

EARTO Paper on the EU Economic Recovery Package: Mobilising European RD&I Capabilities & Skills towards EU Economic Recovery Post COVID-19

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Member States and European Institutions are currently focusing their efforts on solving the health emergency and its direct economic consequences. As key RD&I actors, Research and Technology Organisations (RTOs) are supporting those efforts to upgrade the manufacturing capabilities, quality testing and distribution of key medical supplies and equipment, as well as to develop new testing, treatments and vaccines. RTOs are working alongside their governments and the European Commission in today's crisis management thanks to their digital tools and data analysis capabilities¹. EARTO Members also support their governments in developing specific policy measures to alleviate the pandemic's socio-economic consequences.

On the economic side, the pandemic will lead to an unprecedented decrease of Europe's economy. Today, the focus is understandably on saving the European industry, supporting large and small companies to maintain jobs in the EU as much as possible. The current crisis showed Europe's dependencies on global industrial value chains that are non-functioning in times of crisis, demonstrating the need for Europe's economy to become more resilient, better equipped and technologically sovereign to face future crises. Today's challenge is two-fold: 1) we need to strengthen our European Internal Market with its level playing field and 2) we need to save Europe's global position while other economies are launching large and efficient industrial support and transformation plans to support their local industry manufacturing.

In this context, the European Commission is developing a proposal for a new EU Economic Recovery Package aiming to ensure that the EU economy emerges from the current crisis in a strong competitive position compared to its global competitors. **Europe's technological excellence will be the decisive strategic factor to build Europe's economic and industrial recovery, competitiveness, sustainability, digital capacity and resilience in the long run.** The crisis showed that countries with a high manufacturing added value, hence strong technological capabilities, have been more responsive and more efficient in crisis management. The EU Economic Recovery Package must ensure that the European industry can lead on digitalisation, clean energy and mobility as well as on green industry. To be successful, the EU Economic Recovery Package will need to support the new EU industrial policy framework based on industrial ecosystems and key enabling technologies recently proposed by the European Commission².

Accordingly, EARTO hereby brings forward a set of **4 recommendations on how to utilise the EU Economic Recovery Package to mobilise European RD&I capabilities and skills to create a resilient, sustainable, technologically sovereign and inclusive post COVID-19 era in Europe:**

- 1. Create a strong support mechanism for public & private RD&I investments as key drivers of economic recovery and resilience, while focusing on the EU Green Deal's targets, in line with the new EU Industrial and Digital Strategy.**
- 2. Ensure that EU grant-based RD&I programmes will be an important part of the EU Economic Recovery Package to boost public & private RD&I investments.**
- 3. Agree swiftly on a new Multiannual Financial Framework prioritising future EU RD&I programmes, such as Horizon Europe, as key support to a sustainable and inclusive growth and a revived industry in Europe.**
- 4. Safeguard EU technology leadership and production sovereignty by developing a European strategy on technology infrastructures needed by key EU industrial ecosystems.**

¹ See [EARTO News](#)

² EC [Communication on "A New Industrial Strategy for Europe"](#)

Recommendation 1. Create a strong support mechanism for public & private RD&I investments as key drivers of economic recovery and resilience, while focusing on the EU Green Deal's targets, in line with the new EU Industrial and Digital Strategy.

Expected reduced private RD&I investment readiness

Member States and the EU have released unprecedented emergency funds and ad-hoc research programmes to fight the COVID-19 pandemic. Even if those measures will be successful, considerable economic risks remain for the EU and the future viability of European companies. Europe's industry sees its suppliers and sales' markets breaking away. To maintain business operations, EU companies spend reserves or go into debt. In the coming years, this will tie up their liquidity, reducing their capacity to invest in RD&I and leading to a deterioration of their global competitive position. This will particularly weaken Europe's position compared to Asia and the US³.

