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EURAXESS Japan Quarterly Newsletter

EURAXESS Japan: News review

Council for Science, Technology and Innovation
(Source: https://japan.kantei.go.jp/98_abe/actions/202001/_00026.html)

On 23 January 2020, the Prime Minister held the 48th meeting of the Council for Science, Technology and Innovation at the Prime Minister’s office.

At the meeting, discussions were held on the comprehensive package to strengthen research capacity and support young researchers; the end-of-program evaluation for the Impulsing Paradigm Change through Disruptive Technologies Program (ImPACT), the goal-settings for the Moonshot Research and Development Program and other issues; and the institutional reform policies to promote science, technology and innovation.

Based on the discussions, the Prime Minister said:
“Today, we have decided on the new package to support young researchers. It is no exaggeration to say that the future of Japan as a science and technology nation depends on young researchers. We intend to significantly enrich our support, such as scholarships, so that all students who aspire to a doctorate can devote themselves to research without worrying about their daily living. In the age of accelerating globalization, we also aim to boldly expand opportunities to study overseas. We will also create over 5,000 stable positions for young researchers. Furthermore, we also intend to establish a new research scheme to enable young scholars to conduct challenging research with their creativity for up to ten years, freeing them from bothersome paperwork. By fully implementing all policy measures under this package decided today, we will swiftly create an environment where young people can aspire to pursue a career in research with dreams and hope for the future.

Innovations in the world are accelerating further. Today, we received a briefing on cyborg technologies and artificial photosynthesis; I am aware that various technologies, which were a mere dream until very recently, are now on the verge of becoming a reality at an incredible speed. This month, we will open the International Joint Research Center for Zero Emission Technologies in Japan, which will collect wisdom from around the world. We intend to promote moonshot research in pursuit of six ambitious targets, which we have determined today, towards the resolution of issues that humanity is facing, such as a super aging society, in addition to climate change.
Now, we are already in an age where we must put global competition first in everything. In the field of quantum technology, which provides the foundation of next-generation encryption and other technologies, Japan will firmly raise its flag high to the world. I intend to create a center of excellence that brings together leading researchers and companies. We also need to promote reforms to make our regulations and systems on innovation ones that are sufficiently flexible in light of international standards.

This year, the Olympic and Paralympic Games will be held for the first time in half a century. Concerning the Sixth Science and Technology Basic Plan, of which considerations are in progress in this milestone year of 2020, we must create the foundation for Japan to maintain its status as an innovation powerhouse in the new era, looking ahead to the next 50 or 60 years. I ask Minister Takemoto, in particular, and other relevant ministers, including Minister Hagiuda and Minister Kajiyama, to continue to develop concrete policies, working in unity.”

Young Academy of Japan
(Source: http://www.scj.go.jp/en/yaj/)

The Young Academy of Japan was established within the Science Council of Japan from the 23rd term (2015- ) to help solve social issues and to develop young scientists who will take important roles in the academia of the future. Their work includes collaboration with other domestic and overseas young scientists and implementation of the following activities:

1. Recommendation from the viewpoint of young scientists
2. Operation of young scientist network
3. Collection of opinions and proposals by young scientists
4. International exchange of young scientists
5. Cooperation with industry, government, and non-profit organizations
6. Promotion of science education
7. Other activities to achieve purposes of Young Academy of Japan
The Society of Japanese Women Scientists
(Source: http://www.sjws.info/english/index.html)

Mission statement

The Society of Japanese Women Scientists (SJWS) facilitates friendship and knowledge exchange among women scientists and supports them for their status improvement. SJWS promotes the development of a common ground for all scientists - female and male scientists - to demonstrate their ability and individuality with the ultimate goal of advancing world peace.

