Opinion of the European Committee of the Regions on a New Innovation Agenda for Europe

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POLICY RECOMMENDATIONS

THE EUROPEAN COMMITTEE OF THE REGIONS (CoR),

Why is it crucial? The Innovation Agenda can be instrumental in accelerating the transformation

1. welcomes the New European Innovation Agenda to boost innovative thinking and stimulate action for innovation with the aim of Europe leading the way in science, the industrial base, vibrant start-up ecosystems, conditions for innovation, and the talent base. The CoR stresses that the EU's ambitious innovation policy targets can be reached by avoiding fragmentation and by orchestrating influential measures through effective collaboration between industry, academia, social initiatives and regional and local administrations, at local, regional and trans-regional level, addressing societal challenges brought about by climate change, the need for increased resilience to health threats and digital transformation, to name a few;

2. considers, however, that this communication should have proposed new fields and a more in-depth approach to innovation in European policies. In the context of multiple challenges (globalisation, environment, health, population ageing, depopulation of large rural areas, and peace/war), the Commission should draw on the lessons of these crises, think out of the box and inter alia, open a debate on the type of innovation a resilient European society would call for. The need to increase the focus on societal and social innovations is particularly significant, both those directly relating to the challenges mentioned, as well as others, such as employment, especially youth employment;

3. proposes that the European Commission adds to the New European Innovation Agenda without delay complementary measures focusing on societal, social and energy issues and integrates these measures to accelerate societal transformations towards sustainable growth;

4. points out that policy measures must include clear targets for closing two innovation divides: in several innovation policy areas, Europe lags far behind the global leaders — the US and Asia — and within the EU, in many regions the crucial importance of innovativeness is not taken thoroughly enough, the best-performing regions are up to nine times more innovative than the lowest-performing ones. The CoR reminds that all regions do not have the same technical, human and financial resources to improve their results in the area of innovation;

5. stresses that implementing the New Innovation Agenda requires more radical measures than the EU typically adopts in its Europe-wide policy initiatives, and that the innovation processes need to be more systemic and more risk-taking. The target needs to be clear, realistic, challenging and measurable to double the impact and halve the throughput time;

6. highlights that the Innovation Agenda needs to be a critical signal for the whole EU to take impactful concrete actions — both immediate and long-term — to address the innovation divides and promote local and regional place-based innovation ecosystems;

7. agrees with the European Commission that the new wave of innovation — deep-tech innovation — is rooted in cutting-edge science, technology and engineering, often combining advances in the physical, biological and digital spheres and having the potential to deliver transformative solutions to meet global challenges. The CoR emphasises that the purpose of this new wave must be to accelerate multidisciplinary co-creation processes that will increase societal ([1]) and social ([2]) innovations in order to improve the welfare and wellbeing of individuals and communities, and that these actions will take the human aspects firmly into account, for Europe to get more out of the universal entrepreneurial leadership mindset development;

8. welcomes the recognition of the Partnerships for Regional Innovation (PRI) pilot action and, more specifically, the acknowledgement of the role of the PRI in promoting connected regional deep tech innovation valleys, linked across regions, and interregional innovation investments;

9. regrets that the European Commission has missed the opportunity to highlight the need for a strong link between local innovation ecosystems and the European Research Area via the Area's hubs ([3]);

10. calls on the European Commission and the EU Member States to step up the creation of ERA hubs as part of the ERA Action plan, to ensure that RDI partnerships and actions are upgraded as priority areas on the agendas of local and regional political leaders;

Why are EU innovations and leadership in deep tech more critical now than ever?

11. highlights Europe's potential to become a global innovation leader in the following areas: renewables, low-carbon hydrogen, batteries, digital technologies, drones and artificial intelligence (AI), high-performance computing, semiconductor production and design, Industry Commons, health and food, innovation procurement, and industry-university collaboration via EU programmes. The CoR also points out that EU companies are global leaders in high-value green patents and green patents in energy-intensive industries. Furthermore, one-fifth of all top-quality global science publications are produced in the EU. However, to become a global business and RDI leader requires the full implementation of many ambitious policy instruments;

12. stresses that success can only be achieved through connected local/regional action. The CoR emphasises the fact that Europe still lags behind the US and China in funding the whole innovation process. Private investment is growing faster than elsewhere, but European venture capitalists are still relatively risk-averse when it comes to making significant investments compared to those in the US and China;

13. calls for lessons to be learnt from the previous twelve EU innovation agendas over the past decades, which have not sufficiently changed the pattern of innovation in:

