



I.R.C.E.

Institut de Recherche et de Communication sur l'Europe
Le Think Tank des dynamiques européennes

Paris, 30 December 2024

Mrs Ekaterina Zaharieva
Commissaire Union Européenne
Startups, Research and Innovation

Copy to VP M. Stéphane. Séjourné et Mrs Henna Virkkunen

(par email)

Commissioner,

For the record, the I. R.C.E. is a generalist and independent Think and Do Tank, referenced in your institution, working strategically and operationally on European dynamics through public policies in relation with ministries, institutions, embassies, parliamentarians and thematic ecosystems in many fields, including research and innovation.

Allow me to congratulate you on your appointment and to send you some ideas and reactions stemming in particular from our reflections on all or part of your mission letter. For my part, I have been involved in FPRD programmes and other R&D arrangements since 1992.

Research and innovation are almost the Union's main industrial policy actions. They must be intelligent in the choices and content of the subjects made at the European level in relation to those carried out by the Nations in order to perhaps do less but better, intelligent in the participations relying on existing knowledge and know-how in order to create a dependent Union in interdependence. Finally, it must be intelligent and coherent in the internal functioning of the EU.

About to the enlargement of the European Innovation Council and the European Research Council,

Fortunately, fundamental research has returned to the agenda and is defended, particularly within the European Research Council (ERC). We can see that the European Innovation Council (EIC) also seems to be interested in this by recently creating a bridge mechanism crossing the "valley of death", in particular through financial provisions for risk-taking, which are another of the elements of the EU's industrial policy that may have inspired the provisions of the recovery plans. Coherent work must therefore be carried out between these two entities, so that each one remains on its own skills but by strengthening the bridge linking the different Technology Readiness Levels (TRLs).

Funding must be reinforced with public-private links because 1 euro invested in fundamental research can serve as a long-term leverage effect replacing 100 euros of short- or

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medium-term funding needs, while keeping in mind that if a fundamental researcher is funded to research without necessarily finding, it is different for innovation.

The EIB, as the EIC's board, should also be associated with the ERC in the management of funds and the monitoring of companies that have benefited from financing for projects that are not only technological, with a good rating for the ERC on the financing of projects in the humanities and social sciences, which are often a real leverage and efficiency effect for technological projects.

The EU could probably also think about a risky mode of financing through the ERC as it does through the EIC, by participating in non-bankable projects as equity investors, encouraging banks to get involved, and in particular on dual aspects benefiting the civil sector, such as security and defence in conjunction with the various national agencies and the European Defence Agency.

Each very risky investment can be delegated by securitisation to private or semi-private funds or companies that are often real players in industrial policy but which, in the long term, will sell their acquisition and therefore with a prepared and elaborate takeover follow-up.

It is also important to make progress on the rates of implementation for research and then of implementation for innovation, which could undoubtedly give more resources to the ERC agency (ERCEA). It is also in this sense that the IRCE has long insisted on the need to value completed prior art, which has now been done on the criteria of calls for projects such as impacts, valorization and end users.

As we recommended a few years ago to the Commissioner for Digital Affairs, an extension of actions must continue to be carried out for security, including cyber and the cloud, and perhaps we should imagine a special fund to guarantee the decompartmentalization (removal the partition) between the cyber industry and manufacturing. The trial of the constitution of consortia, dormant, must work on each TRL for cybersecurity and contribute both to protection but to systems of anticipation, attack and imagination of the threat, and in particular towards the aeronautics and space field which seem to be well forgotten.

With regard to the proposal for an act on the European Research Area to guarantee the free movement of researchers, scientific knowledge and technology,

Public policies must provide a framework for research and researchers when they ask for it, but also know how to listen to feedback in order to change the framework.

The 4 freedoms on the movement of people, goods, goods and capital are in line with the provisions of the internal market and the Shengen area. If the opening of communications is now achieved on fundamental research, the European pillar must be privileged and valued for the capitalization and exploitation of knowledge and in particular of the researchers working there, while remaining connected with abroad.

This base must respect the rules of integration but must remain open in order to attract non-European researchers to Europe from now on, but with a commitment not to leave

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immediately unless there is compensation or links preserved with the European Union, as it must also be the case with start-ups and SMEs leaving to set up across the Atlantic, especially for financial reasons and the attitude of action and regulation.

With regard to your mission on the development of a long-term strategy to boost European research infrastructures and a European Innovation Act to streamline our regulatory framework and facilitate access to venture capital,

The notion of strategy is spread over 5 years. A longer-term dynamic must undoubtedly integrate long-term programming contracts and laws.

Reading the Letta and Draghi reports, and the new guidelines on European research and acquisition systems, in general, it is necessary to insist on the creation of strong structures in the face of external competition, as Airbus already does in the civilian sector, without internal competition. The same must be true for research to limit the profit for laboratories and companies from countries outside the Union, which also benefit from European funding, unless they can really bring real added value validated by a council of Member States.

Following the example of defence research in France, it may be appropriate to set up a Programmes Directorate for better management and decompartmentalisation between different fields, including civil and military, with other research structures such as the EIT in conjunction with OCCAR for major projects. But such a decompartmentalization must above all take place between European Directorates-General and agencies, which often already have a substantial knowledge and the substance necessary for the creation of value, as is often the case in major structures.

The research tax credit, known in France and envied by the United States, could be developed and supported at the EU level, but once again with optimised management and supervision. Some industrial structures qualified as strategic research could include R&D costs in their production costs by agreeing to be audited.

As far as venture capital is concerned, the involvement of the EIB and its new guidelines under the impetus of the Commission must be more effective, certainly on certain "non-bankable" EIC programmes, but now on a wider range of low TRLs and on the bridge between research and innovation, while remaining within the framework of its mandate, in connection with private funds. Moreover, as with armaments, infrastructure can very well be financed by the EIB without directly intervening in the tool itself, which is considered problematic.