In April, BusinessEurope⁴ already noted that *"in many sectors, investments plans are likely to be delayed or reduced, given sharply lower domestic and external demand, lower cash reserves, and increased uncertainty"*. Accordingly, once European companies will have overcome the acute phase of the crisis, they will need further liquidity especially for RD&I investments. Consequently, Business Europe expressed the need in the future EU Recovery Plan to *"strengthen collaborative R&D and innovation. [...] Public support will become key for businesses in such recovery phase: private investment readiness will likely reduce but companies' need to innovate will remain crucial. Cooperation will be vital, and industry, technology centres and universities must join forces in this innovation-driven reactivation"*.

RD&I investments as key drivers of labour productivity and industrial competitiveness

OECD latest figures revealed the low level of private RD&I investments in Europe. Those modest figures were already a worrying factor for our future EU growth prior the crisis. If nothing is done at EU level to support such investments further, the future EU economic recovery will be greatly hindered. Also noted by the OECD, RD&I investments are an important factor of EU labour productivity as they lead to new or improved products, services and production processes, which in turn create added value and reinforce industry's global competitive position.

According to a recent analysis, one euro extra of RD&I in companies will have a leverage effect of €4.50 extra growth in our economy. An investment of €1 extra in public RD&I capital (e.g. research by RTOs) generates no less than €4.20 of added value for society. In addition, investments in private RD&I capital (e.g. research by companies) provide a decent yield of €2.60 of added value for each euro spent. The additional growth in added value for companies which collaborate with RTOs is estimated to be between 14 and 17 percent higher than for those companies which also do RD&I, but not with RTOs, a recent Dutch study says⁵.

Additional RD&I investments to target digitalisation and key industrial ecosystems

The current priority is to address the health emergency and its direct economic consequences. As such the European Commission has taken a set of actions, such as the EU reserve of medical materials, the increased RD&I investments regarding COVID-19 vaccine and tests, the ERAvsCORONA action plan, etc. which are welcomed. EARTO Members themselves have actively supported and participated in those actions. These much-needed investments in health care should come along investments in clean and digital technologies aiming at enhancing strategic industrial value chains and ecosystems.

As the crisis has shown, Europe is not always able to supply itself with goods that are vital to its citizens' subsistence. For example, the production of antibiotics, painkillers or cytostatics as well as that of protective masks and medical technologies has been largely outsourced (mainly for cost reasons). The past costs-benefits analysis based simply on costs does not hold any value in time of crisis nor in the perspective of limiting our environmental impact. In addition, Europe currently does not have complete control over its digital lifelines. Indeed, digitalisation is already making it possible during this crisis to continue some economic activities remotely and to organise online education. If Europe develops its own independent digital platforms, then further digitalisation of society and industry will make Europe more resilient in the event of a new crisis in years to come. Such strategic industrial ecosystems will play a central role in relaunching and modernising our economy. The current crisis offers opportunities to realise climate targets and to capitalise and build on digitalisation to further develop a European ICT industry.

³ [See Fraunhofer article](#)

⁴ [See BusinessEurope Paper on Economic Recovery Package](#)

⁵ [See TNO article](#)

Increasing the competitiveness and resilience of the EU economy through a technology-oriented industrial policy as proposed by the European Commission is more vital than ever. As stated in the [EARTO Recommendations for EU RD&I Policies post-2020](#), an ecosystem approach fostering the development of innovation hubs along key industrial value chains located in the EU would boost collaboration and co-creation in Europe. It would enable to maintain the competitiveness and attractiveness of the European industry at its highest level. RTOs, with their state-of-the-art technology infrastructures, play a key role within these innovation hubs. RTOs are at a crossroads between basic research and industry: they bridge the so-called “valley of death” by lowering the risks of private investment in RD&I, enabling innovative products to find their market and their industry. As such, they should be given a clear mandate to stay in the driving seat of European innovation hubs. They should be entrusted the management of ambitious and transversal research and innovation projects/alliances in key enabling technologies for industries’ digitalisation and environmental transition. Investment mechanisms for such ambitious transversal research and innovation projects/alliances aiming at ensuring EU technology leadership in key industrial ecosystems should be planned under the new EU Economic Recovery Plan.