— moving to purpose-oriented creativity and innovation culture;

— moving from relatively closed clusters to genuine open innovation ecosystems;

— developing the entrepreneurial leadership mindset;

— promoting specific programmes starting in school, focusing in particular on women and girls;

— remaining focused on start-ups at the cost of scaling up and growth companies;

([1]) PRI Playbook need for societal transformations and use of societal innovation as one of the instruments.
([2]) OECD definition of social innovation (https://www.oecd.org/regional/leed/social-innovation.htm).
([3]) It should be remembered that in November 2021, the European Council drew up 20 priority actions, one of which ('Build up regional and national R&I ecosystems to improve regional/national excellence and competitiveness') outlined the need to define and pilot ERA Hubs to enable the emergence of competitive R&I ecosystems across the EU, to close territorial gaps and to ensure the easier flow of talents and investments.

— increasing knowledge management, orchestration and synergies between projects;

— collaborating with local/regional innovation, place-based and thematic ecosystems;

— benchmarking and bench-learning good practices and systemic transformation concepts at a global level;

— sharing synergies and knowledge between EU programmes and other initiatives to close the innovation divides;

— creating European partnerships and multi-level governance and systemic transformation;

14. encourages cities and regions to take a mission-driven approach to address critical societal challenges and to establish their missions, such as Green Deal Going Local and Digitalisation roadmaps and action plans. These should take into account Regional Smart Specialisation Strategies and utilise EU, national, regional, and local funding instruments, both public and private. Increasing synergies between the ERDF, the Digital Europe programme and Horizon programme is a must, especially to strengthen cooperation between SMEs, universities, technology centres and research and innovation organisations. Boosting the network of European Digital Innovation Hubs (EDIHs) assists in orchestrating regional innovation ecosystems and establishing European corridors and networks for global leadership;

15. refers to successful initiatives and best practices by cities and regions, including EU campaigns with the CoR, such as Citizen Dialogues, Innovation Camps, European Entrepreneurial Regions and Science Meets Regions, which have demonstrated how local embedding helps to initiate a challenge-focused dialogue with diverse actors' local networks to overcome institutional and mindset barriers in tackling societal challenges;

16. recalls that deep tech is targeted at societal progress, and the notion of social acceptability and utility needs to be taken into account. This requires increasing public and private RDI investments, leading to technology neutrality and avoiding one specific technology dependency. The CoR emphasises that societal innovation involves problem-solving capacities and entrepreneurial aspects in tackling disruption to create value and avoid setbacks and negative costs to society. Therefore, the implementation of the Innovation Agenda needs to pay stronger attention to all the RDI stakeholders, including citizens and, more broadly, the science-society relationship and the required co-construction processes;

17. points out that global knowledge networks and collaborative learning are essential, and therefore local actors participating in international networks, such as globally connected scientists, companies, and NGOs, can and should bring the relevant knowledge and potential solutions from outside to the local context;

18. stresses that Smart Specialisation Strategies play a central role in strengthening regional innovation ecosystems to stimulate sustainable economic growth better and solving societal challenges in a bottom-up, collaborative and context-dependent way, with the best-researched solutions The CoR welcomes the efforts such as the Vanguard Initiative network to build European industrial value chains based on complementarities in Smart Specialisation Strategies;

19. argues that the governance of innovation should benefit from diversity in leadership and management patterns for developing behavioural and managerial practices to support the transition to an entrepreneurial mindset and a learning society — that operates for all generations and across all borders — that is effective in codesign, collaboration, knowledge-sharing, and evidence-based decision-making;

20. considers that when technological solutions to a societal challenge are widely supported and well-proven, as in twinning green and digital, the EU level has a vital role to play in creating conditions for scaling-up, sharing, and standard-setting with a focus on purpose and impact, while avoiding regulation that would lead to technology lock-ins. This support can be developed through enhanced citizen engagement using diverse communication instruments;

21. reminds us that there is increasing demand to co-create dedicated innovation policies within regions and industrial sectors — and that this requires faster progress in deep-tech, green and digital twinning and SDGs;

The nature of innovation: place-based, structural, transformational, with a focus on impact

22. reaffirms that European innovation policy, in conjunction with European research policy, needs to ensure the availability of high-quality science to boost innovation and help society and businesses meet and deal with the crises and challenges facing all EU cities and regions today. The CoR highlights the continued important role of European regional financing through the ERDF and the Just Transition Fund. The CoR urges the Member State Governments and LRAs to take into account the European Commission statement ([4]) that the regulatory framework for 2021-2027 governing cohesion policy funds under shared management and funds under direct management funds allows for strengthened synergies between ERDF and Horizon Europe;

