



## SPACE PLATFORM PROJECT NEWSLETTER

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### HIGHLIGHTS

- China landed a spacecraft on Mars for the first time
- NASA's Mars Helicopter made the first aircraft flight on another planet
- The costs of several raw materials as well as selling prices are increasing for numerous reasons, including supply shortages, demand increase and raising shipment costs
- Europe is highly dependent on imports from third countries such as China for 137 products, including several space technologies

### UNITED NATIONS / GLOBAL



By joining the Paris Agreement, the US and other countries committed to cut emissions by +50% by the end of this decade.

### EUROPEAN UNION (EU)



#### NEW EU SPACE PROGRAM

The EU Regulation on the Space Programme was adopted.

#### EUROPEAN GNSS AGENCY & EU AGENCY FOR THE SPACE PROGRAMME (EUSPA)

- The **European Union Agency for the Space Programme (EUSPA)** is starting its operations and recruiting
- EUSPA's Executive Director Rodrigo da Costa indicated that 2021 will be a key year for the EU Space Programme, confirmed the intention to **support**

**Europe's investment in space and exploit synergies** between the programs to create value-adding solutions

- A call for proposals for the **acceleration of EGNOS adoption in transport** has been launched (deadline July 19, 2021)
- The Agency has published an overview of the main characteristics of the **Galileo High Accuracy Service**
- A European-wide survey is underway to identify **user requirements and use cases for future EU GOVSATCOM services**
- The 2021 edition of the **Galileo Masters** is open and applications can be filed (€785K prize pool)
- The Agency is launching **Space Crossroads**, a series of online broadcasts to discuss how space is inspiring entrepreneurs and start-ups.

## EU COUNCIL

- The Council **conclusions on New Space** for People will be **adopted**. The Council asks the European Commission to propose an **innovation strategy for New Space**.
- The Council is debating the issue of **Space Traffic Management (STM)** (the European STM conference will be held on July 7, 2021)

## EUROPEAN CLIMATE LAW

A provisional **agreement** has been reached on the **Climate Law**, which enshrines the EU's commitment to reaching **climate neutrality by 2050** and the target of **reducing net greenhouse gas emissions by at least 55% by 2030**, compared to 1990 levels.

## EUROPEAN DEFENCE AGENCY (EDA) & FUND (EDF)

- A **political agreement** has been reached on the setting up of the **European Defence Fund** (the EDF), with an agreed upon **budget of €7.9 billion for 2021-2027**, with between 4 to 8% for breakthrough innovation). Actions will ensure SME participation and be subject to an ethics assessment by the EC.
- In 2019, **total defence expenditure by the 26 EDA Member States stood at €186 billion**, marking a 5% increase on 2018, and making it the highest level ever in 15 years. However, collaborative defence spending has gone backward and R&D spending remains at 2007 levels.
- The EDA issued its **annual report**, which highlights the Agency's work on the Governmental Satellite Communication

Pooling & Sharing Demonstration' project.

## HORIZON 2020 AND EUROPE (2021-2027) PROGRAM

- The **first 4 years program strategic plan was adopted**. The plan details in the **Cluster 4 - Digital, Industry and Space** the space-related projects that may benefit from support under the program. This will be mainly managed by the new European Health and Digital Executive Agency (HaDEA). The first downstream calls under Horizon Europe will likely relate to EGNSS and Copernicus applications.
- A **large number of proposals (788) were received** for the last and largest green deal December 2020 call under the Horizon 2020 program. The results will be communicated to the applicants within 5 months.

## KNOWLEDGE CENTRE ON EARTH OBSERVATION

The **Knowledge Centre on Earth Observation was launched** by the European Commission (no specific budget has yet been announced) (see also the **Blog**).

## EUROPEAN INNOVATION COUNCIL (EIC)

- The **EIC was launched** with a budget of over **€10 billion** for 2021-2027.
- A first **€1 billion call** was released to identify, develop and scale-up **breakthrough technologies** and **disruptive innovations** Space-related applicants having the potential to be global leaders in the area of digital technologies can apply (deadlines are

June 9 and October 6, 2021). Other space-related entities may contribute.

