

**EURAXESS Korea
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Dear Colleagues,

I hope you are staying safe and healthy through these enduring challenging times. With almost 80% of its population vaccinated with at least one dose, Korean authorities are slowly implementing the “With Corona” plan that refers to the shift of the quarantine system to focusing on severe patients while letting most others live everyday life. Let’s hope it will allow us for more direct, face-to-face interaction.

The third EURAXESS Korea newsletter this year brings you to Moldova – a country that is ranked third in the world in terms of internet speed, a country with a firm vision for the digital future where Research and innovation (R&I) are engines of economic growth, helping to generate solutions for overcoming some of the toughest challenges facing society.

Secondly, we take a closer look at the European Commission's ambitions and plans to make Europe a “global hub for trustworthy AI”. This implies safeguarding freedoms and safety while encouraging innovation, investment, and commercial uptake.

Finally, we provide you with a summary of one of the EURAXESS Korea activities, where we focused on the Horizon Europe Launching event that took place on 18 August 2021 and gathered more than 200 participants from universities, government-funded research organizations, R&D-based enterprises, funding agencies, research centers based in Europe, European universities, the EU Member States embassies to Korea, and many other organizations.

As always, do not hesitate to contact me, I remain open to any inquires and suggestions for collaboration. I wish you health and success with all your undertakings.

Tomasz Wierzbowski.

- *Tomasz Wierzbowski*, EURAXESS Korea Representative

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EURAXESS members in focus: Moldova

Did you know that in September 2009 Moldova was the first country in the world to launch high-definition voice services for mobile phones? It was also the first in Europe to launch 14.4 Mbps mobile broadband nationally, now covering over 40% of the population. Moldova is ranked third in the world in terms of internet speed, according to the Net Index which covers 152 countries. It is a country with a firm vision for the digital future.

Moldovan R&I strategy

Research and innovation (R&I) are engines of economic growth, helping to generate solutions for overcoming some of the toughest challenges facing society. They influence economic competitiveness and a country's ability to withstand the changes that humanity is going through.

R&I activities are critical in achieving the UN Sustainable Development Goals (SDGs) in three key dimensions – economy, society and the environment – and the Republic of Moldova has committed fully to the 2030 Agenda to achieve these goals.

It was the first country in the Eastern Partnership to be formally 'associated' to the EU's Seventh Framework Programme (FP7) for research, technological development and demonstration activities (2007-2013), as well as Horizon 2020 (H2020, 2014-2020) which considerably expanded access to European research grants.

R&I in Moldova

In 2016, Moldova's research and innovation system was subjected to an evaluation by a group of international experts, within the H2020 Policy Support Facility, who proposed seven key political messages based on 24 detailed recommendations. These referred largely to proposals to strengthen the R&I system by addressing a set of structural weaknesses and amplifying existing strengths. Following the recommendations, the government decentralized R&I decision-making to the Ministry of Education, Culture and Research (MECR) and established the National Agency for Research and Development (NARD), which implements policies and budgets according to sectoral strategies within the national action plan and R&I programming.

The national program transposes the principles of 'smart specialization', which identifies priorities for creating competitive advantage by developing on R&I strengths and linking them to business needs, emerging opportunities and market developments.

EURAXESS – Researchers in Motion is an initiative of the European Research Area (ERA) that addresses barriers to the mobility of researchers and seeks to enhance their career development. This pan-European effort is currently supported by 42 countries, each of which will be profiled in our quarterly e-newsletters.

In this edition, we will zoom on Moldova



The Republic of Moldova is a landlocked state in eastern Europe, bordered to the west by Romania and to the north, east and south by Ukraine. It is one of the most densely populated European countries, with a population of just over 4 million, including the breakaway Transnistrian region. The country is divided into 32 districts and three municipalities.

Moldova is a parliamentary republic with a president as head of state and a prime minister as head of government. It is member of the United Nations (UN), European Council, and Partnership for Peace, OMC/WCO, OSCE, GUAM, CIS, OCEMN/OECBS and of other international organizations.



[The Parliament](#) is the supreme representative body of the people of the Republic of Moldova and the only legislative authority of the state. The Parliament is elected for a term of four years, which may be extended in the event of war or catastrophe.