RD&I investments needed

The current crisis has shown that:

- We need an accelerated transformation to a sustainable, circular and green economy;
- Europe has to rethink its supply chain to ensure a lower dependency on massive global insourcing hindering industrial activities impacting also the green deal and digitalisation targets;
- The issues of resilience and technology leadership/sovereignty are more crucial for many industrial sectors today;
- Digital and green transformations are needed with even more speed than first expected.

As private RD&I investments will most certainly decrease in the coming years to tackle those transformations, it is urgent to put in place specific instruments to compensate for this situation. Long-term EU grant-based RD&I programmes have always been essential to reduce the risks and stimulate private sector’s RD&I investments. This is now more urgent than ever. Hence, a strong budget for EU funding of collaborative RD&I projects will be vital to foster RD&I investments and support industry in their green and digital transformations across Europe. Having a resilient and sustainable industry with an increased labour productivity through innovation will in turn allow Europe to have a more inclusive and long-term growth. This can become a reality only if greater investments are planned now for the EU grant-based RD&I programmes aiming at industrial deployment in Europe.

Recommendation 2. Ensure that EU grant-based RD&I programmes will be an important part of the EU Economic Recovery Package to boost public & private RD&I investments.

Europe’s technological capabilities and skills will be the decisive strategic factor to build Europe’s future recovery. As high-risk pre-competitive RD&I activities cannot be financed through loans, grants are the main form of funding for pre-competitive R&D. Accordingly, under the EU Recovery Fund, if funds are borrowed by the EU, they should then be transferred to Member States through both grants and loans. Grants are essential not only to avoid excessive Member States’ debt, but also to boost collaborative RD&I.

Indeed, loans can only represent limited complements for very high TRL activities and should only apply to private companies and not to public or not-for-profit research organisations like RTOs. Using mainly such financial instruments under the new Economic Recovery Package would limit the capacity of public or not-for-profit research organisations like RTOs to provide technology solutions, with huge negative consequences for innovation in the EU⁶.

In this context, the new EU Economic Recovery Package should aim at creating a larger EU budget for grant-based RD&I programmes like Horizon Europe and Digital Europe. Should the EU Economic Recovery Package only focus on credit-based financial instruments (e.g. in the way the European Fund for Strategic Investment (EFSI) was launched in 2015), this would have a detrimental impact on RTOs’ business models and accountability, and in turn on the public sector’s capacity to alleviate market failures. While the use of new financial instruments such as loans, repayable advances, equity-based public funding, and other credit-based funds have been increased in recent years, those financial instruments represent limited complements only for very high TRL activities.

⁶ See [EARTO Background Note on the repayable advances scheme](#)

Recommendation 3. Agree swiftly on a new Multi-annual Financial Framework prioritising future EU RD&I programmes such as Horizon Europe as key support to a sustainable and inclusive growth and a revived industry in Europe.

The EU Economic Recovery Package should be an additional motivation in the MFF negotiations to ensure sufficient funding for grant-based EU programmes aiming at further leveraging private RD&I investments in Europe. Especially, programmes like Horizon Europe, Digital Europe, and the Defence and Space programmes must be prioritised in the next EU budget. Among others, this requires as a minimum to scale up the budget for Horizon Europe to at least €120 billion and the Digital Europe Programme to €14 billion: such budgets should also be ring-fenced from any cuts in the MFF negotiations.

To complement the EU RD&I programmes that represent only a small portion of what is needed, the further development of a European Research Area with all Member States involved, guided by the principles of resilience and technological leadership, is inevitable. The future EC Communication on ERA to be published later this year should take this into account and further support alignment between EU and Member States RD&I investments.