Introduction

The Society of Japanese Women Scientists (SJWS) was established in April, 1958 to foster friendship among female scientists, facilitate knowledge exchange among them in various fields of research and provide support during their career with the ultimate goal of advancing world peace. The establishment of SJWS was wholly supported by the Committee of Seven for World Peace Appeal initiated in Japan in 1955, which included Raicho Hiratsuka, the vice president of the Women's International Democratic Federation (WIDF) and Hideki Yukawa (Nobel Laureate in physics in 1949). Since April, 2014, SJWS has become the general incorporated association.

SJWS members belong to a wide range of disciplines including basic and applied science, engineering, medicine, pharmacy, agriculture, and home economics. Members are researchers and engineers from academia as well as industry. SJWS welcomes male members.

For over a half century, SJWS has actively organized scientific lectures and symposia focusing on issues involving women scientists. Since 1995, SJWS has annually presented two awards to scientists who have made great contributions to advancing the objectives of SJWS: 1) Early Career Investigator Award to encourage and acknowledge excellence in science, and 2) Distinguished Service Award to recognize outstanding service to scientific community.

SJWS annual meetings provide members with opportunities to present their scientific research and discuss women scientists' issues. SJWS publishes an annual journal and newsletters twice a year. SJWS members have been attending international conferences to communicate and establish connections with women researchers from other countries and in 1999, SJWS hosted the 11th ICWES (International Conference of Women Engineers and Scientists). Since October 2002, SJWS has been an active member of Japan Inter-Society Liaison Association Committee for Promoting Equal Participation of Men and Women in Science and Engineering (EPMEWSE). SJWS has been closely working with the National Women's Education Center (NWEC) to establish connections between women scientists from 2003 to 2005, and has co-sponsored
“Summer School for High and Junior High School Girls” with EPMEWSE and NWEC annually since 2006. Furthermore, SJWS recently co-sponsored events aiming at upbringing next-generation women researchers with Gender Equality Bureau Cabinet Office. SJWS thus promotes the development of a common ground for both female and male scientists to demonstrate their ability and individuality with the ultimate goal of advancing world peace.

Gender equality in science and technology: A critical issue for sustained economic growth and development of Japan by Dilworth Machi

(Source: https://www.jstage.jst.go.jp/article/sjws/20/1/20003/_pdf/-char/en)

Advances in science and technology drive the economic growth of a nation. In order to ensure continued economic growth, a workforce that is well-trained and highly-skilled in science, technology, engineering and mathematics (STEM) is needed. For a society like Japan where the population is decreasing and ageing at a rapid rate, securing such a workforce in sufficient numbers is a critical issue. In Japan, it is anticipated that by 2030 the working-age population (15–64 years of age) will be 63% of that of 2015. Currently, the economic participation of women in Japan is 59.5% of that for men. In the field of STEM, the ratio of women among total STEM workers is 16% in 2017, which places Japan at the bottom of 23 developed countries. Further, data show that Japanese women have the talent and qualifications to pursue STEM careers that are equal to men. It seems clear that increasing the participation of women in STEM goes a long way to mitigate the anticipated workforce shortage needed to sustain Japan’s economic growth. There are a number of factors that are preventing full participation of women in STEM. These factors include both conscious and unconscious biases toward women’s ability to pursue scientific careers, and the separate roles for men and women assigned by society. These factors existed/exist in many countries, but some countries have made efforts to increase the participation of women in STEM with success. This article introduces three such efforts: US National Science Foundation’s ADVANCE Institutional Transformation; EU Horizon2020; and UK’s AthenaSWAN. It is hoped that learning best practices from these successful approaches may provide Japan a way forward to break out of the current situation before it is too late.
I am a thermal engineer interested in the two-phase flow device (e.g. heat pipes) and the thermal control system of spacecrafts. I completed my MA in aerospace engineering at Kyushu University in Japan before starting to work at the Japan Aerospace Exploration Agency (JAXA) as a thermal engineer in 2007. I was responsible for the development of the thermal control system of the JAXA’s astronomy satellite from 2008 to 2016 and was also involved in the development of the mercury magnetospheric orbiter (part of the BepiColombo mission) and the next manned lunar orbital platform (Gateway mission). In parallel with the development of the spacecraft, I started research on thermal control devices for space application and obtained my PhD in two-phase flow devices in 2016. Next autumn, I will move to the University of Parma (UniPR) in Italy as a MSCA fellow.