23. notes that the joint European Commission/CoR action plan in the area of research, innovation, education, and related policies to increase European-wide knowledge flows and collaborative learning in policy-making offers opportunities to empower researchers, entrepreneurs, and civil society to consolidate their regional research and innovation ecosystems and become an integral part of a pan-European network of excellence;

24. points out that EU funding from the Recovery and Resilience Facility (intended above all for the post-COVID-19 recovery and economic renewal) and the Just Transition Fund (intended above all to support coal regions and the other territories most affected by the transition towards climate neutrality) cannot yet deliver its full impact in fostering innovation, above all because the processes involved in putting the funds to use are very slow and subject to strict EU state aid rules;

25. stresses the role of local and regional authorities and the CoR, allowing citizens and their democratically elected representatives to influence the direction and purpose of innovation, and to develop solutions as user-innovators. In this regard, it is important to enable and sustain in all forms the local and regional authorities and ensure that LRAs are well prepared in order to be able to support innovation al local levels;

26. underlines the need to better link the Innovation Agenda and the Better Regulation Agenda by using the recent findings of the CoR RegHub network on public procurement ([5]) and removing obstacles to public investment ([6]), and by engaging local and regional development in finding innovative regulatory solutions that promote innovation. Here the Industry and Societal Commons approach is essential in integrating both agendas;

27. regarding EU research policy, the ERA policy agenda, and the ERA Forum, calls for decision-making to be more open, having the citizens as active contributors and actors fully taking on board the contribution of the CoR and regionally connected stakeholders. This means focusing more on the public value of science and innovation when selecting the challenges to be addressed by the EU while at the same time building the public support required for further development and implementation;

Specific points on the five flagship areas

Flagship on funding for deep tech scale-ups

28. notes that most European countries have a functioning financial market based on national government-supported venture capital and private equity markets, and that the proposed European Innovation Council (EIC) fund providing public grants and patient equity investment should bring additional value to the market and avoid upsetting the existing one;

([4]) Brussels, 5.7.2022 C(2022) 4747 final Annex to the Communication to the Commission approval of the content of a draft Commission Notice on the synergies between ERDF programmes and Horizon Europe.

([5]) https://cor.europa.eu/en/engage/Documents/RegHub/report-consultation-01-public-procurement.pdf

([6]) https://cor.europa.eu/en/engage/Documents/RegHub/RegHub%20report%20on%2021%20century%20rules.pdf

29. emphasises that funding is needed for the initiatives that create favourable conditions for new and innovative technology-based companies to continue operating in their local area using synergies and developing additional complementarities with other local stakeholders, such as research organisations and other companies;

30. considers that more robust links between research and innovation should include effective dissemination of results of projects carried out under the Horizon research programme — with particular focus on their value on improving regional innovation ecosystems and the Knowledge Triangle (research and education and innovation), and on the daily-life of cities, regions, and citizens, in particular on employment and well-being. The CoR stresses the need to effectively disseminate the results of the Horizon research projects on the institutions' open data portals;

31. reaffirms that the EIC and its portfolio are not well-known among industries, start-ups, scale-ups, and SMEs across Europe. Access to its services should be simpler and easier to use;

32. calls for the EIC fund's role to be a catalyser, with a lengthy but limited time horizon, and urges that successful exits will be achieved through initial public offerings;

33. proposes that the focus should be on new businesses and ecosystems requiring very large investments with long time horizons, such as electric car batteries, hydrogen and semiconductors, which tend not to attract direct private funding early enough; transformative investment requires 'patient' public funding rather than private funding, which mainly drives 'market-based' innovation;

34. highlights that 'creative tension' and 'creative destruction' are effective means to invent something remarkably new — co-creating potential breakthrough initiatives. This requires partial use of EU financing to retain, attract and reorganise talents and resources from high-quality market economy initiatives which have tackled similar challenges using experienced long-running business-oriented and/or public-private partnerships;

35. reminds that Europe needs to accelerate the whole innovation process on the ground based on creative idea screening, experimenting, testing, prototyping, bench-learning, and scaling up. The European Commission should show its innovativeness by creating new forms for financing local activities showing born global potential in their initial phase. These EU financing schemes would encourage national and regional feasibility financing, including the active use of cohesion funds;

36. urges the European Commission to take the lead and address the most significant structural problem in the stock market by enabling listed companies to issue new shares and sell these to the market without a burdensome share issuance process;