Horizon Europe Programme

This is the only Pillar in the new proposed Framework Programme that includes directional research programming where policy makers can intentionally steer towards economic resilience of the EU. The Pillar 2 of Horizon Europe focuses on the societal challenges and industry-led key enabling technologies: this pillar is key to pan-European applied research. Such a balance between the three pillars would ensure that the entire value chain from basic research to the innovative product on the market is adequately covered. The impact of applied research as source of innovation is decisive when based on fundamental research of scientific and technical excellence. Excellent science and excellent technology are key to respond to Europe's medium and long-term societal challenges.

In addition, Horizon Europe has under Pillar 2 a set of instruments like industry-led partnerships and missions, that will be essential to leverage private RD&I investments. Those European partnerships and missions are even more important today considering the need to support our key EU industrial ecosystems in facing the crisis as well as the transformations they need to undertake using new technologies and digitalisation. Increased funding for Pillar 2 will be crucial for ensuring the contribution of Horizon Europe in supporting such transformations while increasing resilience in our key industrial value chains. In addition, RTOs play a key role in these partnerships as they reduce the risk for companies to innovate, ensuring a safer and faster technology transfer. Indeed, RTOs have largely fostered industry's participation in EU RD&I programmes. As promoters of innovation in transversal technological fields (i.e. key enabling technologies), RTOs should be entrusted a seat in the governance of these EU partnerships.

Moreover, to create new leading industries with manufacturing activities in the EU Member States, the EU must give a proper support to European deep-tech start-ups. Contrary to US-type digital companies, EU-type deep-tech start-ups, especially RTOs spin-offs, have great life expectancy and low rate of failure as demonstrated by the [EARTO economic footprint study](#). We already witness that start-ups and scale-ups are having an even harder time in this crisis period. In this context, the target of the new EU Economic Recovery Package in terms of technology deployment and industry creation should be supported by the European Innovation Council (EIC) under Horizon Europe, and in particularly focus on RTOs' spin-offs⁷.

Finally, building on past efforts, Horizon Europe will not only support the search of healthcare solutions for the present COVID-19 crisis as mentioned earlier, it will also support research aiming at keeping EU society secure. Here, EU RD&I funds have been well invested in and should continue their efforts in the development of socio-technical solutions related to, for example, physical protection of security practitioners against contagious environments and aggressive people (e.g. face masks, gloves, detection tools), risk communication to citizens (which messages via which channels to which groups), predicting the effectiveness of interventions on societal resilience (combining simulations, AI and collective human behaviour), crowd management (monitoring and influencing crowd behaviour, facilitating social distancing) and in general, cooperative crises management technologies. Addressing potential negative and positive societal, ethical and legal implications of these new technologies is of utmost importance also to support the recovery period. Planned Horizon Europe investments in those areas will continue to ensure a high level of security for Europeans in time of crisis as we are facing today and support the development of appropriate solutions to such crisis.

Digital Europe Programme

In this context, RTOs with their industrial partners will support the coherence between Horizon Europe and Digital Europe programmes. The development of strong European RD&I partnerships and alliances

⁷ See [EARTO Paper on RTOs Deep-tech Start-ups](#)

will be key to ensure a shared direction between the European, national and private investments. This will in turn create the necessary critical mass and strengthen the Internal Market in order to ensure economic recovery at its best. The Digital Europe Programme will be very important in supporting the elaboration of such key pan-European RD&I alliances providing support for the deployment of strategic digital technologies at industrial scale (e.g. high-performance computing, artificial intelligence, cybersecurity, smart systems, 5G, etc.). To allow the creation of such key strategic EU alliances, the Digital Europe Programme budget should go up to €14 billion.