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Meet the researcher: Freshly awarded MSCA-IF Grantee

Iwata Naoko

First and foremost, congratulations on winning the grant! Can you introduce your research interests to our readers?

I am a thermal engineer and my main interest is in developing efficient thermal devices that solve thermal issues. Recently, thermal management has become a critical issue not only for space applications but also for the terrestrial industry due to the widespread introduction of microelectronics in almost [all forms of] processing. The development of innovative heat transport devices with high thermal performance that are compact and low cost has become a top priority. A pulsating heat pipe (PHP) is a promising two-phase thermal device, but it has not yet been put to practical use due to incomplete knowledge of thermo-fluid dynamics governing the internal two-phase oscillating flow and, therefore, lack of a modeling tool to help the design and optimization of PHP. My research topic during MSCA-IF is to reveal the unknown phenomena in thermal tomography techniques and advanced infrared measurement, and create modeling for optimization of PHP performance.

Can you tell us a bit about your professional choices, and what particular circumstances led to your work with Europe under this MSCA mobility grant?

I have been working at JAXA for 13 years in Japan, but not at any other organization or country. I am satisfied with my professional career and job, but would like to work as a researcher in a completely different environment for a couple of years. I visited several European, American, and Asian institutions/companies on business trips, and found the most attractive work environment is Europe. Two years before applying for MSCA-IF, I got acquainted with a professor of the University of Parma (UniPR) at an international conference. He was interested in my PHP research and we started a little collaboration.

How did you obtain the grant? Were there specific hurdles that you managed to overcome in order to secure the funding?

It was very hard for me to complete the proposal because it was my first time to write a research application in English. I learned how to write the research objective and plan logically and clearly in English through writing the proposal. My draft was reviewed by a staff member at the UniPR International Research Office about five times. She pointed out a lot of mistakes and provided constructive comments that were very helpful. Moreover, the EURAXESS Japan coordinator also reviewed my proposal and gave me some important remarks, such as how to put together research objective logically. I managed to obtain the grant because I received invaluable help from the reviewers.
How would you say research environments compare between the different countries you visited and Japan?

I did not spend more than three weeks overseas, but felt that the European environment was much better than Japan from the a work-life balance point of view. I wondered how they could get good results in a short time and since I could not find the answer, I hope I will now find it during my two years there.

What do you think are the challenges of doing research with Europe as a Japanese national?

In my opinion, communication/dissemination strategies in Europe are very different from the Japanese model: Europeans communicate 'aggressively' and aim for clarity and logic. Besides basic language skills, these will be tough to learn.

What does this mobility experience bring to you, in terms of skill or career development?

I hope the experience will serve as a springboard for my career: I would like to create a new area of research in the thermal fluid dynamics field. Also, I hope to expand my expertise in thermal fluid dynamics, thermal tomography and advanced IR measurement techniques with the new skills acquired during the fellowship.

How will your Japanese institute get involved in the project and to what extent?

I will take a leave of absence from JAXA for two years. Unfortunately, JAXA is not involved in the project during my MSCA stay.

From your perspective, how can/should researcher mobility flow between Europe and Japan (both ways) be improved? Also, what would be the barriers for research cooperation?

One of the reasons why Japanese researchers do not venture out of their institutions is because they do not feel the need for mobility or international cooperation. I must admit, I used to have the same opinion but my overseas trips changed that.

A final, more personal question: how do you envisage your future career and where?

