



# Innovation made in Europe

**POLICY MESSAGES**

Setting the foundation for  
future competitiveness



# Corporate priorities to make a better business case for 'Innovation made in Europe'

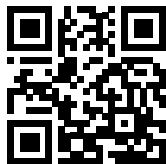
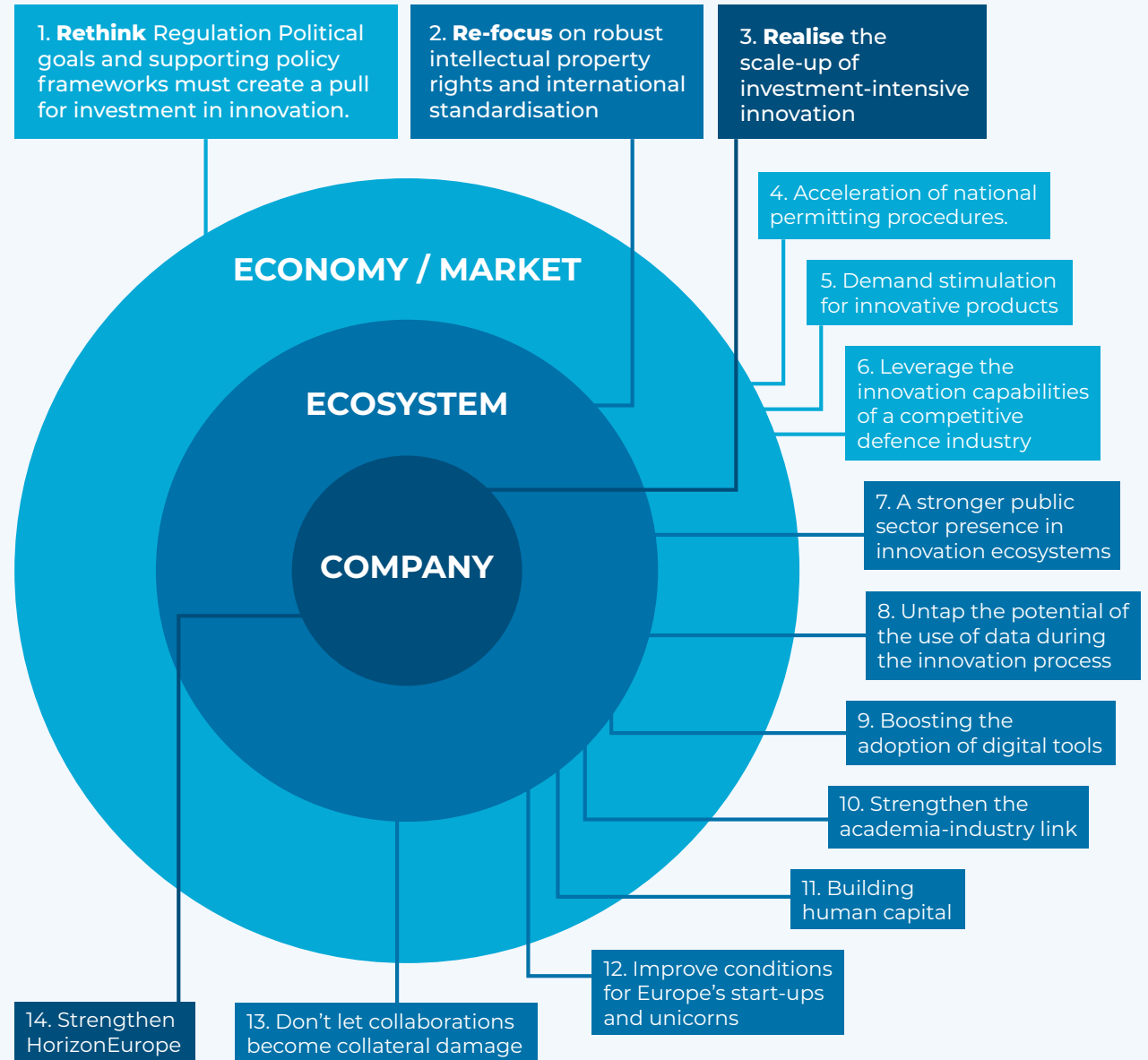
Europe's corporates play a key role in driving and enabling innovation in our economy. And innovation is key to Europe's industrial growth and international competitiveness.