In parallel, the European policy of Digital Innovation Hubs (DIHs) and the reference Testing and Experimentation Facilities (TEFs) planned under the Digital Europe Programme will also further support digitalisation of EU industry (large & small). The Programme will support industry via its DIHs as well as focusing EU investments on enabling technologies in key EU industrial value chains (telecom, transport, health, energy, agri-food, etc.) needed to support economic recovery. In addition, the European DIHs will be crucial to support the cross-cutting of digital and green technologies. They will enable the uptake and scaling up of digital-driven green solutions for companies: offering one stop-shops, giving access to expert services and testing/demonstration facilities. RTOs as strategic players and orchestrators of DIHs will play a leading role in this digital and green alignment to support competitiveness of industrial ecosystems and value chains across Europe. In addition, creating synergies and strengthening the mixed-funding schemes between the European (incl. Horizon Europe, Digital Europe), national and regional strategies (incl. with EU regional Funds) will be essential to support those hubs.

European Defence Programme

The post-COVID-19 world is not going to become safer nor more peaceful: Europe's security will still need to rely on well trained, equipped, interoperable and modernised forces. For the European defence industry, this means to be able to cope with delivering the ongoing programmes as well as having a real future foresight while RD&I investments as for all industries will reduce due to the crisis. First, this will in turn probably lower the defence industry ability to remain competitive with new edge technologies. Defence's exports and national defence spending could then benefit mainly non-European providers, making Europe more dependent on foreign technology to insure European Citizens defence and security. Second, the defence industry has a major duality with the transport sector, especially aeronautics. The consequences of the present crisis for the defence industry will possibly bring a double punishment to other linked industrial ecosystems and value chains. Furthermore, although Defence organisations are not the first actors to act in managing complex medical crises, they still offer support, especially at the onset of a crisis. There are for example two areas where solutions for military purposes are used in the civil domain in today crisis. One, sensors to detect chemical and biological hazards have been modified/extended for use in hospitals and other buildings and public places. Second, security and defence organisations have developed solutions to help personnel to deal with extreme and psychological stressing situations: today medical staff working on Intensive Care units of hospitals can benefit from knowledge and tools used to prevent or treat post-traumatic stress syndrome. In our present context, the elaboration of the new European Defence Fund is very much welcome and should find appropriate funding under the next MFF.

The European Defence Fund (EDF) will be a powerful incentive for maintaining a decent basis of RD&I for the EU defence sector, while national recovery plans will ensure production and employment retention by the sector. In addition, the EDF will support Europe to regain defence's sovereignty maintaining skills in strategic sectors such as AI, material or components for defence applications for example. Here again, RTOs will be key to support synergies of RD&I funds and especially combine the EDF RD&I activities with the other EU RD&I civilian initiatives, like Horizon Europe and Digital Europe.

European Space Programme

Already before the crisis, the European capacity to access and use space with a high level of autonomy is currently strongly challenged for several reasons: one of the most important being that our global competitors (US, China, India, etc) have very strong institutional space programmes and very clear space strategies based on national assets. In addition, the dependence on non-European components needed to manufacture both launchers and satellites with very strong export restrictions (e.g. ITAR) is penalising the European capacity to access to space and building satellites. With the present crisis and as for many sectors, the EU space industry is under even larger global competitive pressure today.

Hence, the creation of a new co-programmed partnership on space systems with sufficient funding under the new MFF is of utmost importance to boost the European space industry assuring a continuity in the development of space components and systems based on roadmaps prepared by all the stakeholders. EARTO therefore actively supports the proposal that is currently being developed by the European Commission in close collaboration with the main space stakeholders for a new EU partnership on global competitive space systems.

Recommendation 4. Safeguard the EU technology leadership and production sovereignty by developing an EU strategy on technology infrastructures needed by industrial ecosystems.

