensively reported in the Draghi report and Heitor working group outcomes.

Innovation, understood as the transition from scientific and technological results to a complex product, produces an incremental economic spillover effect and the growth of local economies where it is performed, improving EU economic conditions and strategic resilience. **Innovation will be a key factor to support EU strategic autonomy, its international technological leadership and competitive strength.** No EU sectorial value chain can address alone the combined energy and digital transition and global competitiveness in an unstable framework without strong public support. **All European actors need continuous support and regular funding with adequate funding rate:** research centres and universities as source of new and original ideas, SMEs and start-ups that develop enabling technologies, larger industries that can carry out complex and ambitious projects.

IMPLEMENTATION

Future FP 10 shall provide sectoral value chains with a set of simple, fit-for-purpose implementation tools, avoiding major overlaps and being complementary, customizable to sectorial own features and complexity in terms of type of results, maturation stages, size and costs, regulations.

In principle, **the three main implementation tools of Horizon Europe -collaborative research, partnerships, missions- shall be maintained** introducing corrective measures aimed at improving the operating environment, synergies and collaborations between tools and stakeholders:

- A budget of **200 B€** to cope EU's ambitions on strategic leadership in the current unstable international context.
- **Seeking excellence in R&I on key topics, by developing implementation tools specialized with respect to their purposes and needs**, eventually taking inspiration from the best international experiences.
- **Strategic definition based on wider use of foresight tools. FP 10 should include the whole TRL spectrum** with the contributions of universities, research centres and industry (including SMEs) to realize European sovereignty.
- **EU implementation tools facilitating synergies.** For example, projects funded by different EU Programs and as well project connected to "State Aid" need to be aligned, also in terms of funding intensities. Synergies shall pursue coordinated efforts that optimizes partnership and activities.
- **Addressing the whole spectra, not just a subset, of the technologies needed by a sector** to remain competitive. Consider integrating disruptive technologies into the existing operative operational frameworks.
- **Stable funding mechanisms for programs and individual projects** that promote high-quality collaboration, and **flexibility to the allocation of funds and content** that can adapt to emergence of new challenges: a fruitful cooperation must cope with the inevitable uncertainties of research activities connected to the development of complex products.
- **Easy to use and streamlined administrative procedures** that allow involvement and collaboration between partners of any size, while protecting the respective intellectual property rights.
- **Transformation of the EIC into an Agency that supports technology transfer actions** towards scale up and go to market, similar to the ARPA model in the USA.
- **Implementation** of effective operational solutions for the development of **dual use technologies.**
- **Review of evaluation processes, metrics and criteria as well as selection of evaluators** referring to best international approaches and experiences. This is critical to make R&I EU opportunities credible and attractive.
- **Cooperation with non-EU countries** that share R&I priorities, providing relevant and valuable skills for impact but taking care of **reciprocity in accessing to opportunities.**

- Consider specific actions on **training of young researchers, focusing on the technology transfer** and potential of a generated result in tangible innovations, within each of the implementation tools

AIRI envisages the European Commission will adopt a co-creation approach to shape FP 10. FP10 content and tools should be defined both using a top-down process, being implementation linked to EU Strategy and political and institutional decisions, and in a bottom-up process, as stakeholders, in particular industrial ones of any size, can provide a better view of the needs required to achieve the desired impact.

CONTENTS

AIRI contributes to inform the contents of FP10 with its technology assessment and foresight analysis. The 11th edition of the study “The innovations of the near future” (publication expected early 2025) is based on the work of a wide and diverse panel of R&D managers in Italy. It provides a mapping and selection of over 130 high socioeconomic impact families of technologies in ten sectors: Environment and circular transition, Chemistry and materials, Building and construction, Energy, Pharmaceuticals, Mechatronics, Microelectronics and semiconductors, Digital technologies, Transport and mobility, Space. Notably, it is estimated that **the 10 sectors and technologies addressed in the AIRI study** are relevant and could have a direct impact on more than 60% of total Italian R&D expenditure and more than 50% of total R&D employees, representing about 15% of the total Italian companies.

Airi, Italian Association for Industrial Research- December 2024

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