37. highlights that, while the success of any innovation agenda depends on the continuous capacity to replace old products and services by new ones, its disruptive effects should be addressed through co-design and co-construction to ensure long-lasting acceptance, also involving local and regional players;

Flagship on enabling deep tech innovation through experimentation spaces and public procurement

38. highlights the importance of the Open Discovery Process and refers to a body of research and proven methods to orchestrate and manage multi-level collaboration and experimentation processes in radical systemic transformation. The CoR acknowledges the need to improve professional capabilities and workplaces to become learning environments that deliver actionable ideas, by creating favourable conditions for trust and experimentation in joint projects with approved vision, goals, strategies, and action plans;

39. stresses that in an approach based on multi-level cooperation, solutions to local problems should, in most cases, be developed jointly with all the quadruple helix stakeholders in a connected way in real-world environments. This development will lead to fast learning, scale-up and rapid corrections in the innovation path — while certain parts of

coordination and monitoring take place in the form of trans-regional networks. The aim is to recognise 'what is possible' and extend expectations of what is possible to include making 'the impossible possible', then comparing alternative practices and to evaluate and learn about successful and failed experimentation paths, as well as to encourage the diffusion and uptake of innovation outside of its original context;

40. reiterates that proper monitoring and assessment of innovation is essential for effective policy implementation. The CoR recalls ([7]) the use and further development of the Regional Innovation Scoreboard on regional place-based policies. The CoR reminds that this is an essential tool for comparing changes in the performance of regional innovation policies and organising bench-learning processes between regions, thus improving regional innovation ecosystems and smart specialisation;

41. highlights that large-scale experimentation requires European Partnerships under Horizon Europe, the use of innovative public procurement, and the support of the European Innovation Council (EIC) throughout the whole innovation lifecycle, from the early stages of research to proof of concept, technology transfer, and the financing and scaling-up of experiments, companies, and start-ups to succeed in, as a source of inspiration, important projects of common European interest (IPCEIs) and Hydrogen Valleys;

Flagship on accelerating and strengthening innovation in European Innovation Ecosystems across the EU and addressing the innovation divide

42. proposes that the regional innovation valleys, together with leading higher education institutes (HEIs) should become essential catalysts for societal and industrial change and should enable regions with similar areas of specialisation to collaborate and take forward joint innovation projects. In this context a comprehensive, coordinated and decentralised system for programme monitoring and assessment will be required;

43. notes that to reach the targets that have been set, Horizon Europe (EUR 100 million) and the Interregional Innovation Investments (I3) (EUR 70 million) under the ERDF will only provide enough resources for the initial framework, which needs to be supported by radically more extensive efforts and subsequent financing. The CoR urges the European Commission to develop effective synergies between these funding streams by building on initiatives such as the Partnerships for Regional Innovation (PRI) and the network of European Digital Innovation Hubs (EDIHs);

44. welcomes the European Commission's effective measures in promoting regional dimension in the EU policy and regional innovation ecosystems as the key to strengthening Europe's competitiveness and achieving EU strategic autonomy for smart and sustainable growth. The CoR points out that HEIs are at the heart of regional innovation ecosystems with a strong culture of start-ups and business. All HEIs, especially universities of applied sciences and other similar HEIs operating on the development of real-life practice, need to strengthen their role as active drivers of innovation in the regions, ensure the training of much-needed professionals, attract new talent from the ground, and enable important technological innovations to be transferred to the local economy;

45. points out the important role of vocational education, focusing on the training of technicians and other practice-oriented professionals, in implementing this Innovation Agenda;

46. highlights the fundamental challenge of the European deep tech innovation agenda, which has inadequate incentives, experiences, and resources to engage stakeholders in a systemic transition. We also need incentives for the change in top HEIs from 'publish or perish' to an increased focus on how to address pressing major societal challenges and support deep tech innovation and global technology transfer in collaboration with industry;

47. proposes that HEIs need jointly with the other quadruple helix actors to develop the roles and responsibilities of professional orchestrators of local ecosystems wherein researchers, students and companies experiment together and pilot new technologies in the new entrepreneurial and innovation culture;

([7]) CoR-517-2020.