EU technology leadership and production sovereignty

The COVID-19 crisis should lead to new EU industrial and RD&I policy priorities. In the recent decades, some companies have moved part of their production to Asia and other parts of the world aiming at saving costs (and consequently exported associated GHG emissions and environmental impact). Those companies were not only 'low tech' but also producers of essential goods such as for example medical supply. The pandemic has revealed how vulnerable and dependent the intercontinental production chains of European companies have become due to globalisation. Consequently, European companies, possibly incentivised by Member States, are expected to shorten their production chains and move their production capacity and jobs back to the countries of origin ("reshoring"). This applies especially to vital sectors such as medical technology and critical technologies for our ICT infrastructure. New sustainable technologies for a circular economy will contribute significantly to creating autonomous production. Energy security of supply will be instrumental to restore Europe's industrial capacities and ensure their competitiveness. Recent examples have shown that new technology, such as robotics in combination with 5G technology, is essential to facilitate reshoring. Europe should make great efforts to develop sustainable and circular production processes, relocated back in Europe, producing 1) less waste, 2) less GHG emissions, and 3) using less of imported raw materials. In short, besides European technological leadership, European production sovereignty should also become a feature of innovation policy. The goal here is neither self-sufficiency nor complete autonomy, but sovereign freedom of decision and resilience. Technology leadership and production sovereignty should not generally undermine international scientific collaborations or global trade.

Reshoring strategic industries also involves the development of buildings, roads, machine fabrication, goods transportation, raw materials transformation to create benefits and services. This ambition for Europe has to consider the need for the extra energy that will be consumed by this transition while today natural gas, coal and oil derivatives account for 80% of the European energy consumption. The EU technological sovereignty cannot be seriously considered with an ultra-dependence of Europe on fossil fuel importations. Consequently, ambitious RD&I programmes for every key industrial ecosystem must run in parallel of all evident reshoring actions and supports of the same industrial ecosystems. More production and raw materials transformation will lead to more CO₂ emissions, which is strictly antinomic with the European carbon-neutrality target for 2050 of the EU Green Deal. When reshoring production capacities, Europe will bring back home its GHG emissions, waste and environmental consequences. To prevent Europe from missing both the objectives of industrialisation reshoring (with unsovereign energies) and green transition with respect of climate, Member States must seriously consider and require a drastic change in the production process, waste management and CO₂ emissions of their industrial ecosystems. It includes CO₂ valorisation and transformation to produce fossil-free synthetic fuels, chemicals and materials based on low carbon electricity and renewable sources. Indeed, a clean, affordable and domestic energy supply also requires developing alternative energy sources including long-term chemical energy storage via conversion of renewable energies (e.g. wind and solar energy) and abundant molecules (H₂O, N₂, CO₂) into fuels and materials.

The EU Economic Recovery Package should aim at maintaining and strengthening Europe as a continent of innovative business and science even in time of crisis which is the key for a sustainable and inclusive growth. An important prerequisite is leadership in central, strategically important areas of technology such as substitutes to fossil energy sources, artificial intelligence, quantum technology, cyber security and, of course, medicine and health care. Sovereignty has to be effective all along the value chain of the former technologies (from materials to systems and through components). Technology-based competitive advantages should be sustainably designed and maintained. However, it requires a more conscious, strategically well thought division of tasks, which includes the economic interdependence and political proximity of European partners thinking "resilience first".

In short, being sustainably competitive is not a gift: it depends not only on intelligent policies but also on the scientific, economic and social performance of a community. The EU Economic Recovery Package and its attached policies must support such performance in the years to come.

EU strategy on technology infrastructures

In the context of technology leadership and production sovereignty, Europe should ensure that it will stay at the forefront of science and technology and has the proper technology infrastructures to support its key industrial ecosystems and attached value chains (for e.g. infrastructures for low-volume pilot manufacturing like pilot lines). European industries need to have the technology infrastructures available to lower the risks of their own RD&I investments to further develop their innovation capacity (i.e. green & digital technologies diffusion across EU) and support their business transformation and digitalisation fitting the EU Green Deal's ambitions. EARTO strongly advocates for further work to be done at EU level to link the identified key EU industrial ecosystems with their needed strategic technology infrastructures.

