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TRANSFORMATION POST-COVID

Mobilising Innovation for People, Planet and Prosperity

ESIR

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Independent
Expert
Report

Transformation post-COVID: Mobilising Innovation for People, Planet and Prosperity

ESIR Policy Brief No. 2

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Transformation post-COVID

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TRANSFORMATION POST-COVID: MOBILISING INNOVATION FOR PEOPLE, PLANET AND PROSPERITY

Introduction: early lessons from an enduring pandemic

One year into the pandemic, the European Union (EU) has shown the ability to react to the deepest social and economic crisis since World War II even if there have been some hiccups along the way. The EU managed to contain the centrifugal forces that generated a plethora of uncoordinated national measures that seriously jeopardised the integrity of the Single Market. Thanks to enhanced collaboration with Member States (and despite the painful Brexit process), the EU guaranteed the supply of personal protective equipment and now vaccines for COVID-19 to all Europeans in record time. EU institutions reacted also by laying the foundations of a future Health Union. And crucially, the EU mobilised extraordinary financial and human resources to support an ambitious plan for fostering the resilience and enabling the recovery of all Member States. Altogether, this provides an impressive illustration of the importance of acting together at the EU level to weather the storm, a useful and promising example from which important lessons should be drawn for other areas of future collaboration.

Key lessons can already be drawn from experience of this first year of the pandemic

Firstly, there is no use in trying to restore the *status quo ante*. Since its inception at the end of 2019, the von der Leyen Commission had already expressed its willingness to move away from a purely growth-oriented paradigm, which was showing critical flaws in terms of economic, social and environmental sustainability. The EU has since then launched the Green Deal as its strategy for sustainable prosperity, and deeply embedded the Sustainable Development Goals (SDGs) and the Just Transition in the European Semester, as well as in its external actions. Secondly, the pandemic added two important imperatives to the EU agenda:

- the need to **protect** the overall wellbeing of individuals (not just their income), at a time in which the pandemic is leaving a deep scar by taking away lives and placing the mental health and security of individuals under strain; and
- the need to **prepare** for future pandemics and crises and **transform** the European economy and society into a resilient holistic system for people, planet and prosperity at the same time.¹

¹ See ESIR Policy Brief no. 1 at https://ec.europa.eu/info/publications/protect-prepare-and-transform-europe-recovery-and-resilience-post-covid-19_en.

Now, at the onset of a second disruptive year, the pursuit of resilience, wellbeing and sustainable development must still be translated into a concrete set of guiding principles, investments and actions that would enable the EU and its Member States to ‘build forward better’. The unprecedented resources mobilised by the EU, topping €1.8 billion if one combines the EU budget for 2021-2027 with the SURE fund and the Next Generation EU programme – an historic €750 billion recovery programme funded as EU sovereign debt, largely green bonds – constitutes at once an extraordinary opportunity, and a huge responsibility for policymakers at all levels of government. Realising this opportunity will require a concerted focus on innovation designed and supported to catalyse systemic change.

Europe faces an intensifying puzzle: *protect citizens and the economy* in the short term, *prepare them for future shocks* by creating greater resilience “by design, not by disaster”, and sow the seeds of *transformative, systemic change* to promote prosperity in the long-term with the EU Green Deal and a just transition as the North Star. Only by achieving all of these goals in an integrated way, will the EU be able to protect its values and ambitions, without compromising on its renewed vision of sustainable prosperity. This is more easily said than done. The time is now ripe for translating words into deeds. Designing new social, industrial and economic systems in the midst of a crisis period such as COVID-19 is not an easy matter.

Applying a “protect-prepare-transform” design approach ultimately implies learning as fast as possible from innovation, in an integrated and democratised fashion, focusing on transitions that are just, that embody new social, green, and digital pathways together, but also tapping into the shift in political and citizen consciousness that has arisen from COVID-19. Europe, with its collaborative and inclusive approach to innovation serving people and planet, is well equipped to respond to this emergency, but will need to act in a coherent and ambitious manner at the EU, Member State, regional and city level, while ensuring that it engages and brings all key actors, including the private sector and people on the journey, above all the most vulnerable. This latter point is what will create both citizen engagement and political buy-in, which is also important in light of the forthcoming Conference on the Future of Europe.