[Ministry of Education, Culture and Research](#)

The Ministry of Education, Culture and Research consults with parties interested in promoting the national research program, sectoral strategies and associated action plans for their implementation. Proposed revisions to these programs and actions also go through the Ministry. It approves the institutional budgets, examines related performance and scientific reports, and promotes bilateral and multilateral R&I programs launched through cooperation agreements with international organizations and foundations. In addition, it monitors R&I policy and projects and presents an annual implementation report to the government. It attracts funds from external sources for the development of research and innovation and elaborates minimum standards for conferring scientific titles and related activities.

At the same time, the national program corresponds to Moldova’s Code of Science and Innovation (259/2004) and activities planned within the ‘Roadmap for the integration of the Republic of Moldova into the European Research Area’ (2019-2021). That roadmap sought to strengthen the country’s R&I capacities, promote further integration within ERA, and the take-up of opportunities within the framework programmes (i.e., FP7, H2020).

Altogether, the R&I system in Moldova is represented by 61 state and private organizations, including 39 institutes and research centers, 15 higher education institutions, and seven other learning or research entities. These employ 2,707 scientific researchers, more than half of which are women (1,430).

To meet the principles of the European Charter for Researchers and recruiters Code of Conduct, MECR has implemented several measures including a Human Resources Development Strategy (2019-2023) and corresponding action plan.

R&D expenditure in Moldova in 2020 totaled 469.6m lei (€22.52m), the equivalent of 0.23% of the GDP, compared to 0.24 in 2019. Just over three-quarters of that was spent on applied research, 10.6% on fundamental research, and 14.2% on technological development.

Funding and recruitment opportunities

Research in Moldova is primarily financed on the basis of ‘quality competition’. Funding comes from the state budget, foreign funds, companies and the NARD. The MECR is the principal R&D funding body in Moldova, consolidating different grants and types of funding and giving research more visibility within society.

As most research is performed in public universities, the majority of research jobs are also in these centers of learning. Doctoral studies are regarded as part of the student body and receive a monthly scholarship.

Research excellence in Moldova

According to the 2019 Ranking Web of Research Centres (RWRC) – a global comparison of visibility (total number of external links received by the web domain of the institution), online presence, transparency/openness and excellence – the Academy of Sciences of Moldova (ASM) climbed 218 positions on the previous year’s ranking of 477.

[Academy of Sciences of Moldova](#)



The Academy of Sciences of Moldova is the umbrella organization for all researchers, scholars and intellectuals in the country. The Academy works according to the provisions of the Constitution, the Code on Science and Innovation, the Partnership Agreement with the government and other legislative and operational remits. There are 45 full members of the Academy, 28 corresponding members and 47 honorary members. Within the framework of the Academy different institutions carry out fundamental and applied scientific research, innovation and technology transfer resulting in new scientific knowledge and applications, actions to capitalize on national patrimony and promote scientific and cultural values on a national and world level, and the high-level training of scientific personnel.

Promotion and dissemination of scientific results

Despite the Covid-19 crisis, the scientific community has managed to carry on using various digital platforms. Scientific research has been widely broadcast on radio, TV and social networks, as well as through press releases and electronic and print media. The pandemic has helped to raise the profile science and innovation in Moldova. Events designed to ‘popularise’ science are streamed online by the Information Society Development Institute (ISDI), Privesc.eu, Rlive, etc. Thanks to the country’s high internet penetration, this means scientific achievements are accessible to the general public, civil society as well as to businesses.

Moldovan research is well recognised nationally and internationally in terms of awards, prizes and other distinctions garnered in exhibitions, competitions and festivals. Among the most important awards are the National Award, given annually in various fields, including science. The Moldovan Academy of Sciences awards prizes for outstanding results in the field of life sciences, exact sciences and engineering, as well as in the economics, humanities, arts and social sciences. The ASM also awards an annual prize for young researchers, as well as prizes for the promotion of science. An annual Municipal Youth Award is also organised.

Moldovan research is well represented in scientific publications. In 2020, more than 7,000 published works were registered. These included articles in scientific journals, high-impact international journals, monographs, collections of articles, conference proceedings, etc.

Moldova is keen to further develop its international reputation and make better use of its scientific and human potential, as well as its modern infrastructure within the R&I ecosystem. According to the Code on Science and Innovation, collaboration with other countries based on bilateral and multilateral projects is the responsibility of the NARD but also rests partially with the MECR. The drive towards more internationalised science is also part of Moldova’s Association Agreement with the EU’s framework programmes.

EURAXESS Moldova

Moldova’s Academy of Sciences plays an important role in the process of implementing its ERA roadmap and action plan in line with the national strategy. Since 2011, the Academy has acted as the liaison institution for the EURAXESS network. As the host institution it provides services and maintains the national portal (euraxess-eu.md) as a tool to promote researcher mobility all over Europe.