To be honest, I cannot answer this question at this point. In my opinion, it is attractive to develop a new career in Europe as a researcher in the thermal fluid dynamics field, but at the same time I am also thinking about returning to JAXA after MSCA-IF and continue contributing to aerospace development in Japan.
EU insight: A glance at recent developments

Coronavirus: EU mobilises €10 million for research


The European Commission announced on 31 January that it is boosting urgently needed research into Coronavirus with €10 million from its research and innovation program, Horizon 2020.

It has launched an emergency request for expressions of interest for research projects that will advance our understanding of the novel coronavirus epidemic, contribute to more efficient clinical management of patients infected with the virus, as well as public health preparedness and response.

Mariya Gabriel, Commissioner for Innovation, Research, Culture, Education and Youth, said: “We are working to mitigate the consequences of a potential larger spread of the Coronavirus outbreak in the EU. Thanks to emergency research funding from Horizon 2020, we will know more about the disease. I am proud that following the progress made during the last years, our supercomputer centres stand ready to help researchers in their work to develop new treatment and vaccines. We will be able to protect the public better, and to deal more effectively with the current and any future outbreaks.

Stella Kyriakides, Commissioner for Health and Food Safety, said: “We need to see a multifaceted, whole-of-government response to the Coronavirus and research is an essential part of this. We need to know more about the virus to better target our prevention measures and to ensure better care for our citizens – this is precisely the aim of the Horizon 2020 emergency research funding announced today.”

The Commission has launched this action as the World Health Organization (WHO) declared the new coronavirus outbreak a public health emergency of international concern. The disease continues to spread with cases now reported and growing in Europe and elsewhere. The Commission is working closely with the WHO and other international actors to ensure a rapid, efficient and coordinated European and global response to the outbreak.

The funding is expected to support two to four research projects. The Commission is using all means at its disposal in order to enable research work to start as soon as possible. This rapid action is made possible by a provision of Horizon 2020 for the ‘Mobilization of research funds in case of public health emergencies’.

Several EU-funded projects are already contributing to preparedness and response to the 2019-nCoV outbreak, for example:
The European Virus Archive – GLOBAL (EVAg) has already responded to some 200 requests from 55 countries to provide access to products needed for diagnosing coronavirus infection.

The PREPARE project, a wide network that supports the readiness of hospitals in Europe and helps better understand the dynamics of the outbreak.

The Commission is also working with other research funders through the ‘Global research collaboration for infectious disease preparedness’ (GloPID-R) network, which coordinates research response and addresses priority research needs.

**Background**

Coronaviruses (CoV) are a large family of viruses that cause illness ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).

Chinese authorities identified a cluster of novel coronavirus 2019-nCoV infections in Wuhan City, China. Cases have now been detected around the globe. The coronavirus (2019-nCoV or COVID-19 as it is now known) is a new strain that has not been previously identified in humans.

For the latest information on the spread and impact of the virus, consult the WHO situation reports.

For the latest reliable scientific references on COVID-19 composed by journalists in the field, consult the WFSJ briefing.

**Making Europe’s businesses future-ready: A new industrial strategy for a globally competitive, green and digital Europe**

(Source: https://ec.europa.eu/commission/presscorner/detail/en/ip_20_416)

The Commission published on 10 March a new Strategy to help Europe’s industry lead the twin transitions towards climate neutrality and digital leadership. The Strategy aims to drive Europe’s competitiveness and its autonomy at a time of moving geopolitical plates and increasing global competition.

The package of initiatives outlines a new approach to European industrial policy that is firmly rooted in European values and social market traditions. It sets out a range of actions to support all players of European industry, including big and small companies, innovative start-ups, research centres, service providers, suppliers and social partners. A dedicated Strategy for small and medium-sized enterprises (SMEs) also aims to reduce red tape and help Europe’s numerous SMEs to do business across borders, access financing and help lead the way on the digital and green transitions. The initiatives also include concrete steps to address barriers to a well-
functioning single market, Europe’s strongest asset to allow all businesses to grow and compete in Europe and beyond.