This will require further efforts in:

- Linking EU industrial and RD&I policies together;
- Setting up of a European strategy on the needed technology infrastructures to foster the development of innovative technologies and their scale-up/deployment by key EU industrial ecosystems.

The [European Commission SWD on Technology Infrastructures](#) has set the first steps towards such strategy. EARTO is looking forward to the next steps under the future ERA Communication. A European-wide strategic approach is necessary to ensure that the required technology infrastructures to support European industry to develop their innovation capacity and business transformation capabilities are indeed available in Europe with the proper skills. RTOs are key to manage such infrastructures as well as to provide the necessary skills.

Fostering the creation and the long-term sustainability of technology infrastructures in Europe will require 1) boosting public & private investments in technology infrastructures along key industrial ecosystems and 2) ensuring a good and sustainable funding mix, with European, national, regional support depending on the business model and target of the infrastructures and 3) making state aid rules for research, development and innovation more innovation friendly. The EU Economic Recovery Package should aim at funnelling the needed mix-funding for those investments.

To this extend, EU RDI and competition policies should be further integrated preventing any unwanted regulatory barriers hampering the EU's innovation capacity and preventing Europe from keeping its technological leadership. Especially, the specificities of the RDI sector should be clearly recognised in the revised EU state aid rules, for instance by distinguishing the construction of research and technology infrastructures by non-profit actors like RTOs from the most common infrastructures cases such as ports or airports. The revision of the EU state aid rules should aim at finding a better balance between the need to safeguard free and fair competition in the EU internal market and the need to boost EU technology leadership and production sovereignty through knowledge co-creation and innovation.

Conclusion

The current crisis demonstrates that there is an urgent need for a united European action targeting RD&I investments: RD&I investments have never been as important as they are today. Economic recovery will only be sustainable and inclusive in Europe if based on technology and innovation to ensure competitiveness of the European industry on the long run. The present crisis should not lead to postpone nor downgrade EU ambitions on the green and digital transitions. Not only these two EU policies remain necessary, they are also a condition for the strengthening of Europe's resilience, strategic sovereignty, and security of supply in critical goods and services. The need of the latest has been painfully highlighted by the current pandemic.

The EU is now preparing funding instruments of great magnitude under the EU Economic Recovery Package which will shape European policies for the next 5 to 10 years. As such, it is therefore vital that RD&I investments are placed on top of the EU priorities. Accordingly, ambitious RD&I programmes such as Horizon Europe, Digital Europe, Defence and Space programmes should be linked to the new EU industrial strategy. Technology should be a key component of the forthcoming EU Economic Recovery Plan: grants schemes should be used for to this purpose.

Finally, as key RD&I actors, RTOs have a strong impact on the green and digital transitions of Europe's industry. In addition, RTOs are already playing an active role in supporting our way out of the current health crisis, they should be further utilised to do so for the EU economic recovery as well. Collaborative RD&I and industrial innovation showed their true value in the present crisis: RTOs have proven to be key actors allowing governments and industry to gain agility in their current crisis' responses. As the European Commission President Ursula Von Der Leyen noted "*Europe, more than ever, needs unity, determination and ambition*"⁸. European RTOs will be instrumental to the EU economic recovery given the right instruments to do so by both their respective Member States and the EU: ambitious European and national RD&I investments are needed today.

RTOs - Research and Technology Organisations: *From the lab to your everyday life. RTOs innovate to improve your health and well-being, your safety and security, your mobility and connectivity. RTOs' technologies cover all scientific fields. Their work ranges from basic research to new products and services development. RTOs are non-profit organisations with public missions to support society. To do so, they closely cooperate with industries, large and small, as well as a wide array of public actors.*

EARTO - European Association of Research and Technology Organisations: *Founded in 1999, EARTO promotes RTOs and represents their interest in Europe. EARTO network counts over 350 RTOs in more than 20 countries. EARTO members represent 150.000 highly-skilled researchers and engineers managing a wide range of innovation infrastructures.*

⁸ See [EC President Speech](#)