The corporate sector has a responsibility towards society in supplying progress, employment, and prosperity.

At the same time politics and society have a responsibility to provide the best possible framework for launching and implementing innovation efficiently and with impact.

ERT sets out **three priority recommendations** to create a better environment for 'Innovation made in Europe'. Together these actions will create the dynamics needed to encourage innovation, and to do so with a lasting impact.

At a more detailed level, other factors also play a role. These are highlighted in our 'additional' policy recommendations.



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## 3 Priority Recommendations

### 1) Rethink regulation

**Political goals and supporting policy frameworks must create a pull for investment in innovation.**

**Europe can only be a frontrunner in innovation if EU decision-makers put the business case for innovating and investing in Europe at the centre of EU regulation.**

**Coherence and incentives are key.** Long-term strategic priorities have to incentivise and reward innovation from a business perspective.

Incentives are key because they provide a business case for innovation that goes beyond mere compliance with requirements. Well-tailored incentives generate a much greater drive for innovation that also improves competitiveness more broadly and allow for greater creativity. Regulatory incentives moreover de-risk innovation investment and therefore free up resources for more R&D and faster deployment.

Coherence is key because incoherent regulation discourages investment and R&D in new innovative solutions. Without coherence, regulation is unpredictable or even self-contradictory – this creates uncertainty and increases the financial risk of investing and engaging in R&D activities for all actors along the innovation chain. Successful innovation builds on the collaboration of many stakeholders and organising this collaboration is itself already a considerable challenge: protracted uncertainty

on whether, when and where an innovation can be commercialised can further discourage key stakeholders from investing their resources even into otherwise promising innovation projects.

**Follow-through is essential.** To achieve real coherence, political goals are not enough. It is nearly as important that sectoral and product legislation are aligned to foster the same goals and are free of contradiction and silo-thinking. Here the European Commission has an important role to play, but Europe's co-legislators also need to exert great discipline during the adoption process.

**Keep regulation up to date.** Political coherence is an empty shell without the determination to dynamically adapt and update product and services regulation to keep track of technical innovation. Here, too, silo-thinking can be a barrier to adaptation. Moreover, solutions are needed to overcome rigidity or lack of speed at the policymaking or policy adaptation level.

Why is this so important? If, due to outdated or inflexible product legislation, innovation cannot be brought to the market in Europe, it will not benefit our economy. Instead, it will strengthen the competitiveness of our peers and/or rivals who can then easily outrun European companies in the commercialisation phase.

Moreover, if companies need to price in the cost of time lost due to unfit regulation, they will adapt – whether by investing less in innovation, tailoring innovation to more promising markets or reducing the level of ambition to what can be commercialised under current rules. Each scenario means lost opportunities for Europe.

These concerns weigh heavily – and especially so in highly regulated markets and for the

development of new materials. EU and national legislators should systematically build in mechanisms for time-efficient and timely updates when designing product regulation.

**Speeding-up approval processes for new products/substances is key** for instance for food contact materials, cosmetics, biocides or pesticides where consumer and environmental safety are of paramount importance. This tends to be the responsibility of national authorities – who often do not internalise that overly drawn-out processes spanning over many years present a significant handicap to innovation: they prolong uncertainty for commercialisation in often highly competitive markets and lead to losses in IP. Strengthening the business case for innovation would therefore also imply greater ambition in speeding up approval processes.

**Europe's lawmakers and regulators must walk the talk when it comes to testing.** Testing is as a key step in innovation, but we are miles away from a state where testing under real-life conditions is the rule, not the exception.

Innovation builds on lessons from trial and error. Everyone accepts that testing is key in the innovation process, but still there is little readiness to actually allow it under real-life conditions (provided of course the risks involved are limited and understood). Europe needs a change of mindset and to embrace openness to testing as a logical (even desirable) part of its innovative identity.