Ursula von der Leyen, President of the European Commission, said: “Europe’s industry is the motor of growth and prosperity in Europe. And it is at its best when it draws on what makes it strong: its people and their ideas, talents, diversity and entrepreneurial spirit. This is more important than ever as Europe embarks on its ambitious green and digital transitions in a more unsettled and unpredictable world. Europe's industry has everything it takes to lead the way and we will do everything we can to support it.”

Thierry Breton, Commissioner for Internal Market, said: “Europe has the strongest industry in the world. Our companies – big and small – provide us with jobs, prosperity and strategic autonomy. Managing the green and digital transitions and avoiding external dependencies in a new geopolitical context requires radical change – and it needs to start now.”

The Industrial Policy package includes the following initiatives:

A new Industrial Strategy

To uphold Europe’s industrial leadership, the new Strategy will help deliver on three key priorities: maintaining European industry’s global competitiveness and a level playing field, at home and globally, making Europe climate-neutral by 2050 and shaping Europe’s digital future.

The Strategy sets out the key drivers of Europe’s industrial transformation and proposes a comprehensive set of future actions, including:

- An Intellectual Property Action Plan to uphold technological sovereignty, promote global level playing field, better fight intellectual property theft, and adapt the legal framework to the green and digital transitions.
- As competition brings the best out of our companies, the ongoing review of EU competition rules, including the ongoing evaluation of merger control and fitness check of State aid guidelines, will ensure that Europe’s rules are fit for purpose for an economy that is changing fast, increasingly digital and must become greener and more circular.
- Eurokoe seeks fair competition at home and abroad. In addition to making the most of its toolbox of trade defence mechanisms, the Commission will adopt a White Paper by mid-2020 to address distortive effects caused by foreign subsidies in the single market and tackle foreign access to EU public procurement and EU funding. The issue related to foreign subsidies will be addressed in a proposal for a legal instrument in 2021. This will go hand in hand with ongoing work to strengthen global rules on industrial subsidies in the World Trade Organization, and actions to address the lack of reciprocal access for public procurement in third countries.
- Comprehensive measures to modernise and decarbonise energy-intensive industries, support sustainable and smart mobility industries, to promote energy efficiency, strengthen current carbon leakage tools and secure a sufficient and constant supply of low-carbon energy at competitive prices.
Enhancing Europe’s industrial and strategic autonomy by securing the supply of critical raw materials through an Action Plan on Critical Raw Materials and pharmaceuticals based on a new EU Pharmaceutical Strategy and by supporting the development of strategic digital infrastructures and key enabling technologies.

A Clean Hydrogen Alliance to accelerate the decarbonisation of industry and maintain industrial leadership, followed by Alliances on Low-Carbon Industries and on Industrial Clouds and Platforms and raw materials.

Further legislation and guidance on green public procurement.

A renewed focus on innovation, investment and skills.

In addition to a comprehensive set of actions, both horizontal and for specific technologies, the Commission will systematically analyse the risks and needs of different industrial ecosystems. In doing this analysis, the Commission will work closely with an inclusive and open Industrial Forum, to be set up by September 2020. It will consist of representatives from industry, including SMEs, big companies, social partners, researchers, as well as Member States and EU institutions. Where needed, experts from specific sectors will be called upon to share their knowledge. The Commission’s annual Industry Days will continue to bring all players together.

A new SME Strategy

SMEs play a key role in Europe’s industrial fabric, providing two out of three jobs, and are central to the success of this new industrial approach. The Strategy aims to help SMEs to lead the twin transitions, which also means securing access to the right skills. To build SMEs’ capacity for these transitions, the Commission will upgrade the European Enterprise Network with dedicated Sustainability Advisors. It will also expand Digital Innovation Hubs across every region in Europe to empower SMEs to integrate digital innovations. It will open up possibilities for volunteering and training on digital technologies.

