



ACCESS.SPACE

# Position of ACCESS.SPACE on space financing

## Executive summary

ACCESS.SPACE wishes to present its position on the current state of space financing. The importance of the space ecosystem is becoming increasingly recognized and progress has been made in terms of the firepower of the public authorities and the amounts of private investments. However, public and private support remains vitally important for the space ecosystem and a number of outstanding issues have been identified. ACCESS.SPACE proposes concrete policy actions to tackle these issues with a sense of urgency.

### **1 The current situation in terms of public and private funding and support for the European space ecosystem is as follows:**

- The space ecosystem is of strategic importance and a growing number of citizens, users, services, technologies and applications are dependent on the space ecosystem (approximately 10% of the European's GDP).
- The space ecosystem nicely fits with policy priorities, including R&DI and the climate and digital transitions. Space also makes important contributions to the UN Sustainable Development Goals (UNSDGs) and in terms of crisis management.
- Whilst global economic recovery is strong,<sup>i</sup> the economic (and human, social and cultural) costs of the coronavirus pandemic remain severe. The pandemic has led to a sharp increase of the demand for public support ( -40% of the companies).
- Clearly, public support remains vitally important for the space ecosystem. It may be the only option to avoid irreparable damages.
- Despite budgetary cuts<sup>ii</sup>, 41 programs can help the space ecosystem at European levels during the budgetary period 2021-2027 and €21 billion may become available during the next 3 to 7 years.<sup>iii</sup>
- A broad range of persons and entities can benefit from public support<sup>iv</sup>, of various forms,<sup>v</sup> for virtually all activities and projects. Uptake measures are also available, under management by private and public bodies.<sup>vi</sup>

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- Encouraging new actions and approaches for the space ecosystem have reached political agreement, including:
  - the *EU Space Programme*, with the largest ever budget of €14.88 billion for the period 2021-2027;
  - the *CASSINI initiative*, targeting a €1 billion EU space fund-of-funds;
  - the EU Council conclusions *New Space for People*, including the proposed innovation strategy for New Space, encompassing access to finance;
  - *ESA 2025 Agenda*, including proposed actions to facilitate access to capital;
  - inclusion of space within the scope of certain *national recovery plans*;<sup>vii</sup> and
  - the setting of GDP targets for R&D spending.<sup>viii</sup>
- Private investments in the space ecosystem in 2020 have reached record levels and there are indications that 2021 may be another record year. There have also been record levels of global deals in 2020 and in Q1/Q2 2021.<sup>ix</sup>
- An ecosystem of space-related start-ups and SMEs is on the rise and a growing number of dedicated VCs<sup>x</sup>, generalists VCs<sup>xi</sup>, business angels<sup>xii</sup>, private equity firms<sup>xiii</sup>, corporate ventures<sup>xiv</sup> and others are providing support and increasing their visibility.

## 2 However, despite the above, the following aspects are of concern:

- Supply shortages and price increases could derail the recovery of the space ecosystem and have long term strategic implications.<sup>xv</sup>
- Start-ups and SMEs often lack customers and contracts to support their business and face difficulties in participating to large or long-term space programs at European and national levels.
- The success rates for certain public support programs have dropped, sometimes below the 10% bar.<sup>xvi</sup> This could undermine the legitimacy of such programs, discourage new applications and result in innovation taking place elsewhere than in Europe.
- The number of space-related companies and the amounts of public and private investments in other regions of the world are often higher than in Europe.<sup>xvii</sup>
- There are little synergies in terms of public and private investments, civil and defense, space and non-space sectors and virtually no synchronization in terms of the timing of such investments.
- Support tends to focus on short term actions for rapid market growth, aligned with policy priorities.
- Few instruments are available to bridge the “valley of death” between research and revenues such as public-private partnerships (PPPs) and public authorities acting as anchor customers.
- Very few countries have developed comprehensive directories of space-related entities and there is little visibility in terms of the number of companies, employment, investments, growth and ownership and control.<sup>xviii</sup>

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- It remains difficult to navigate through all funding opportunities, especially for start-ups and SMEs, which often do not have dedicated resources.
- Very few de-risking tools and other means to attract private investments are available. Risk-taking attitudes are rare as well as a culture of “learning from failures”.<sup>xix</sup>
- There is no official (one-stop-shop) web site granting access to all European public funding programs and few digital tools to facilitate access and provide guidance are available.<sup>xx</sup>
- Whilst this may be appropriate from a public perspective, non-EU owned or controlled entities may not be able to participate to certain strategic funding programs.