Europe could and should improve the conditions for testing new innovations:

- more comprehensive rollout of **regulatory sandboxes across all industries, including at European level.** Some Member States

have understood this – for example Spain is planning to roll out sandboxes for AI innovation.

- **increased and fast funding for test beds** would also help speed up the innovation process by facilitating concept testing and adaptation to lessons learnt and customer needs. This proved effective in the product development phase for 5G.

Improving the industry's ability to test innovation would benefit all parts of the innovation ecosystem and not only speed up innovation but also increase the readiness to launch new projects as well as the appetite for collaboration between industry and academia. We hope the Commission's forthcoming Guidance on Regulatory Sandboxes can unlock potential across industries.

**Walking the talk also means that instruments that have been put in place need to be made usable. Let us look at IPCEIs.**

**Fast funding processes are key.** Public funding can be very important, but processes are often too slow. An extreme example are the approval processes for IPCEIs. By definition, IPCEIs are of a strategic interest to Europe, but too much valuable time is lost in administrative decision making. The fact that eight years into the creation of IPCEIs, only four have been approved speaks for itself. For the IPCEI approach to provide effective solutions to Europe's strategic challenges, approval processes need to be accelerated.

More generally, when designing or re-designing approval processes, greater speed is essential. Delays increase uncertainty, opportunity costs and the risk of being overtaken by rivals in more dynamic jurisdictions.

**Foster private sector investment in R&D and start-ups.** For private sector funding to support innovation going forward, the EU taxonomy can play a major role. If Europe is serious about its commitment to innovation and the twin digital and green transition, the taxonomy has to be adjusted to foster investment in R&D driving transformation. As it currently stands, the taxonomy includes bottlenecks that hamper investments in (activities that are prerequisite for) economic activities and technologies widely regarded as necessary for a successful twin transition. Especially innovation and best practices further up the supply chain are not duly recognised because of onerous technical screening or 'do no significant harm' criteria. The taxonomy can and should be adjusted to facilitate investments consistent with the EU's long-term strategic objectives. For this European policymakers would need to commit to coherent rules, allowing themselves a strategic long-term view and overcoming silo-thinking.

The long-discussed EU Capital Markets Union has huge potential to raise private capital for innovation but remains elusive for now. One point where greater coherence of EU policy would be key is to enable institutional investors, including corporate pension funds, to directly or indirectly invest in innovation-related activities, for example in start-ups. This overarching interest of the European economy should be reflected in financial services regulation, which at the moment seems to lack a greater vision. To initiate this, the ball lies in the court of the European Commission, but support by Member States and the European Parliament would be essential, too.

## 2) Re-focus on robust intellectual property rights and international standardisation

### **Solid and globally competitive intellectual property rights are key for the business case of innovation.**

Investments in innovation are costly in terms of financial and personnel resources. Innovation processes can result in success or failure and imply taking risks and exploring the unknown. At the beginning of this process – which depending on the sector can span over years, even decades – there is no guarantee that the investment will pay off eventually by commercialisation to market.

Without soundly protected and efficiently enforceable intellectual property (IP) rights, there is even less predictability on commercialisation and pay-off is even more at risk. The reason is that competitors will find it attractive to copy new products, as this is easier and cheaper than a fully-fledged R&D project and shortens time to market. In short, for innovation to have a business case, sound and well-functioning IP protection and enforcement are key.

### **European companies need a solid IP system.**

This is important in all highly competitive sectors: Where development time for new products is long (such as the pharmaceutical sector), where the IP landscape is dense and competitive (e.g. renewable energy, new decarbonised molecules or CO<sub>2</sub> storage in the energy sector) or where copying of products is comparatively easy (e.g. in software-related areas).

Effective IP protection also enables collaboration and technology sharing – indeed this has been the key success factor in the development of cellular technologies and underpins the global success of EU actors in this area.

The European Unitary Patent System, about to be implemented, is a model that looks promising, but still has to demonstrate its effectiveness and competitiveness in terms of the costs for applicants. One weakness is that so far not all EU Member States have joined.