In this policy brief, we offer guidance as to how this goal can be achieved by relying on smart and coherent policies, collaborative efforts across all levels of government and decentralisation of governance, and most importantly the courage to direct research and innovation at transformation.

Post COVID-19 transformation and R&I policy: building synergies, embracing complexity and mastering governance options

There is growing convergence on the need for a truly transformative Research and Innovation (R&I) policy that drives and enables the sustainability transition (including

the circular economy), strengthens economic and societal resilience and preparedness for future crises, and supports Europe's competitive edge. The recently revamped European Research Area, in synergy with the European Education Area and the Digital Education Action Plan and Horizon Europe, will be essential to help deliver on Europe's recovery and prosperity. These frameworks will also incentivise Member States to prioritise and boost investments and reforms in R&I by focusing on the twin (green and digital) transitions and on the recovery.

These ambitious policies are underpinned by a combination of ambitious targets and funding including: a goal to cut greenhouse gas emissions by at least 55% below 1990 levels by 2030, and to become climate neutral by 2050; the earmarking of significant funds from the Recovery and Resilience Facility to support the green transition (37%) and the digital transition (20%); a renewed commitment by EU governments towards achieving 3% of GDP spent on Research and Development (R&D), coupled with a voluntary target of spending 1.25% of GDP on public R&D by 2030, with the intention to qualify these targets through more directionality; and last but not least, a strong Horizon Europe with a financial envelope of €95.5 billion for 2021-2027 and seven carefully chosen flagship areas alongside earmarked Horizon funds for climate action.² This will be the biggest-ever EU R&I investment programme, programmed on the basis of strategic orientations that clearly prioritise the twin transitions and the recovery and set a clear transformational pathway. Importantly, Horizon Europe will mobilise resources through Missions and European Partnerships supporting the alignment of national strategies and industrial investments towards common EU objectives.

The level of commitment and the extent of resources invested in innovation and in the recovery is an extremely important signal, unprecedented in quantity and speed. It provides an unexpected opportunity to accelerate social, infrastructural and industrial transformations towards sustainability, and regenerative circular economy models. In combination these will provide the foundation for greater resilience, powered by innovation as a force for creative change and as a mechanism to engage with the complexity of transformation. The stimulus packages represent an opportunity to complement and accelerate what cities and regions are already doing and to support industrial transformation processes and agreements. Framed by the call for a 'just transition', transformation can be combined with solidarity and sustainability in order to ensure societal and economic resilience. This is an essential lesson to be learned from experiences and examples in other regions (e.g. the United States), where economic growth has been sought and achieved at the expense of equity, inclusivity, and sustainable development, and political instability has been fuelled by the disenfranchisement of certain regions and social groups.

² The Commission strongly encourages Member States to prioritise investments and reforms in the following flagship areas: 'Power up', 'Renovate', 'Recharge and refuel', 'Connect', 'Modernise', 'Scale-up', 'Reskill and upskill' (see https://ec.europa.eu/commission/presscorner/detail/en/IP_20_1658).

At the same time, these resources constitute debt that future generations will be paying off for decades. Taking a post-COVID-19 lens, to ensure that we properly protect, prepare and transform Europe for the future, create better economic growth, social and environmental resilience in the face of future pandemics and looming environmental shocks, **Europe's new policies and funds must be stress-tested against a better understanding of the tensions inherent in our goal of protecting people, planet and prosperity simultaneously.** The crucial questions to be answered are:

1. *How do we ensure that the significant investment in the recovery promotes systemic transformation, and is not spent on propping up harmful carbon-intensive economies, unsustainable growth models, dysfunctional approaches to urban living and damaging inequalities?*

- What types of investment can generate the greatest systemic impact and transformation needed?
- What levers will do most to enable long-term systemic change and resilience and address short term needs at the same time?
- Which short-term measures to “protect” the economy and society will not jeopardise our ability to “prepare” them for future shocks, and even more to “transform” them in view of a more sustainable future?