To make it easier for SMEs to operate in the single market and beyond, the Commission proposes actions to remove regulatory and practical obstacles to doing business or scaling up. Among them, the Commission is stepping up its efforts to ensure prompt payment, in particular through a new Virtual Observatory, as well as through alternative dispute resolution. To make it more accessible for SMEs to go public in Europe, the Commission will also support an SME Initial Public Offerings (IPOs) Fund under the InvestEU SME window. It will also empower female entrepreneurship by stimulating investment in women-led companies and funds. Furthermore, the Commission invites Member States to ensure one-stop shop assistance to companies. The objective is to make Europe the best place to start a business and grow. It will work with Member States on an EU Start-up Nations Standard to share and adopt best practices to accelerate growth of high-tech SMEs and start-ups. To ensure political commitment for these measures, a high-level EU SME Envoy will guarantee close partnership and coordination with EU Member States through national SME envoys, as well as with regional and local authorities. It will also strengthen the SME perspective in EU legislation.

A single market that delivers for businesses and consumers
The single market is one of Europe’s greatest achievements and provides Europe’s businesses with a large domestic market. It stimulates competition and trade within the EU. It provides EU citizens with a wider choice of goods and services and more employment and entrepreneurial opportunities. It gives European companies the leverage they need to become leaders on the global stage.

Nevertheless, Europeans continue to experience barriers that prevent them from fully exploiting the potential of the single market. Estimates show that removing these barriers could bring up to €713 billion by the end of the decade. A recent report on barriers to the single market published identifies a broad range of obstacles in the single market taking the perspective of Europe’s businesses and consumers. It points to the root causes of such barriers: restrictive and complex national rules, limited administrative capacities, imperfect transposition of EU rules and their inadequate enforcement.

To address these barriers, the Commission adopted on 10 March an Action Plan for Better Implementation and Enforcement of Single Market Rules (COM(2020) 94), which aims at addressing obstacles that arise from violations of EU law. The Action Plan is based on a renewed partnership between Member States and Commission in their shared responsibility to ensure that single market rules are properly enforced and applied. In this context, the Action Plan launches a Joint Task Force of the Commission and Member States to strengthen cooperation on enforcement of single market rules. The Commission, for its part, will support national and local authorities in their efforts to implement correctly European law and will not hesitate to take firm action against violations of single market rules.

Background

Industry plays a vital role in supporting Europe’s economic growth and prosperity. European industry is a global leader in many sectors representing 20% of the total value added of the EU and providing jobs for 35 million people in the EU.

In March 2019, the European Council called for a comprehensive and long-term EU industrial policy Strategy along with an integrated approach for a deeper and stronger single market. The need for a new industrial way for Europe is reflected in President von der Leyen’s political guidelines, the priorities set out by the European Parliament and the European Council’s Strategic Agenda 2019-2024, the European Green Deal and the Commission’s Strategy on Shaping Europe’s Digital Future.
Shaping Europe’s digital future: Commission presents strategies for data and artificial intelligence


On 19 February, the Commission unveils its ideas and actions for a digital transformation that works for all, reflecting the best of Europe: open, fair, diverse, democratic and confident. It presents a European society powered by digital solutions that put people first, opens up new opportunities for businesses, and boosts the development of trustworthy technology to foster an open and democratic society and a vibrant and sustainable economy. Digital is a key enabler to fighting climate change and achieving the green transition. The European Data Strategy and the policy options to ensure the human-centric development of artificial intelligence (AI) presented today are the first steps towards achieving these goals.

The President of the Commission, Ursula von der Leyen, said: “Today, we are presenting our ambition to shape Europe’s digital future. It covers everything from cybersecurity to critical infrastructures, digital education to skills, democracy to media. I want that digital Europe reflects the best of Europe – open, fair, diverse, democratic, and confident.”