In some sectors it will nevertheless be necessary to maintain strong complementary IP protection. For example in the pharmaceutical sector, Regulatory Data Protection remains key for clinical data generated during clinical trials and Supplementary Protection Certificates compensate for an early expiration of patents due to compulsory lengthy testing and clinical trials before commercialisation.

**Leverage the existing IP system for digital innovation.** Europe needs to build on its existing strong and competitive IP system with its special relevance to the digital industries. This is crucial for Europe's ability to develop next-generation technologies (such as artificial intelligence, the Internet of Things, data) as well as for digital economic development.

A joint challenge in moving forward is finding the right balance between a) the European Patent Office's guidance towards patent examiners regarding the protection of next-generation technologies and b) the related case-law based decision making. Why is this important? Protecting next-generation technologies is key to help strengthen Europe's competitive position – and for this we also need to provide greater clarity and certainty for innovators.

### **Step up on international standardisation.**

Beyond the EU's borders, policymakers need to address issues of complexity and geopolitical bias in international standardisation processes to avoid delays in innovation and product commercialisation.

EU Member States and the European Commission should support European industry in standardisation efforts. This can be done by ensuring framework conditions that provide incentives for technology contributions to standardization and promote a widespread adoption of the resulting standards.

A balanced and transparent licensing system for standard essential patents based on Fair, Reasonable and Non-Discriminatory (FRAND) terms needs to be preserved, as well as fair access to standards for all market players. The continued and effective protection of IP rights, including standard essential patents, is key to ensuring that European technology companies can earn a fair return on their investments and continue to bring innovative solutions. This is one of the key factors which EU companies need to pursue to develop their investment in open standardised technologies.

### **Prioritise and strengthen Europe's role and values in international standard development.**

A smart, focused, inclusive and balanced policy approach to European standardisation is needed. Incentives for innovators and technology-leading companies to participate in European standardisation activities in ETSI, CEN and CENELEC need to be maintained and strengthened, and standards activities need to continue to be industry-led. Advisory groups of the European Commission, governments and other political bodies should continue to include experts of non-EU stakeholders.

Global standards will be key for the green and digital transition going forward, because they ensure interoperability and economies of scale e.g., for next-generation networking technologies such as 6G and PON evolution. For the increasingly trade-relevant product circularity domain, European preferences for Digital Product Passports (DPP) should be internationalised with high priority.

The overall standard-setting approach and objectives need to be balanced with Europe's ambition of open strategic autonomy and economic interests.

In short, it is essential to ensure that international standards do not stray from core EU values built on WTO/TBT principles for international standards development. We also need to avoid a scenario where (national) standardisation in third countries, market access (EU FTA agenda), technology-specific regulation or government funding become vehicles for other jurisdictions to gain competitive advantage in innovation and commercialisation.

### 3) Realise the scale-up of investment-intensive innovation

**To move forward with the green and digital transition we have to de-risk technology development through public-private partnerships and innovation-oriented public funding**

**True partnerships are key!** To gather pace for the transformation of our industries and remain a global leader in the green transition, the public sector has to keep its sights on the scale-up phase of innovation. To some extent, it can do so by encouraging partnerships at company level or with research institutions to scale up (e.g. test beds), but efforts cannot stop there.

Especially for capital-intensive or infrastructure-demanding projects, hands-on public support is common in other jurisdictions which have long recognised that deploying the newest technology at scale – and fast – offers competitive advantages for their entire economy.

The unprecedented US Inflation Reduction Act only underlines that for large-scale innovation made in Europe to remain competitive – and indeed for European industry to remain competitive – Europe's leaders must adapt to global reality. Europe's decision-makers and public sector have to step up their support as partners to industry – without entering into a transatlantic and/or intra-European subsidies race.

For Europe, the minimum would be to support investment-intensive projects that respond to a real demand and would have immediate industrial applications. But public support / de-risking can also take the form of outright partnerships, targeted subsidies as well as economic or regulatory incentives that would

allow companies to achieve scale-up faster and at a larger scale.

**Pair-up public support with tax-based incentives for R&D activities** to free up considerable company resources that could then be invested in the scale-up of more mature innovation projects.