2. *How can funds be distributed and managed to ensure ongoing structural changes, and not simply be dispersed into thousands of individual projects that never join up or amount to structural change? Or disenfranchise even more European citizens, or contribute to a chasm between generations?*

- What implementation approaches can ensure appropriate engagement with key eco-system actors, including the private sector, and that these are connected and integrated to harness transformation dynamics, scale solution adoption and possibilities for exponential change?
- How can we ensure that the invaluable engagement and knowledge that R&I projects and actions produce on the ground become visible, feed into decision making, policy making (including public procurement) and trigger private as well as public investment?
- How can we best identify, double-down on, optimise and scale successful actions, to ensure they achieve continental or global impact?

3. *Where are the greatest needs for human, institutional and financial capacity-building to ensure that we both recover and transform at the same time?*

- How can we develop dynamic capabilities in the public sector to ensure effective governance, and create the right organisational structures and skills to provide an agile and dynamic response to the COVID-19 crisis?
- How can we adapt, simplify, and improve procurement processes so that the public sector can access the right capabilities in a timely manner?
- How can we equip both public and private sector actors with the skill sets, institutional capabilities, organizational structures and economic frameworks necessary to rise to challenges (such as climate change, but also future pandemics and other crises) characterized by a combination of scale, complexity, uncertainty and urgency that threaten to undermine democracy, well-being, solidarity and the future of humanity?
- How can we better prepare today's youth to be tomorrow's leaders and complex solution providers through better adapted universities and educational systems?
- How can we incorporate into all initiatives a component of lifelong learning practices and capability building in adapting to change and uncertainty and in working in relationship with others, no matter the conditions, making creative use of differences rather than division?

These questions will become critically important for the evaluation of national Resilience and Recovery Plans, in evaluating and selecting R&I projects, in shaping and supporting the implementation of R&I projects into connected portfolios of action, in designing the governance of complex organisations such as *i.a.* Horizon Europe Missions, European Partnerships and Important Projects of Common European Interest and in ensuring future leadership and citizens are part of the transformation.

We are aware that work is already underway in EU institutions to develop adequate models and **assessment frameworks**³; at the same time, such efforts **must be more concretely directed at providing institutions at the EU, Member State and regional level with adequate tools to monitor the orientation of their efforts towards resilience, wellbeing and sustainability** and most importantly help Member States, regions and cities build the necessary human and financial capacity for implementation. This should include, as a cross-cutting priority of EU policies, establishment of effective multi disciplinary stakeholder holder (finance,

³ For example the JRC Dashboard on resilience: the [European Recovery Dashboard](#).

industry sector, academic institutions, civil society, etc.) engagement mechanisms to enable collaboration for the development of focussed, mission-oriented system solutions, the reduction of gender, generational and territorial inequalities, with an important emphasis on the gender gap, broader diversity and inclusiveness in solution formulation and consideration of intergenerational needs. It may also **require an additional effort, not only in the European Semester, but also in the EU Better Regulation Agenda**, traditionally oriented towards cost-benefit analysis, a framework that does no justice to the mix of policy goals that Europe and the world face today.

We encourage focusing, through design principles, guidelines and incentives, on three critical enablers for transformative actions and assessment of impact: the creation of synergies and dynamic capabilities, a willingness to embrace and work effectively with complexity and an understanding of the need to make better use of governance options.

Building synergies

For Europe to increase the likelihood of success in achieving its ambitious objectives in a cohesive and enduring way, **strong partnerships with local authorities (regions, cities and metropolitan areas), academia, social representatives, willing actors aligned with and committed to systems transformation missions within the private sector, trade unions, and civil society will be needed** to unpack systems challenges together and to bring everyone along this transformative journey so that recovery planning is implemented effectively, impactfully and democratically. Radical innovation in approach, processes and methods of collaboration across governmental departments, finance and industry sectors and communities should be a design feature, encouraged through incentives, and reflected in conditions for the deployment of recovery funds and in project evaluation and selection.

To that end, the Next Generation EU plan must seize the opportunity to drive innovation across public administration with the goal of public leadership and enablement of new forms of partnerships and approaches for collaboration aimed at demonstrating systems change at scale and pace.