**3. ASA believes that the following actions to improve the situation in terms of public support for the space ecosystem and access to capital are required with a sense of urgency:**

- **Adopt an innovation strategy for New Space,<sup>xxi</sup> encompassing access to private and public capital and continue providing all needed support for start-ups and SMEs.**
- **Increase the number of start-ups and SMEs, VCs, funding entities,<sup>xxii</sup> bridge the “valley of death” and focus on the areas where Europe can lead.**
- **Consider setting up dedicated space-related funds-of-funds and public funding instruments and increasing the success rates under public support instruments and the size and scope of exit markets for space-related start-ups and SMEs.**
- **Define new and innovative approaches in terms of procurement contracts, procedures and standards,<sup>xxiii</sup> allowing for New Space approaches and a level-playing field (on a cross-border basis) for all, including, new entrants, start-ups and SMEs.**
- **Stimulate demand**, including by increasing the number of PPPs in strategic areas and having public entities acting as first users and buyers/anchor customers.
- Develop measures, tools and sponsor events to **increase the levels of trust and confidence between all stakeholders**, including between public and private entities, and **encourage risk-taking attitudes.**
- **Clearly define a common roadmap and new approaches** for the evolution, next generation of launchers, launch technologies, infrastructures, products, services and applications.
- **Develop and implement mechanisms to synchronize the timing and scope of private and public investments** (at European, national, regional and local levels).
- **Foster synergies and complementarities** among relevant European-funded programs, between space, defense and related civil industries, between public and private funding at European and national/regional/local levels and **avoid duplications.**

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- **Create centers of excellence and welcome packages for the space-related scientific and innovation community** and address aspects such as tax incentives/reliefs, operating rules and regulations, access to premises and test facilities, security clearances, funding/networking/coaching/mentoring support and benchmarking.
- **Set up an official website, granting access to all European public funding instruments** (including EU and ESA), using the approach taken in the US by [GRANTS.GOV](https://www.grants.gov) as a source of inspiration, and **develop supporting tools and applications**.
- **Encourage creativity in terms of funding instruments and approaches** such as blended operations involving a combination of different forms of investment and transfers of funds between programs.
- **Enable space agencies to offer expertise** as technical partner/adviser for funding entities like VCs and business angels.
- **Continue adopting simplification measures for public instruments**, including moving away from paper invoices, reducing red tape and implementing the seal of excellence mechanism.
- **Support public and private initiatives in terms of targeted uptake actions** for start-ups, SMEs and Research & Technology Organisations (RTOs) and in terms of **finance and related guidance**.<sup>xxiv</sup>
- **Continue promoting that funding for the space ecosystem has dividends for citizens and that space can support any and all of the 17 UN SDGs.**

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<sup>i</sup> For instance, global GDP has now risen above its pre-pandemic level, [OECD](#).

<sup>ii</sup> For instance, whilst the European Commission proposed in June 2018 a budget of €16 billion to finance EU space activities during the 2021-2027 period, a political agreement was reached on 16 December 2020 that the EU space programme will have a total budget of €14.8 billion. The 11 December 2021 agreement on the €95.5 billion (in current prices) budget for the research and innovation programme Horizon Europe was lower than the Commission 2018 proposal of a budget of €100 billion.

<sup>iii</sup> The following programs and funds may provide support for the space ecosystem (in alphabetical order): Cohesion Fund (CF), Connecting Europe Facility (CEF), the Coronavirus Response Investment Initiative EU initiative, Development Cooperation, managed by the European Commission, Digital Europe, the EU Satellite Centre (SATCEN), the EU Space Programme, Eureka program, the European Agricultural Fund for Rural Development (EAFRD), the European Border and Coast Guard Agency (FRONTEX), the European Defence Agency (EDA), the European Defence Fund (EDF), the European Environment Agency (EEA), the European Innovation Council (EIC), the European Innovation Ecosystems (EIE), the European Commission European Institute of Innovation and Technology (EIT), the European Innovation Council (EIT), the European Investment Bank (EIB), the European Investment Fund (EIF), the European Maritime Safety Agency (EMSA), the European Maritime, Fisheries and Aquaculture Fund (EMFAF), the European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT), the European Regional Development Fund (ERDF), the European Social Fund (ESF), the European Space Agency (ESA) Advanced Research in Telecommunications Systems (ARTEMIS) program, ESA Technology Research Programme (TRP), ESA General Support Technology Programme (GSTP), ESA Future Launchers Preparatory Programme (FLPP), ESA Business Applications, and ESA other programs, the European Union Agency for the Space Programme (EUSPA), HORIZON EUROPE, the Innovation Fund, INVESTEU FUND, the Just Transition Fund (JTF), the LIFE programme, the Recovery and Resilience Facility and the National Recovery Plans, REACT-EU, and the Single Market Programme. For more information, please refer to the 2nd edition of the *Practical Guide to Public Funding for the Space Ecosystem*, available upon request.