Through its efforts, the number of local contact points within universities, research institutions and SMEs has increased to 27. As elsewhere, the network offers personalised assistance on administrative, legal, accommodation, courses, integration and other issues. It promotes its activities and events via the web-page and social media posts.

One noteworthy achievement of the EURAXESS mobility programme at national level was to encourage Moldovan research institutions to adopt the Human Resources Strategy for Researchers (HRS4R). This tool helps employers and funders from the research field to put the principles of the Charter and Code into practice, thus defining their rights and obligations, and increasing the transparency, visibility and international prestige of beneficiary institutions.

Local contact points in Moldova regularly meet to discuss the best ways to provide services and help entities fully implement the Charter and Code of Conduct for recruiting researchers. Currently, seven research organisations in Moldova have earned the right to display the 'Excellence in Research' logo that goes with full implementation.

The scientific community collaborates with the European Commission's Joint Research Centre in developing the country's smart specialisation strategy. It also cooperates with the United Nations Economic Commission for Europe (UNECE) in developing innovation policies, the Francophone University Agency in promoting excellence in research and attracting young researchers, and the European Training Foundation (ETF) for training in smart specialisation, etc.

Useful links:

[National Agency for Research and Development](#)

[National Agency for Quality Assurance in Education and Research](#)

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The story behind Europe's AI ambitions

The European Commission's proposed new regulations for artificial intelligence (AI) include a clear ambition and plans to make Europe a "global hub for trustworthy AI". EURAXESS Worldwide Newsletter explores what this means and how it fits into wider digital ambitions and research policy directions.

Barely a day goes by without a news headline heralding developments in artificial intelligence. Tantalizing as each story may sound, the scientific community is likely to be more drawn to the backstory. The countless hours



Source: Shutterstock

of hard work behind the scenes and, behind that, the strong belief – backed by political will and investment – that AI can transform science and society.

In its proposed regulation, [announced on 21 April](#), the Commission spells out that ‘trustworthy AI’ means safeguarding freedoms and safety while encouraging innovation, investment and commercial uptake. Ethical concerns are also raised about the way AI is developed, how data is obtained and ‘trained’ during machine-learning processes to avoid bias, and how the information is used.

As the Commission’s proposal is debated in the EU’s law-making chambers, questions about AI compliance and strategies for enforcing it are also being explored. Issues about its use in law-enforcement (e.g., facial recognition systems), credit scoring and insurance risk, as well as its potential abuses (e.g., deep fakes, scams, subverting justice and democracy) are also high on the agenda.

The EU naturally wants to capitalize on the benefits while ensuring that suitable checks and balances (standards and agreements) are in place to guide developments. Many of these challenges and opportunities are presented in a 2020 [White Paper](#), ‘Artificial intelligence – A European approach to excellence and trust’.

World-class AI research (and funding)

Europe is betting big on artificial intelligence. There are good grounds for such optimism. The global market for AI, which includes software, hardware and services, is forecast to grow by 16.4% to \$327.5 billion in 2021 and push through the \$500 billion mark by 2024 thanks to a five-year compound annual growth rate (CAGR) of 17.5%, according to [IDC data](#).

Reaching this potential is going to take a lot of strategic planning and hard work. According to the Commission, Europe needs to increase and better coordinate public and private investment to “reap the full benefits of AI” and strengthen its position in this key enabling technology. It is why digital technology and AI feature prominently in EU research programs and initiatives. These include [Horizon Europe](#), the main R&I funding program supporting technological and societal aspects of AI development and deployment, and [European Research Council](#) grants to simulate AI-focused research centers and leadership across the EU, and beyond.

Other AI initiatives include [European Innovation Council](#) funding to help promising innovators and SMEs turn research into breakthrough innovations, and [European Partnerships bringing private and public R&I partners together to tackle pressing societal challenges](#). For example, the [AI, Data and Robotics Partnership](#) is looking for cross fertilization between partners from the digital and space sectors/industries, thus driving development and uptake of new technologies.

Public-private partnerships (PPP) are another avenue to advance AI in and with Europe. One [AI-PPP](#) is being set up to boost “value-driven trustworthy AI, data and robotics based on European fundamental rights, principles and

values”. It brings together a range of initiatives ([EurAI](#), [CLAIRE](#), [ELLIS](#), [BVDV](#) and [euRobotics](#)) covering different aspects of big data, intelligent systems, machine-learning, etc.