Public administrations at all levels need to stimulate employee motivation with strategic objectives; hire young people with updated skills and competences; offer quality training to create quality jobs; and engage in widespread co-planning with aligned private sector and social actors. This process can help to produce dynamic capabilities in the form of new eco-systems for collaboration, organisational structures and procedures that question dominant routines in government and generate new approaches, frameworks and skills to achieve the targets of digital and green transformation differently and more effectively.

These new dynamic capabilities should increasingly become part of routine skills that many departments and agencies should have in-house, becoming part of a wider organisational landscape. Dynamic capabilities require constant nurturing within public organisations, and interaction within external stakeholders. Strengthened public administrations and collaborative frameworks will also enable deeper understanding around the key tensions between people-planet-prosperity to ensure we break down barriers to policy change and enable transformation. They also **require more forward-looking frameworks (forecasting and backcasting, inclusive foresight exercises which are not only limited to technology, experts or bureaucrats)**. The recent EU Commission foresight report⁴ moves in this direction, offering pathways forward through widely shared visions of the future we want to shape based on a common understanding of 21st century challenges and wicked problems.

New European Bauhaus⁵ similarly offers an inspirational testing ground and opportunity space to demonstrate the power of partnerships and synergies among its three complementary dimensions of sustainability, style and inclusiveness. The five Bauhaus pilot projects proposed open up – conceptually, institutionally and literally – spaces of possibility in which practical experimentation and participation in sustainable living and design, building and making principles and solutions – can be brought to life, and made tangible, accessible and attractive. **Making a connection between the new EU Bauhaus and investment in recovery and resilience offers a means of capturing the public imagination for transformation** and of making that compelling in local contexts and cultures through manifestations of the meaning and value of alternative ways of living and being.

Embracing complexity

Moving forward, **Europe must acknowledge and embrace the complexity of the transformations needed, system dynamics and wicked problem solving.** COVID-19 has drawn attention across parts of the political spectrum and all ages to the phenomenon of complex connected systems and to the necessity of thinking and of acting in integrated, systemic ways to achieve resilience and health, planetary and human. The systemic nature of the transformations Europe has rightly committed to bears important consequences for public policy. **Institutions at the EU, Member State and regional level will need to direct the injection of investment in innovation and policy change at systems, not at their isolated parts**, and in so doing acknowledge the fundamental uncertainty that comes from engaging in interventions in complex systems dynamics. In this case, that uncertainty is all the

⁴ https://ec.europa.eu/info/sites/info/files/strategic_foresight_report_2020_1.pdf.

⁵ https://europa.eu/new-european-bauhaus/index_en.

greater for the fact that the systems requiring the greatest and fastest change are social, political and cultural.

Innovation has an invaluable role to play in the face of complexity and the uncertainty that comes with it. Innovation offers a mechanism to explore viable options and pathways for action through systematic learning. It furnishes a means of mobilising participation and a sense of possibility through experiences that identify relevant combinations of interventions together with the reference narratives needed for transformation. But **the paradigm of innovation underpinning R&I policies, and evaluation of innovation effects, needs to change to embrace a strategic and systemic approach.**

Complexity also requires an adequate understanding of the interplay between different policy impacts, as well as a better understanding both of key opportunities as well as the key tensions and possible trade-offs between digitalisation, social and green considerations:

- Where does digitalisation clash with employment and/or decarbonisation initiatives? And where are the opportunities to redesign our economy to foster all three?
- How can we ensure that industry bail-out measures foster transformation and our European Green Deal measures and do not lead to delay in business model transformation?
- How can public funding, including R&I, be directed to impactful missions-oriented projects that provide the vehicles for new forms of focussed public/private collaboration to drive innovation and scaleable system solutions, and provide demonstration cases to learn from and apply across other EU and global challenges?
- What is needed to ensure state subsidies and perverse market instruments do not discourage competition and innovation?
- How to transform planet-people oriented regulations into a comparative and competitive advantage for EU organizations and economic actors?