<sup>iv</sup> Including start-ups, SMEs, midcap and large companies, universities, public-private partnership (PPPs) and non-profit organizations.

<sup>v</sup> Including grants, prizes, procurement, loans, equity, debt and other financial operations supported by public budgets.

<sup>vi</sup> Such as business accelerator, hackathons, mentoring, matchmaking, industrial partnering and in orbit demonstration and validation such as the [CASSINI initiative](#), [Astropreneurs](#), [Go2Space-Hubs](#), [SpaceUp](#), [Cofounderslab](#), [EURISY](#), [Go2Space-Hubs](#), [IoT Tribe Space Endeavour](#) and [spacehubsnetwork](#).

<sup>vii</sup> For instance, [France](#) has included the space ecosystem within the scope of its national recovery plans and announced that €500 million will be available in 2021 for such ecosystem, including €365 million in terms of new loans, €100 million for R&D activities on “dual use” technologies and €35 million for start-ups and SMEs. This is also the case for [Italy](#).

<sup>viii</sup> For instance, the UK government has recently set a [target](#) for total R&D spending to constitute 2.4% of GDP by 2027 (similar targets have played a large role in the development of the Luxembourg space ecosystem).

<sup>ix</sup> Refer for instance to [Seraphim](#) and [Bryce Tech](#).

<sup>x</sup> Including [Seraphim](#) in the UK, [Promus Ventures](#) in Luxembourg, [Primo Space Fund](#) in Italy, [OTB Ventures](#) for the CEE region, [CosmiCapital/Karista](#) in France and [Unternehmertum VC Capital Partners \(UVC\)](#) in Germany.

<sup>xi</sup> Approximately [190 VCs](#) has invested in space on a global scale.

<sup>xii</sup> Including [EBAN Space](#), the [Luxembourg Space Tech Angels](#) (LSTA) and family offices.

<sup>xiii</sup> Such as [New Space Capital](#) in Luxembourg.

<sup>xiv</sup> Among the most notable corporate ventures in Europe are [Airbus](#), [SES](#), the [Virgin Group](#).

<sup>xv</sup> Refer, for instance, to [Argus](#) and [Finabel](#).

<sup>xvi</sup> For instance, the last advanced grant success rate in Horizon 2020 was around [8%](#), the success rate under the 2021 EIC Accelerator program is less than [3%](#).

<sup>xvii</sup> For instance, [52%](#) of the space-related start-ups are located in the U.S.; U.S. and Chinese companies have attracted the majority of capital. In 2019, private funding in the U.S. reached €5 billion compared with €188 million in Europe (for start-ups only), refer to [ESA 2025 Agenda](#).

<sup>xviii</sup> To the best of our knowledge, comprehensive official directories of space-related entities are only available in the [UK](#) and [Luxembourg](#). Whilst information about the number of space-related entities is available in the

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following countries: [Austria](#), [Belgium](#), [Czech Republic](#), [Finland](#), [France](#), [Germany](#), [Greece](#), [Hungary](#), [Ireland](#), [Italy](#), [Lithuania](#), [Netherlands](#), [Norway](#), [Poland](#), [Portugal](#), [Romania](#), [Slovakia](#), [Sweden](#) and [Switzerland](#) (and others), it is not necessarily accurate, updated or subject to a review process.

<sup>xix</sup> For instance, space agencies may be reluctant to involve start-ups and SMEs in certain large/long term space programs.

<sup>xx</sup> This contrast with the situation in the US, where 1600 grant instruments (and 808 cooperative instruments) are currently within the scope of the [GRANTS.GOV](#), an official website, with detailed search functions and other helpful applications.

<sup>xxi</sup> “New Space” has a broad meaning and includes the new space ecosystems, new space actors, new space systems and operations and new space for people, society, economy and the environment.

<sup>xxii</sup> Including venture capital firms, private equity firms and business angels.

<sup>xxiii</sup> Including European Cooperation for Space Standardization (ECSS) standards and hybrid civil/defence standards.

<sup>xxiv</sup> Including certain measures proposed in the [EC action plan on synergies](#), the [EIB Space Finance Lab](#) and the [Space Platform](#).

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