More details about EU projects, results and publications, including a handy [CORDIS Results Pack](#) on how AI is “turbocharging European industry”, can be found on the Commission’s dedicated [AI research web-page](#).

Better understanding of ‘trust’

“With all of the attention on machine learning, many are seeking a better understanding of this hot topic and the benefits that it could provide to their organizations,” notes SAS, a software and analytics business, in a helpful [primer/briefing](#) on ethics and AI. This is also true of the international research community, which is both heavily invested in the science behind AI but also in what it can do for their field.

Artificial intelligence and related fields are driving innovation in countless areas, from language processing and security applications to image analysis, medicine, self-driving vehicles, personalized marketing, e-commerce, and much more.

According to a [2020 report on AI research and innovation](#), ‘Europe paving its own way’, the EU ranks among global leaders in AI science and it has actively supported ethical and human-centric progress, but its innovation performance in the field needs a boost.

Effort in the coming years is thus focused on developing and deploying [AI solutions](#) with positive impacts on society and the economy, while prioritizing public and private investment including [better access to and use of scientific data](#).

Focus is also needed on extending [trustworthy AI](#) and “ethics by design” in Horizon Europe R&I projects. The impact of such determination could “bring about significant improvements to society”, the Commission notes, delivering high-impact innovations in healthcare, education, transport, industry, climate action, and many other sectors.

On the flipside, as AI becomes more pervasive, it will bring about considerable socio-economic changes which need discussing, according to the Commission. This is why it has launched a consultation ([Europe’s Digital Decade](#)) to explore these implications as it forges new laws governing AI developments: “The EU must act as one, based on European values, to promote the development and deployment of AI.”

A post-pandemic digital compass

To help translate the EU’s digital ambitions into concrete goals with built-in monitoring and reporting milestones to reach by 2030, the Commission



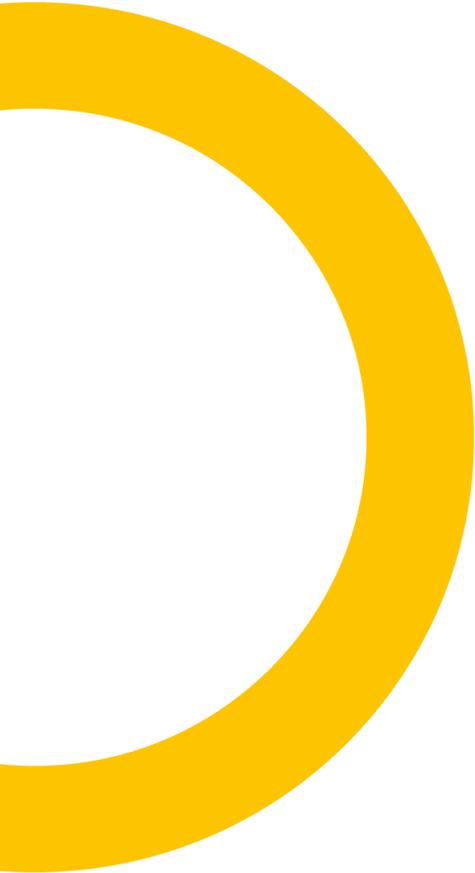
came up with a so-called [Digital Compass](#) revolving around four “cardinal points” outlined briefly here:

- Digital skills (at least 80% of adults and a much higher proportion of women should have digital skills to reach a target of 20 million ICT specialists employed in the EU)
- Well-functioning, secure and sustainable digital infrastructures (all EU households should have gigabit connectivity and all populated areas should be covered by 5G)
- Digital transformation of businesses (75% of companies should use cloud computing services, big data and AI)
- Digitalization of public services (all key public services should be available online including secured access to e-medical records and eID solutions)

The pandemic has shown the importance of digital technologies and skills, and highlighted where improvements are still needed. In a [prepared statement](#) about Europe’s post-Covid digital ambitions, Commission President Ursula von der Leyen said, “We must now make this Europe’s Digital Decade so that all citizens and businesses can access the very best the digital world can offer,” and concluded that the new Digital Compass “gives us a clear view of how to get there.”

More info

[Read the Commission proposal](#) laying down harmonized rules on AI to the European Parliament and Council.



Source: Shutterstock

Korea Updates

Horizon Europe Launching Event

The Horizon Europe Launching Webinar in Korea took place online on 18 August 2021. This webinar was planned to officially launch Horizon Europe Research and Innovation Framework Programme in the Republic of Korea and promote the excellent Korean entities to join Horizon Europe projects for the next 7 years.