Based on these considerations, **the EU will need an integrated assessment model to measure the impacts of public policies and investments on resilience, wellbeing and sustainability**, accounting for cumulative and spillover effects, for example between different SDGs.

Mastering governance options

When it comes to governance, we believe that **a multi-dimensional and multi-disciplinary approach will be needed to enable systemic change that goes hand in hand with sustainability and resilience**. This means exploiting and optimising the full spectrum of governance options available to policymakers seeking to achieve systemic change.

As it is currently evolving, **COVID stimulus funding risks being dispersed into individual, disconnected initiatives, distributed at the government level along ministerial or departmental lines**, few of which are transformational because of the pressure to get money moving and the fact that there are few or no administrative precedents and tools for public spending at this scale that are fit for purpose, i.e. designed to support systemic approaches and investment in genuinely new and diverse actions, multifaceted and joined up to explore possibility without predictable outcomes or able to invest in participatory grant making together with communities who need to make change to their ways of living. And as a result, **investments risk being directed to short term fix-it solutions – the grey economy rather than a green recovery**.

COVID recovery stimulus, the European Green Deal and the Horizon Europe Missions all call for changes in the way in which R&I are designed, deployed and supported through governance and through appropriate implementation approaches. Achieving success will require active inclusion of delivery partners and platforms capable of catalysing systemic change and with the experience of deploying public investments at different scales and across all Member States (pan-European instruments).

Furthermore, **the pandemic has revealed key weaknesses in Europe's ability to respond to unforeseen events**. EU competences in healthcare and the institutional architecture at the EU level were insufficient to face the challenge from day one. Today, the need to strengthen the mandate of the European Centre for Disease Prevention and Control and the first steps towards a Health Union testify to the added value of working together to promote access to healthcare without leaving anyone behind, and coordinating to secure an equitable access to vaccines, also with the help of local communities. However, it would be a mistake to think that centralisation of powers and functions would be sufficient to solve the inefficiency of the *status quo ante*: **one of the key lessons from the pandemic is a re-discovery of decentralised governance and the empowerment of individuals and communities** as an element of resilience that can also lead to sustainability in the medium-term. Supporting decentralised forms of governance will require investing in the research and development of enabling technologies, from digital democracy platforms, to data distribution and delivery systems, which together, can help create

new and better channels for partnership and co-determination between citizens and their local governments.

The start of a new R&I Framework Programme and the current crisis presents a once-in-a-generation opportunity for reflection on the key enablers above and for instigating institutional renewal. Within institutions, such renewal could include rethinking and redesigning decision-making processes, incentive structures, mechanisms for interaction and engagement with the finance sector, industry and society. It should include the breaking down of disciplinary and governmental policy silos, with the intention to firmly embed European Green Deal priorities and build capabilities for the flexibility and systems perspective required in decision- and policy making. For Horizon Europe as an R&I Framework Programme, this would further imply looking beyond the priorities currently outlined in the strategic planning process, to review the entire ‘procurement’ process for R&I, from Calls for Proposals to the disbursement of funding and the evaluation of outcomes.

Regions/cities, universities and industrial value chains as key actors of the future European economy

The need for systemic change requires strengthening some of the key actors for the post-pandemic economy. We stress in particular the role of Regions and Cities; the need to leverage the knowledge and prominence of Universities and other Academic Institutions; and the redesign of Industrial Value Chains.

Regions and cities, national governments and local councils have been thrown into unprecedented difficulties managing through the onset of COVID-19, trying to find the right balance of protection and stability while seeking to maintain trust. At the same time, they continue to face the immense, looming challenges of structural change and radical transformations needed to address the climate emergency and ensure that both decarbonisation and resilience can be achieved in time, and by design rather than through ongoing disaster.

Cities will be one of the important engines of change towards a green and ecological transition. COVID-19 exposed our fragility and vulnerability as societies. It highlighted the social and economic differences amongst people: in status, habitat, and access to resources. People hit worse by the pandemic crisis are the most vulnerable communities that have the least possibility of access to public health service and social security. It will be very important to reorganize urban life and to promote sustainable and democratic innovations that foster more diverse, inclusive and distributed system solutions and do not increase social inequalities. Innovation and meaningful work, for example, have to be a fundamental partnership. Innovation policy and labour market policy need to be joined at the hip. Innovation approaches and efforts need to be designed and deployed in such a way as to enable cities and regions to become vectors for transformative change.