- The EIC could be granting € **602 million to startups** and € **507 million for targeted calls** addressing specific areas of research in the next 11 months.
- **37 companies were preselected to receive funding to develop and scale up ground-breaking innovations** in Europe (4200 applications were received, the highest number ever). A number of space-related entities have been pre-selected for projects relating to launch vehicles, electric propulsion and space laser communications to satellites

#### OTHER EU FUNDING PROGRAMS

- The Regulation establishing the **InvestEU Program 2021-2027** was adopted. The space ecosystem may benefit from support under Invest EU for strategic actions and investments in space and defense and cybersecurity
- The European Climate, Infrastructure and Environment Executive Agency (**CINEA**) **will manage several funding programs** including the energy-related aspects of the Connecting Europe Facility (CEF) and the LIFE program (€5.4 billion budget).
- **Several funds part of the cohesion policy** such as the European Regional Development Fund (ERDF), the European Social Fund (ESF) and the Cohesion Fund (CF) **will likely enter into operation before the summer break.**
- The European Innovation Council and SMEs Executive Agency (**EISMEA**) **will manage the European Innovation Council** and other EU programmes focusing on SME.

#### EUROPEAN INVESTMENT BANK (EIB) Group

- The European Investment Fund (EIF) will be involved in the setting up (with the European Commission) of the **€1 billion space fund** as part of the CASSINI initiative
- The EIB and Eutelsat announced a **€200 million financing agreement** to back investments related to the satellite advanced broadband services in Europe and neighboring areas
- The EIB will work with EUSAP to **promote R&D investments and pilots in the GNSS market.** They will cooperate to design new financial instruments and support the development of EU New Space.
- **EIB's Space Finance Lab** connects donors and space companies and thus helps the latter to access the EIB and other sources of long-term financing.



- ESA new Director General Josef Aschbacher introduced **ESA Agenda 2025**, setting out ESA's strategic priorities and goals. He indicated that **Europe needs to be more ambitious** to stay ahead in the space race. He expressed the need to work “very closely” with the European Commission and other stakeholders and proposed a number of actions. This will be followed by several discussions and initiatives, including a space summit in 2022
- ESA signed a contract for the construction of **3 more European service modules for Orion**, NASA's spacecraft that will fly astronauts to the Moon and lunar Gateway as part of the Artemis programme

- An invitation to tender to **develop space resources-related projects** (€200K to each winning team) has been launched.
- ESA and the DFKI are establishing a **tech transfer lab** located on the premises of DFKI in Kaiserslautern, Germany
- The **Global Space Markets Challenge** opened to springboard into international markets for SMEs.
- A partnership project uses **laser technology to reduce the time for sending information** from low-Earth orbiting spacecraft to Earth.
- European space and non-space companies can apply to get involved in the **modernisation of Europe's Spaceport in Kourou**, French Guiana (€140 million budget until 2024)
- The **EMITS system has been replaced by esa-star publication**, which has new tools to better interact and communicate, and a tool to better coordinate (R&D) activities (called esa-star ECM)
- **ESA match module** is the Agency's new matchmaking platform to showcase, find partners and establish business relationships
- A **report** shows how **satellite applications have supported sustainable development** during these last 10 years.
- The formal **application** process for the first new **astronaut** selection ends on May 28, 2021
- ESA cooperate with by the European business schools Rotterdam School of Management, Nova School of Business and Economics and St. Gallen University to launch a **European Space Business Programme** (info day on June 2, 2021)
- The Agency is soliciting ideas for **in-orbit servicing activities** such as refueling, refurbishment, assembly,

manufacturing, and recycling from European industry and academia

- The Agency signed a contract to **study future space transportation solutions**
- **Lithuania** is a new Associate Member of the ESA

## NATIONAL RECOVERY PLANS

- **23 national recovery and resilience plans** were submitted, including by countries such as France and Germany.
- As part of its national recovery plans, **the French government has announced plans of more than €500 million to support the space sector** (including € 365 million in terms of new loans). The **CNES** will lead the implementation of the space plans, which will be also monitored by a steering committee made up of several other public bodies. The plans **ambit to cover all needs of the space sector** (including for "dual-use technologies), focusing on SME and mid-caps' needs, with **calls for tenders in priority areas** such as (i) optical communications, (ii) flexible telecommunications satellites, (iii) ground segment virtualization, (iv) terminals for satellite telecommunications and (v) data economy.