**The public sector could become a better customer for innovation.** Beyond de-risking of deployment investment, public procurement is also an important accelerator of market penetration or replication of innovation.

Looking at past experiences, a European Sovereignty Fund may turn out to be a useful instrument to finance innovation, but the debate is at an early stage. An agreement on a new fund, its firepower and its conditionality, not to mention its actual set-up – are likely to take time and there is little guarantee that the new fund will not be beset by similar complexities as experienced for existing instruments.

In this light, policymakers should keep it a priority to look closely into all other means to de-risk innovation in the short to mid-term. This would alleviate current pressures and provide further confidence in Europe's ability to act and support innovation.

**Would de-risking generate more innovation? It certainly would.** One obvious impact is that it directly frees-up private sector resources.

Moreover, it would stimulate additional investment in new R&D projects: first, opportunity costs of innovation projects decrease; second, the business case for innovation improves because a larger scale can be achieved both more easily and faster. The latter is key in light of intense global competition for technological leadership.

# Additional Policy Recommendations

## Economy & market

### 4) Acceleration of national permitting procedures

Fast permitting is key to an innovation-friendly business environment. Delays in permitting, on the other hand increase uncertainty for innovation projects. Moreover, unnecessary delays are costly, both in terms of global competitiveness as well as in returns to innovation. In interconnected ecosystems, delaying the deployment of one innovation triggers further delays in connected projects and undermines dynamic sector development.

Slow permitting creates issues in many areas, for example the deployment of Very High Capacity Networks.

- 5G roll-out is held back by slow permitting for the deployment of network infrastructure.
- The deployment of charging points/recharging infrastructure in the public transport network is similarly affected.

### 5) Demand stimulation for innovative products

Policymakers should be more open to – widely – use demand-stimulation measures in order to support market uptake of innovative products that have clear sustainability benefits or help promote the twin transition. Reducing the

commercialisation-related risks would trigger additional and more capital-intensive innovation. Possible stimulants include tax credits, compensation mechanism and subsidies.

### 6) Leverage the innovation-capabilities of a competitive defence industry

Europe urgently needs to take a broader and more long-term perspective on its defence capabilities as we are facing persisting and fundamental security concerns. From an innovation perspective this could be a game changer.

The defence industry is one of the most R&D-intensive industries, reflecting the absolute need to strive for technological superiority – which literally can become a matter of life and death. Countries which are commonly recognised as innovation leaders – the US, Israel and South Korea – all have strong defence sectors both domestically as well as in terms of exports.

Most military technology is of dual-use i.e. it also has civilian applications. The US Defence Advanced Research Projects Agency (DARPA) is by now synonymous to the spill-over of military R&D into wider industry applications and for the competitive advantage that creates for US industry. This could become true in Europe, too, if we collectively learn how to better foster and integrate defence related R&D.

## Innovation ecosystem

### 7) A stronger public sector presence in innovation ecosystems

Stronger public sector participation in innovation ecosystems could take various forms, without narrowing down the scope of innovation.

Governments can take initiative to create consortia for specific innovations together with academic organisations, research institutions and private companies.

As in many areas the public sector is an important end customer, there is ample opportunity to become more involved in innovation collaborations as part of the value chain.

EU institutions, as well as Member States' national, regional and local governments, administrative bodies or state-owned companies could commit to adopting innovative technologies at an early stage to support the scale-up process.

### 8) Untapped potential: the use of data during the innovation process

Investing in advanced digital infrastructure and connectivity would help innovate our innovation processes. Possible gamechangers for innovation include the creation of industrial data pool ecosystems that facilitate big data analytics and machine learning. Promoting interoperable data infrastructure projects could also make a difference.

In many fields there is potential in the standardisation for data-sharing and the creation of horizontal data space. This could support Open Science projects amongst research institutions – or, very concretely, enable innovation in the use of healthcare data.

## 9) Boosting the adoption of digital tools

The use of digital tools in innovation – as for most scientific and economic activities – could lead to significant efficiency gains. Yet the current focus on upstream digital infrastructure diverts attention from the persisting gap in downstream infrastructure.