Not surprisingly, given the concentration of issues, **regions and cities have been at the forefront of trying, testing, adapting and aggregating new implementation approaches for transformative change.** Deep demonstration projects across European cities and regions are showing that coordinated interventions in economic, political and social systems and along value chains are key to achieving transformative change.⁶ Learnings from European cities and regions suggest that a portfolio approach – activating a combination of deliberately chosen innovation initiatives, connected and supported by continuous feedback loops – can be effective mechanisms in enabling active learning across connected innovations and systems (instead of focusing on the success of individual solutions). Deep listening practices and socialising change with local communities, creates ownership of and participation in transformation processes from the outset, while building capabilities to experiment and learn to engage in with public administration in practical place-based actions co-created with those who live and will live in them.

Universities are fundamental pillars of knowledge-based societies and in many cases service centres for communities. They can play a strategic role in leading, supporting and fostering transformation in the research community, industry and society at large. But many students are also holding universities accountable for their tardiness in adopting the educational systems transformation needed to respond to 21st century complexities and challenges. The pandemic has also shown that once students can no longer attend courses, directly engage with professors or experimentation, or meet other students, there is a propensity to quickly become disenfranchised, disenchanted and emotionally affected. Post-COVID scars within University environments will be felt for years to come. It is imperative that **Universities refocus their attention on truly innovating both in terms of knowledge exchange but also on building a healthy generation of leaders for tomorrow.**

For European Universities to lead requires fostering knowledge exchange and innovation through a more systemic and holistic approach that not only focuses on the competitiveness of the University as an intellectual institution but as a real contributor to applied innovation and solutions development, in partnership with private sector actors and industry, educating future leaders equipped for the contemporary system and transformation challenges, and enhancing the lives of people, communities and society.

This implies **enabling broader access to high-quality educational content, designing academic programmes that teach complex systems and design thinking, fostering lifelong learning and rethinking how R&I, entrepreneurship and education are interconnected for real-world transformation.** It involves fundamentally rethinking curricula and access to learning

⁶ For example the work of Viable Cities in Sweden and Deep Demonstrations supported by EIT Climate-KIC.

to provide students and future leaders with multidisciplinary tools, models and perspectives necessary for addressing wicked problems and complexity. It requires embracing digital tools (to a much larger extent as it is the case today) as a means to improve content and delivery of and access to education. It requires engaging students in hands on projects involving ideation and teamwork. These are essential skills that go beyond traditional in-class instruction, and that are absent in content-heavy curricula. Building on this, **European R&I ecosystems could benefit from collaborations beyond conventional stakeholders in the R&I community and invite broader participation by creating platforms for intergenerational innovation** (universities + schools + X) and crowd-sourcing innovation talent globally around selected themes.

Industrial value chains were directly impacted by the pandemic. To enable more resilience, greater sustainability and to capture opportunities for new forms of economic value creation through the adoption of circular and regenerative economic approaches, supply chains will face pressure to redesign, in order to both to shorten and diversify. Global value chains have been a distinctive feature of the globalised economy in the past three decades, with important benefits, but also raising concerns in terms of social and environmental sustainability including, massive waste, economic value loss and pollution, fairness in the distribution of value, and a lack of resilience due to the exclusive focus on efficiency and cost-cutting vs true cost accounting of environmental and social externalities. **Even before the pandemic, global value chains had already shown the signs of a ‘triple failure’**: a failure to protect workers, the environment and the economy, especially in economies in transition; a failure to prepare the economy for unforeseen disruptions, such as COVID-19, in particular due to the lack of diversification of sources, as well as the absence of sufficient guarantees for weaker players on many global value chains; and a failure to transform business models towards sustainable practices and circularity.