USA 

## CONGRESS

- A bill to require a **review** of NASA's **preference for domestic suppliers** was introduced.
- The draft American Innovation Act proposes to **increase the Science Mission Directorate NASA's budget** from

€7.7 billion in 20223 to €14.2 billion 2031.

- The draft Space Research Innovation Act would allow NASA to **establish a research center for deep space and interplanetary research**, and for other purposes.

## THE WHITE HOUSE

- President Joe Biden's administration **proposes** a **\$24.7 billion budget for NASA** in 2022, representing an historic proposed increase in Earth science and space technology programs spending (6% increase from the 2021 enacted level). No detailed breakdown of the different components of NASA's human exploration program has been provided. More details are expected with the full budget proposal in Q3/2021.
- President Joe Biden **plans to rebuild infrastructure and reshape the economy**, while also addressing climate change and racial inequities and raising corporate taxes and taxes on wealthy individuals (**the American Jobs Plan, valued at \$2.3 trillion**). The plan was presented as a rival to the space race in its ambition. It may however serve to support revamping NASA's infrastructure.
- President Joe Biden indicated during the Summit on Climate that it was **time to make real commitments during the U.N. Climate Change Conference in November**, putting all of our nations on path to a secure, prosperous, and sustainable future.
- **Bill Nelson** to serve as National Aeronautics and Space Administration (NASA) Administrator.
- President Joe Biden announced his intent to **nominate key members** for the

Department of Defense (Ronald Moultrie for Under Secretary of Defense for Intelligence & Security, Michael J. McCord for Under Secretary of Defense (Comptroller), and Michael Brown for Under Secretary of Defense for Acquisition & Sustainment.

- An Executive Order was issued to **improve the Nation's cybersecurity**

## NATIONAL SPACE COUNCIL

President Joe Biden's administration decided to **continue the Council's operations** without revealing in detail how it will operate. It may be responsible for promoting norms of responsible behavior in space.



## NASA

- NASA's **Mars rover Perseverance was able to extract oxygen from Mars'** thin, carbon dioxide-rich atmosphere
- **NASA is investing more than \$100 million in more than 100 American** small high-tech businesses under the Small Business Innovation Research (SBIR) program
- **Bill Nelson** has been appointed to serve as National Aeronautics and Space Administration (NASA) Administrator.

## FEDERAL COMMUNICATIONS COMMISSION (FCC)

The Commission would like to **grant a secondary allocation of S-band spectrum**, currently reserved for government uses, for telemetry for commercial launches spectrum for commercial launches.

## US SPACE FORCE

- 80 persons were nominated at high level positions for the Space Force,
- The Space Force is working on its procurement efforts and may soon issue proposals to accelerate its acquisition programs.

## DOD

The DOD indicated that modernization investments are needed to protect space domain.

## CHINA AND RUSSIA

A MoU for the construction of the international Lunar Research Station was signed.

## RUSSIA

Russian officials indicated that the country could **abandon the International Space Station as soon as 2025.**

## CHINA

- China **landed for the first time on Mars**
- China has successfully **launched the core element of its new space station**
- China approved a **5-year strategic plan (2021-2025)**. The plan refers to several **sustainable development goals** such as

the need to increase air quality, become a low carbon economy, prioritize quality over quantity and protect nature and biodiversity. The plan also supports the need for China to become a leading innovative country by 2035, to gradually liberalize the business environment and increase competition. The plan includes several space-related initiatives, such as **11 scheduled missions** in the next two years for the building of the first space station.

## JAXA

**Bilateral meetings and discussions** between JAXA and other organizations such as the Australian Space Agency (ASA) and the Indian Space Research Organisation (ISRO) were held to share information on future plans and exchanged views on the possibility of cooperation in the fields of international space exploration and space science.

## SOUTH KOREA

South Korea's president Moon Jae-in announced plans to develop the country space program and go to **land a robotic lander on the Moon** by 2030.

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