In other words, there is not only a significant investment lag in state-of-the-art digital infrastructure, but huge potential remains untapped if we fail to promote its uptake by users. For example, it would be very important to increase the uptake of quantum computing.

What could be done concretely?

Public funds (for instance via the Recovery and Resilience Fund) could be used to boost the uptake of digital technologies in particular by SMEs, as this would enable them to partake in digital innovation and enable demand for new services. And public authorities themselves could accelerate their adoption of digital technologies such as cloud solutions.

## 10) Strengthen the academia - industry link

Europe's academia is also facing a global competitiveness challenge – not (yet) because of the quality of researchers, but because of the growing gap in terms of funding and equipment vis-à-vis global competitors.

National and EU policy makers should urgently step-up funding of academic centres of excellence to maintain and increase their attractiveness to top researchers and students who are still deciding on their career paths.

Moreover, we need to improve the dialogue between academia and industry across sectors to strengthen our ability to collaborate. For this it is key to a) identify what research the market needs, and how to conduct this research with success and b) to promote mobility both nationally and across the EU, as well as between academia, industry and public sector.

What else can – and should – policymakers do? We all should take a European viewpoint rather than think in national dimensions. This will help promote cross-fertilisation across specialisations and strengthen the case for applied scientific research across the EU.

It also would be key to make cooperation with industry more attractive across academic ranks, including established scientists, junior professors and PhD students. This can be done by financially rewarding those universities that cooperate with industry on the research level, and those who encourage out-of-the-box thinking by their scientists.

## 11) Building human capital

EU and national governments must do everything in their power to stop the brain drain so that Europe can build tomorrow's generation of scientists and specialists.

This starts with improving conditions for Europe's academics, including through better funding (see previous point) and less burdensome administrative workload – but it doesn't end there.

We should urgently make the European job market more accessible for third country students after graduation at European universities. This should be a key deliverable for 2023 – after all, it is the European Year of Skills.

We will need many more STEM graduates, specialists and researchers. What can we do to make STEM subjects more attractive and accessible? We should work on this throughout the education system, starting with young pupils at schools. A more widespread curiosity in science at an early age is the foundation for Europe's next generation of scientists.

STEM alone is not enough – we also have to keep curricula relevant – both in mainstream education and specialised courses. Here industry can support development and orientation. That said, industry having to build independent programming schools to secure its future workforce is not a solution (although this has been the case in at least one Member State), but rather a clear signal that a public education system has fallen behind.

We also have to re-think the purpose of education more deeply. European education systems should foster a more entrepreneurial mindset and promote training in new disruptive technologies.

Moreover, it would be urgent to develop digital skills and expand training in ICT at all levels. Several industrial sectors are struggling with a lack of certain digital skills, a problem that will increase with an accelerating digital transition at industry level and that may slow down the update of digital innovation.

## 12) Improve conditions for Europe's start-ups and unicorns

Start-ups are key drivers of – especially disruptive and deep tech – innovation. They are also very important allies and partners in innovation projects driven by corporates. Keeping and growing Europe's start-up culture is key – and that includes making home-grown start-ups choose Europe over other destinations with currently better



conditions for financing and growth. Europe's legislators have to work hard on various fronts.

Access to finance for start-ups will remain an Achilles heel for our innovation ecosystems and our competitiveness in the mid-term. The only possible remedy is to scale up European Joint Venture Capital for start-ups of all sizes, including unicorns.

Third country-based investors should remain welcome, but a situation where Europe's start-ups are mostly dependent on foreign Venture Capital is neither sustainable nor acceptable. Only a well-developed European Venture Capital scene will reduce the pressure on unicorns to relocate to other jurisdictions. For the time being, the pull of (and conditionalities attached to) foreign capital deprives Europe's economy of leaders in new technologies and undermines the build-up of a vibrant start-up culture.

Whilst Europe has to keep its sights on the mobilisation of Venture Capital at scale, some partial improvements could be achieved in shorter term. Tax incentives could be used to increase early-stage corporate Venture Capital investments, for instance by classifying such investments as R&D investments to allow for tax deductions. A 'no taxation policy' could also be introduced for returns on R&D investments that end up making a profit, taking into account the high risk nature of such investments and the considerable likelihood of incurring losses.