Today, **thanks to key policy initiatives such as the Farm to Fork Strategy, the Circular Economy Package and the EU Industrial Strategy, Europe has a window of opportunity to seek transformation towards resilient and sustainable value chains**. This will require reducing Europe’s dependency in key areas such as raw materials, promoting trust and fair relations between the players located along the value chain, and creating dedicated partnership alliances for R&I and joint venture investment vehicles in targeted sectors (taking a mission approach), inside and outside of the EU.

The importance of these focus areas in offering key post-COVID learnings for transformational change cannot be underestimated and are being unpacked in greater detail in a series of three focus briefs.

Conclusions

The impressive political commitment and financial resources invested in innovation and in the post-pandemic recovery are an extremely important signal, unprecedented in quantity and speed. The EU can now seize the opportunity to accelerate social, infrastructural and industrial transformation towards sustainability, regenerative and circular economy models to drive new forms of more resilient economic value creation, powered by innovation as a force for creative change and as a mechanism for the cross value-chain/ecosystem collaboration and focussed system solution development necessary for scale and transformation.

NextGenerationEU represents a pathway forward, which is unlikely to present itself again in the near future. The stimulus packages provide the means to complement and accelerate what cities and regions are already doing, supporting industrial transformation throughout the continent. Importantly, public/private ecosystem collaboration, innovation and system solution development fostered and enabled by EU policy and R&I investment will influence take-up and private sector adoption globally, playing an important role in addressing global challenges.

The EU also has the means to drive this (self)transformation while safeguarding – and ideally even strengthening – solidarity and combating inequality through social protection within European societies, in partnership with less developed regions in the world. **Systemic modernisation can be achieved with an eye on the education of future generations, the enhancement of R&I capabilities and the creation of climate friendly jobs.** This is the most effective, and indeed, the only way to make lasting change for a better common future.

Understandably, EU Member States seem to be still mostly oriented towards protecting the economy and society, rather than preparing both for future shocks, and transforming them towards more sustainable, regenerative and circular economic models. **It is of utmost importance, in this context, that the European Commission acts to encourage Member States, regions and cities to preserve their focus on the long-term while seeking to navigate through the short term.**

Against this backdrop, the ESIR expert group will continue to support the work of the European Commission in developing the tools and instruments that will be needed on this unprecedented endeavour. **We believe that the Commission should update its framework for measuring progress, targeting directly the need for systemic approaches and outcomes in resilience, wellbeing and sustainability for the long term.** Such a framework should be applied in the context of EU policies, and in evaluating Member States' proposed reforms in the context of the European Semester and NextGenerationEU. A coherent approach should also be adopted in R&I policy and spending, as well as in the forthcoming review of the Industrial Strategy,

which should be oriented towards Industry 5.0 as an overarching vision of competitive sustainability.

Reconciling short-term needs with longer-term goals is not going to be easy. However, **we believe that the EU has what it takes to achieve remarkable progress and become a global leader in the post-pandemic phase.**

Our recommendation is to encourage and enable collaboration and synergies, the development of system solution approaches and capabilities as well as to rapidly learn from those actively leading at the front. This is the intention of our three “focus briefs” and our forthcoming Industry 5.0 proposals.

The principles and values that the EU is following in cooperating and coordinating with Member States should, in turn, inspire Europe’s conduct vis-à-vis the rest of the world. In the coming months, the challenge of vaccine distribution and solidarity, the need for a revamped development policy and key opportunities for reflection such as upcoming international leadership opportunities on climate (COP26), biodiversity (CBD COP), Food (UN Food System Summit), Economics and Trade (G7 and G20) alongside the Conference on the Future of Europe can dramatically change the course of the European project, and its impact on the global order. The ESIR expert group will support the actions of the European Commission throughout these important series of challenges and events to draw on inherent European strengths and learnings from the COVID crisis so that we can truly ‘build forward better’.

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ESIR is a high-level expert group that provides evidence-based policy advice to the European Commission on how to develop a forward-looking and transformative research and innovation policy. This will help drive Europe's transition to full sustainability.

In this publication, ESIR offers guidance on how a 'protect-prepare-transform' approach can ensure fast learning from innovation by relying on smart and coherent policies, collaborative efforts across levels of government and decentralisation of governance, and most importantly the courage to direct research and innovation at the transformations Europe is facing.

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