Executive Vice-President for A Europe Fit for the Digital Age, Margrethe Vestager, said: “We want every citizen, every employee, every business to stand a fair chance to reap the benefits of digitalisation. Whether that means driving more safely or polluting less thanks to connected cars; or even saving lives with AI-driven medical imagery that allows doctors to detect diseases earlier than ever before.”

Commissioner for Internal Market, Thierry Breton, said: “Our society is generating a huge wave of industrial and public data, which will transform the way we produce, consume and live. I want European businesses and our many SMEs to access this data and create value for Europeans – including by developing Artificial Intelligence applications. Europe has everything it takes to lead the ‘big data’ race, and preserve its technological sovereignty, industrial leadership and economic competitiveness to the benefit of European consumers.”

Europe as a trusted digital leader

Digital technologies, if used with purpose, will benefit citizens and businesses in many ways. Over the next five years, the Commission will focus on three key digital objectives:

- Technology that works for people
- A fair and competitive economy
- An open, democratic and sustainable society

Europe will build on its long history of technology, research, innovation and ingenuity, and on its strong protection of rights and fundamental values. New policies and frameworks will enable Europe to deploy cutting-edge digital technologies and strengthen its cybersecurity capacities. Europe will continue to preserve its open, democratic and sustainable society and digital tools can support these principles. It will develop and pursue its own
path to become a globally competitive, value-based and inclusive digital economy and society, while continuing to be an open but rules-based market, and to work closely with its international partners.

**Europe as a leader in trustworthy artificial intelligence**

Europe has all it needs to become a world leader in AI systems that can be safely used and applied. We have excellent research centres, secure digital systems and a robust position in robotics as well as competitive manufacturing and services sectors, spanning from automotive to energy, from healthcare to agriculture.

In its [White Paper](#) presented on 19 February, the Commission envisages a framework for trustworthy Artificial Intelligence, based on excellence and trust. In partnership with the private and the public sector, the aim is to mobilise resources along the entire value chain and to create the right incentives to accelerate deployment of AI, including by smaller and medium-sized enterprises. This includes working with Member States and the research community, to attract and keep talent. As AI systems can be complex and bear significant risks in certain contexts, building trust is essential. Clear rules need to address high-risk AI systems without putting too much burden on less risky ones. Strict EU rules for consumer protection, to address unfair commercial practices and to protect personal data and privacy, continue to apply.

For high-risk cases, such as in health, policing, or transport, AI systems should be transparent, traceable and guarantee human oversight. Authorities should be able to test and certify the data used by algorithms as they check cosmetics, cars or toys. Unbiased data is needed to train high-risk systems to perform properly, and to ensure respect of fundamental rights, in particular non-discrimination. While today, the use of facial recognition for remote biometric identification is generally prohibited and can only be used in exceptional, duly justified and proportionate cases, subject to safeguards and based of EU or national law, the Commission wants to launch a broad debate about which circumstances, if any, might justify such exceptions.

For lower-risk AI applications, the Commission envisages a voluntary labelling scheme if they apply higher standards. All AI applications are welcome in the European market as long as they comply with EU rules, according to the Commission.

**Europe as a leader in the data economy**

The amount of data generated by businesses and public bodies is constantly growing. The next wave of industrial data will deeply transform the way we produce, consume and live. But most of its potential remains unfulfilled. Europe has everything it takes to become a leader in this new data economy: the strongest industrial base of the world, with SMEs being a vital part of the industrial fabric; the technologies; the skills; and now also a clear vision.

The objective of the [European Data Strategy](#) is to make sure the EU becomes a role model and a leader for a society empowered by data. For this, it aims at setting up a true European data space, a single market for...
data, to unlock unused data, allowing it to flow freely within the European Union and across sectors for the benefit of businesses, researchers and public administrations. Citizens, businesses and organisations should be empowered to make better decisions based on insights gleaned from non-personal data. That data should be available to all, whether public or private, start-up or giant.