You are tasked with developing ways to support EU start-ups and scale-ups and create a network of trusted investors to bring together deep tech investors across Europe.

The big "champion" structures can nurture start-ups, scale-ups and other SMEs and their projects, maintaining a long-term link if possible, with licenses, for example, to avoid leaving for other continents. The notion of sovereignty, or rather strategic autonomy, which is more about decision-making than about own capacity, must be understood and validated once and for all by everyone, possibly including in a limited way industrial partners who are not members of the EU but who have locations within the EU in accordance with its rules and in non-sensitive areas.

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Apart from programs deemed "strategic" requiring public funds for research and development, projects must move closer to "commercial" formats to get out of the culture of financial facilitation and to fuel a certain saving competition while seeking to regulate possible fragmentation. The same must be true for defence and security. EU-nation governance must be complementary and intelligent in order to better guide and lead external agencies and partnerships, particularly through major structuring projects. The EU must also encourage large countries to participate systematically without necessarily seeking leadership, as well as small countries to develop their expertise but without necessarily seeking geographical return.

A true BCG (duration/profitability) approach, on the investments to be made in the short and medium term in relation to the expected delivery time, is necessary to justify and understand any action that might seem surprising to others. The "Made in Europe" incentive label can be pulled by the armaments with a bonus of aid and a sharing of risks to be defined for a "substantial" European share, according to the Union Customs Code, if possible greater than 60%, of which 30% is carried out by EU SMEs spread over several countries, showing a leverage effect of the relationship "institutions, State, industries", especially if manufacturers express a desire for transparency with objective costs and open books, and if they follow an optimal rule of cost, deadlines and performance on their projects.

If the annual news at industrial fairs is often more about fundraising than about results, it is nevertheless advisable not to cultivate the culture of "hormone" finance, rather than government orders, which often prevent start-ups, scale-ups and other companies from joining the mature world of non-SMEs and mid-caps. or even Unicorns.

It is important to ensure that there is a strong general policy management to ensure sustainable growth, as a start-up that has become an SME cannot operate in the same way, with a mix between, on the one hand, the simple financial return of the EIB, on the other hand, a reasonable, adapted, realistic and achievable profitability expectation of 9%, as in France by the Caisse des Dépôts, and finally the rates of 12% generally expected by investors directly or through the the intermediary of the funds.

A comparison with the American, Chinese or Indian funding cultures is not always appropriate, considering that European knowledge and know-how can achieve the same results with fewer resources.

In terms of industrial policy and research, it must finally be considered that if a fund is involved, its objective will be to sell and it is therefore necessary to ensure that as much as possible is taken over from Europe as soon as they are involved.

You will be responsible for preparing a new strategy for life sciences in Europe to unlock high value-added technologies.

The life sciences are linked to European values united in diversity, particularly in the social, demographic and healthy dimensions of ageing. It is necessary to find their own identity by focusing as much as possible on the decompartmentalization between all fields of research and by thinking in a disruptive way to find them an added value capable of attracting, retaining and

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capitalizing. Mastering artificial intelligence will be an essential factor to make the difference, while also remaining among the key players without dependence.

You are tasked with working on an Advanced Materials Act to support the research and innovation process through to manufacturing and deployment

Your task must therefore focus on imagining, developing, optimising and sustaining the Chips Act that was finally decided on recently. Once again, the GROW method (objectives, realities, options, actions) SMART (specific, measurable, realistic, achievable, time) will be essential to leave the actors in a dynamic that is both individual and common, defining the necessary strategic framework, in addition to the established regulations, and letting the industrialists realize the best way to achieve it by seeking a public-private interdependence on the four pillars of the state-industry relationship: Open books, objective costs, bonus malus, risk sharing, all in an approach of strategic independence by taking into account the challenges related to the economy of rare metals and their optimal exploitation via environmentally friendly processes.

Regarding the increase in the adoption of artificial intelligence by European scientists and the contribution to the establishment of a European AI Research Council.

Why not create an AI Council to implement the AI Act, both for AI research and to apply AI to research. It will be necessary to talk about ethics without the latter slowing down research and innovation, but which will undoubtedly be able to avoid the mistakes previously known with radium, a miracle drug before we notice its harmful aspects. The integration of science fiction authors will be able to develop certain working options that are often close to or initiating realities with openness and associated risks.

With regard to the implementation and supervision of the funding of EU research and innovation programmes, such as Horizon Europe, as well as EU missions,

The model of the French DGA, but also of the decompartmentalization of French and European innovation agencies, has already been discussed.

While the Framework Programme has the merit of being a multiannual programme, it must not freeze the ideas and initiatives that may appear afterwards. It is necessary either to create an "other" line but with the risk of processing delays, or to create a bi-annual system of selection as they arise, as NATO's Eureka and Diana systems do.

As far as project management is concerned, the addition of the selection criteria that we have been calling for, such as selection as well as impact, the enhancement of the existing system and the end user, must be accompanied by a financed analysis of the implementation failures for a better optimization of the process, particularly beyond prototyping.

In addition, and through experience of participation in numerous projects or infodays in various fields, this requested valuation must be pushed into decompartmentalization (removal the partition) in areas other than that of the project in order to save both time on the identification of problems and solutions, often common, but also budgets.

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Funding could be provided for auditing post-project failures and successes, which are rarely carried out by research teams wishing to find funds to spend their time on scientific research.

Finally, the supervision of financing but especially of its management with the monitoring of risk analyses must remain fundamental to avoid unexplained losses.

Hoping to have caught your attention,

Receive my sincere greetings and deep respect.

François CHARLES Président de l'I.R.C.E.

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