Start-ups could be sheltered from Europe's fragmented legal, accounting and fiscal regimes and the many obstacles this fragmentation poses to scaling up across our (still deficient) Single Market. One possibility to be seriously considered would be a single legal, accounting and fiscal EU-regime under which registered

start-ups can operate in any country – i.e. a "Virtual IP Zone" for a limited time period to give them a window of opportunity to gain scale and capacity.

Incubator services and benefits programmes would stimulate transactions, including financing and tax benefits to EU buyers and investors. Financial pressures aside, Europe needs to take steps to remain attractive for entrepreneurial talent.

### **13) Don't let collaborations become collateral damage**

R&D collaborations are key for dynamic innovation in several highly specialised sectors.

More often than not, innovation is based on collaboration. In many areas, this also includes pre-market R&D collaborations amongst companies that are keen to share know-how and expertise, but may also be (potential) competitors.

The European Commission's DG Competition is currently revising its block exemption rules under which such collaborations are assessed. It is of great concern that the first proposals for a revision of these rules do not cut back on burdensome and disproportionate aspects the current rules (i.e. application to vertical collaborations or paid-for R&D; far-reaching requirements on IP access rights).

It is even more worrisome that additional and highly unrealistic conditions have been put forward. In particular, DG Competition's first proposal introduces a novel and ambiguous concept of "innovation poles", which requires collaborating parties to base their assessment on other market players' R&D efforts – information

that is by definition highly confidential and hence not obtainable for companies.

While we are waiting for the final rules, we cannot stress enough that for an R&D block exemption to be of value, its conditions need to be realistic, proportionate and clear in order to minimise legal risk. Over-complex rules that are designed to make collaboration virtually impossible would be another case of silo-thinking that will deprive Europe's economy of an important innovation channel.

## **Company-specific**

### **14) Strengthen Horizon Europe**

Horizon Europe is a key initiative with a lot of potential to create and grow partnerships that drive innovation. It is an important investment in the competitiveness of our industries.

Horizon Europe also is an excellent basis for an even stronger innovation support system that should be developed in anticipation of the evolving innovation needs of Europe's economy and society in a changed geopolitical environment. Under those circumstances, particular focus should be on advancing the digital and green transition.

In the short-to-medium term, it would be important to keep the current sectoral priorities for the second wave of partnerships (2025-2027).

It would also be key to avoid using the "exit clause" for secured PPPs as this would irreparably undermine trust in Horizon Europe and its successor programmes.

Equally to maintain trust and predictability, funding rates have to remain secure and stable.

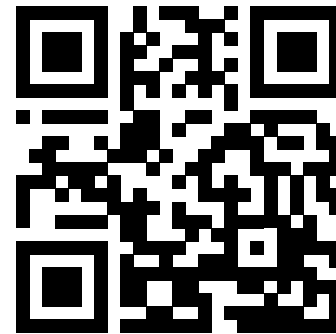
To address challenges in scale-up, and to ensure that Horizon Europe supported innovation really sees the light of day and contributes to our economy, it would be key to extend the Horizon Europe programmes beyond TRL 7 to the deployment phase.

Last but not least, Horizon Europe should keep on board like-minded innovation-focused countries, such as the UK and Switzerland.

After a few years' experience with Horizon Europe we would also propose a few straightforward steps that could make participation more 'user-friendly'. For example, it would be possible to lower the administrative burden for project participants and programme administrators alike by reducing the number of KPIs that need to be reported for PPPs.

Applicants might be further encouraged by greater transparency on the interaction between different parts of the programme – which should then also lead to more targeted project proposals. They would equally benefit from clear instructions on how to best prepare to win projects – which would likely improve the quality of submissions and encourage proposals by additional stakeholders who may have been deterred by the administrative burden and perceived low chance of success.

Dynamics amongst applicants could be improved by clear signals that industry actors of all sizes will mutually benefit, if they collaborate rather than pitch against each other.



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