48. reiterates the importance of targeting and financing the initiatives to close the two innovation divides to facilitate globally excellence-level orchestrated multi-actor partnerships and open access to these also for partners from underperforming countries and regions. These are crucial to create a more robust and cohesive EU innovation ecosystem;

49. reiterates that the ERA hubs connecting decision-makers and RDI actors are an ideal instrument for fully recognising the merits of a place-based approach to science and innovation in co-creating new solutions to tackling the current crises in a regional bottom-up approach;

50. recommends actions through the Enterprise Europe Network in terms of international technology transfer and technological cooperation in RDI;

Flagship on fostering, attracting and retaining deep tech talents

51. urges creating a particular action plan with incentives and adequate financing to encourage HEIs to play an active role in solving major societal challenges, fostering European deep tech innovation, industry collaboration, and integration and to train the talent needed in Europe;

52. highlights the role of HEIs and especially students, as catalysts between the start-up and the scientific mindset and university-industry partnerships in supporting deep tech innovation and tech transfer; HEIs should become the drivers of the structural change needed to accelerate deep tech innovation to create, keep and maintain talent in Europe. In this regard, technology centres could play an important role as mediators and facilitators;

53. proposes that the best HEIs set an example, as in the US, for others in the mindset-change towards a society that values entrepreneurship, start-up and growth companies, university-industry collaboration, deep tech, and tackling societal challenges;

54. reaffirms that the European Institute of Innovation and Technology (EIT), its Knowledge and Innovation Communities (KICs), and their portfolios are not yet well-known among cities, regions, students, citizens, and academia across Europe;

Flagship on improving policy-making tools

55. recommends deepening the understanding of the changing nature of innovation in local and regional policy-making via the Partnerships for Regional Innovation initiative (PRI) and the collaboration between the JRC, DG RTD, DG GROW, DG REGIO and the CoR. This should be done in cooperation with the territories involved in the CoR-JRC PRI pilot action and with experienced European-wide innovation-focused networks such as EARTO, ERRIN, and ENoLL;

56. notes that this flagship includes action points that are very relevant to regions and cities. The CoR agrees with the European Commission's statements on supporting regions in designing and implementing better innovation policies and proposes negotiating a joint implementation plan that takes into account different elements of the Innovation Agenda and this opinion;

57. reminds (all regions) that this New Innovation Agenda is a vital and extensive effort to co-create new instruments to tackle burning societal challenges which require European collaboration, and recommends that the European Commission use PRI and other tools in creating support for cities and regions to prepare their regional innovation agendas and accelerate innovation measures with their stakeholders;

58. agrees with the need to define and use key terminology, indicators, data taxonomy, and comparable data sets to support evidence-assisted policy-making, which will be published on institutional open data portals to facilitate access, use and consultation;

Next steps

59. proposes that the JRC creates a European virtual collaboration arena for sharing, experimenting and testing methods, tools and practices in RDI policies and measures that Member States, regions and municipalities can use in forming and implementing their innovation policies;

60. stresses that the Innovation Agenda process requires regular assessment of progress and adjustments with stakeholders;

61. stresses the crucial importance of increasing the synergy and collaboration between major EU initiatives and showcasing how this happens in real-life practice in implementing the New European Innovation Agenda at the local and regional levels. In this, the EU and the Member State Governments should increase the synergic use of different European and national financing sources targeted especially to strengthen the innovation base of cities and regions;

62. stresses that multiplying European scaleup business development requires political leaders on all levels to commit to financing RDI much more than so far and, with that help, extend new growth platforms and influential place-based open innovation ecosystems throughout Europe. The pioneering phase can be created using the PRI piloting regions and cities;

63. recommends deepening the methodological development for carrying out on all governance levels the systemic transformation processes, which above all focus on transformative innovations needed for meeting global challenges. One of the targets is to increase the use of the best science-based knowledge in these transformation processes. The other target is to co-create the local level practices for European leadership in the existing strengths such as the Greens Deal, the twin transition approach, and the reinforcement of strategic resilience;

64. urges to face global competition for talent and leadership in science, technology, engineering, mathematics and innovation capacity, using as a reference two US initiatives: the new National Science Foundation (NSF) funding initiative, called the Regional Innovation Engines, which is a program that catalyses and fosters innovation ecosystems across the US, and the MIT Regional Entrepreneurship Acceleration Program (REAP), which is a global initiative and helps regions accelerate economic growth and promote social progress through innovation-driven entrepreneurship (IDE);

65. underlines that the Innovation Agenda will be successful only if fragmentation is avoided and the measures are effectively implemented. Europe will become the global leader in science, the industrial base, vibrant start-up ecosystems, conditions for innovation, and the talent base — and this will create favourable conditions for the European Green Deal and the UN SDGs.

Brussels, 1 December 2022.

The President
of the European Committee of the Regions

Vasco ALVES CORDEIRO