To achieve this, the Commission will first propose to establish the right regulatory framework regarding data governance, access and reuse between businesses, between businesses and government, and within administrations. This entails creating incentives for data sharing, establishing practical, fair and clear rules on data access and use, which comply with European values and rights such as personal data protection, consumer protection and competition rules. It also means to make public sector data more widely available by opening up high-value datasets across the EU and allowing their reuse to innovate on top.

Second, the Commission aims at supporting the development of the technological systems and the next generation of infrastructures, which will enable the EU and all the actors to grasp the opportunities of the data economy. It will contribute to investments in European High Impact projects on European data spaces and trustworthy and energy efficient cloud infrastructures.

Finally, it will launch sectoral specific actions, to build European data spaces in for instance industrial manufacturing, the green deal, mobility or health. The Commission will also work to further narrow the digital skills gap among Europeans, and explore how to give citizens better control over who can access their machine-generated data.

Next steps

As set out in the Strategy, the Commission will present later this year a Digital Services Act and a European Democracy Action Plan, propose a review of the eIDAS regulation, and strengthen cybersecurity by developing a Joint Cyber Unit. Europe will also continue to build alliances with global partners, leveraging its regulatory power, capacity building, diplomacy and finance to promote the European digitalization model.

The White Paper on Artificial Intelligence is now open for public consultation until 31 May 2020*. The Commission is also gathering feedback on its Data Strategy. In light of the input received, the Commission will take further action to support the development of trustworthy AI and the data economy

Background

Since 2014, the Commission has taken a number of steps to facilitate the development of a data-agile economy such as the Regulation on the free flow of non-personal data, the Cybersecurity Act, the Open Data Directive and the General Data Protection Regulation.

In 2018, the Commission presented for the first time an AI Strategy, and agreed a coordinated plan with Member States. The framework for AI presented also builds on the work carried out by the High-Level Expert
Group on Artificial Intelligence, which presented their Ethics Guidelines on Trustworthy AI in April 2019.

In her political guidelines, Commission President Ursula von der Leyen stressed the need to lead the transition to a healthy planet and a new digital world. In that context, she announced to kick-start the debate on human and ethical artificial intelligence and the use of big data to create wealth for societies and businesses during her first 100 days in office.
Poland: Post-doctoral fellowships in astrophysics

The Department of Fundamental Research at National Center for Nuclear Research in Warsaw invites applications for a post-doctoral position. The successful candidate is expected to work on statistical studies of the attenuation of dust in galaxies and its dependence on the types of galaxies in different space ages using a unique sample of 170 million galaxies observed in the infrared by the Herschel satellite.

Read more

Cyprus: Post-doctoral fellow in energy economics

The Cyprus Institute is looking for a researcher to join the group of Energy Planning and Analysis within the activities of the Energy Division of the Institute’s Energy, Environment and Water Research Center (EEWRC). The successful candidate is expected to helping secure financial and other resources from national and international sources and initiating, among other tasks.

Read more

Germany: PhD in neuroscience

The Department of Physiology at the University Freiburg offers a PhD position for 2-Photonimaging of the hippocampal area CA3. The PhD student will join an existing team with extensive knowledge in 2-Photon imaging, behavioral analysis and a broad set of in vivo and in vitro electrophysiological techniques as well as nice working atmosphere and working relationships.

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Netherlands: Postdoc in music

The post-doctoral researcher will study how martyr cults were created through a variety of media in early medieval Iberia in Nijmegen. The project goes beyond hagiography to focus on the ritual commemoration of martyrs, looking at how the Old Hispanic liturgy communicated the ideal of martyrdom throughout the peninsula, but always in connection with material expressions of religious piety.

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Belgium: PhD in neurobiology

The MIRIADE project (Multi-omics Interdisciplinary Research Integration to Address Dementia diagnosis) works to develop novel immunoassays to improve the diagnosis of the three main forms of dementia. Successful candidates will join the team in Gent.

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