Moderated by Mr. Christophe Besse, Head of Trade and Economy Section of the EUD, it was successfully finished with more than 200 participants in a zoom, YouTube, and Instagram. The participants comprised universities, government-funded research organizations, R&D-based enterprises, funding agencies, research centers based in Europe, European universities, MS embassies to Korea, and others.

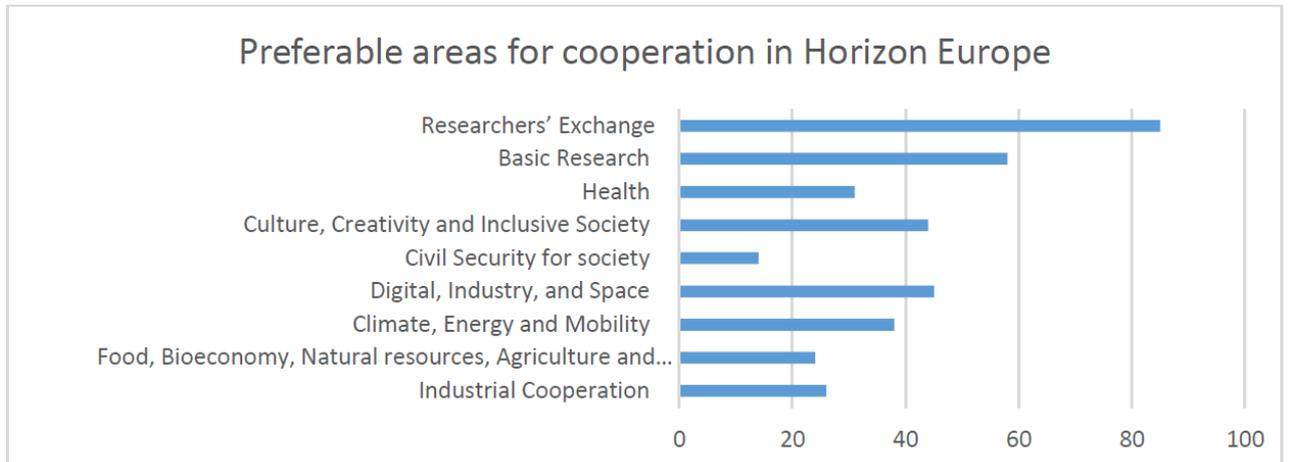
With a start of opening remarks by the EU Ambassador Maria Fernandez Castillo, two video presentations followed by Ms. Maria Cristina Russo, Director for Global Approach and International Cooperation, for congratulatory remarks, and Ms. Nienke Buisman, Head of Unit for International Cooperation, for the introduction of Horizon Europe from a global point of view.

Dr. Tomasz Wierzbowski, EURAXESS Korea Representative, gave detailed information on Pillar 1 of Horizon Europe, particularly ERC and MSCA. In the end, Ms. Ju Young Kim, Policy Officer in Science, Technology, and Innovation of EU Delegation to the RoK presented practical methodologies on participating in Horizon Europe and receiving matching funds from the Korean government.

In particular, she put all answers to the questions given by participants before the event during her presentation. Many participants actively joined the Q&A Session, and Ju Young and Tomasz lively answered all the questions.



According to the survey of the pre-registered participants, more than 80% recognized Horizon, and 92% wanted to cooperate with European partners in the future. As per the question of choosing preferable areas for cooperation in Horizon Europe, the majority considered 'researchers' exchange', followed by basic research, which enables cross-sectoral collaboration. Specific research topics by clusters in Pillar 2 are as below:



Most of the questions were related to practical matters, such as where to find the calls and actual partners, the major topics for Korea, budget, timeline, the status of UK and Switzerland, major difference between H2020 and HE, and programs for students, etc. Among them, there were few questions about Korea's new status to be an associated country in Horizon Europe.



Based on this successful initiative, the annual flagship event named 'EU-Korea Research and Innovation Day,' co-organized by EUD and the National Research Foundation of Korea (NRF) under the Ministry of Science and ICT (MSIT), will continue with the role to expand R&I cooperation with Korea via Horizon Europe. It might occur either in late October or in early November, possibly back-to-back with the Joint Science and Technology Cooperation Committee (JSTCC).

To follow up, EUD and EURAXESS Korea will closely approach the Korean research entities to better understand Horizon Europe by organizing small-sized webinars, meetings, round-table discussions, and other events.

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