



Empowering
innovation intermediaries
to generate sustainable
initiatives to incentivise
and accelerate
the commercialisation
of space innovation

D4.6: Policy Recommendations



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COORDINATION AND SUPPORT ACTION

D4.6: Policy Recommendations

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MAIN AUTHORS

Name	Organisation
Thomas Tanghe, Marco Borghi	SpaceTec Partners

QUALITY REVIEWERS

Name	Organisation
Milena Garthley	TechTour Global
Iasmina Cioroianu	Startup Europe Networks
Apostolos Tsolakis, George Malliopoulos	Q-Plan

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CAPACITY & SUPPORT FOR
SUSTAINABLE SPACE INNOVATION

D4.6 Policy Recommendations

Thomas Tanghe (SpaceTec Partners)

Marco Borghi (SpaceTec Partners)

PARTNERS



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Thriving entrepreneurial ecosystem are built on 8 components

“TECHNOLOGICAL INNOVATION IS A FUNDAMENTAL DRIVER OF ECONOMIC GROWTH AND HUMAN PROGRESS”

BROUGHTEL & THIERER, 2019

Technological innovation has long been identified as a key driver of GDP growth. In addition to long-term economic growth, science- and technology-based innovations can help unlock a swathe of benefits for citizens and communities. As such, boosting the innovation potential and capabilities of a region or nation is a common priority.

Branscomb and Auerswald assessed the conditions needed to turn science or technology-based inventions – defined as commercially promising products or service ideas – into innovations, meaning the successful entry of these products or services into a particular market. They concluded that national investment into this conversion “significantly affects long-term economic growth, converting the nation’s portfolio of science and engineering knowledge into innovation generating new markets and industries”, thus helping to unlock a wide variety of socio-economic benefits.

Entrepreneurs as drivers of innovation, supported by a diverse and enabling ecosystem

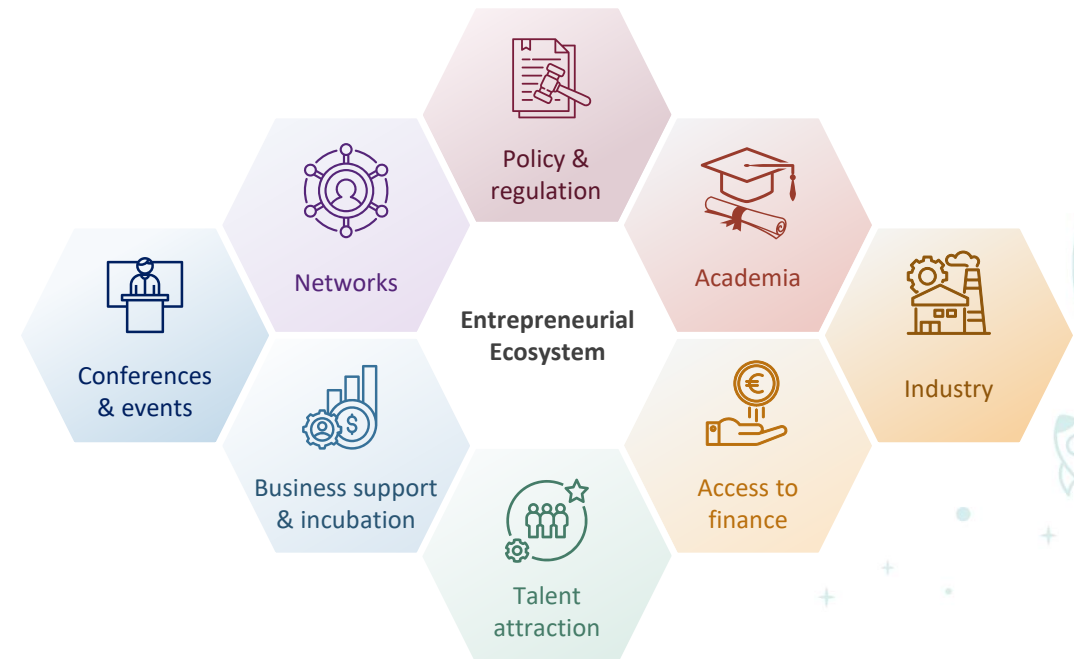
There cannot be an innovation system without entrepreneurs. However, entrepreneurs are better viewed as a necessary but not sufficient driver of innovation. Indeed, successful innovations arise from entrepreneurship ecosystems involving a number of key actors complementing and supporting new and growing enterprises, including universities, financial firms, large firms, and public organisations. Several different definitions of entrepreneurship ecosystems exist in academic literature; most describe it as an interconnected set of actors and conditions, categorised into different domains. Despite these different versions, many of them share significant similarities, including the identification of the key role to be played by public entities, the importance of well-established business support mechanisms, and the need for facilitated access to finance

Sources: [Broughel and Thierer \(2019\)](#), [Hekkert et al \(2007\)](#), [Brown & Mason \(2017\)](#), [Isenberg \(2011\)](#), SpaceTec Partners analysis.

Defining innovation frameworks for the space sector

SpaceTec Partners, leveraging its extensive knowledge of the space sector as well as existing research on successful entrepreneurial ecosystems, developed a concrete methodological framework to assess a country’s or region’s Space Innovation Support Framework. The framework is designed to systematically support public actors in providing services to innovators, enabling their endeavours, improving their survival rate and helping them scale faster when ready. Eight key components for a successful space innovation ecosystem have been defined.

SpaceTec Partners’s Space Innovation Support Framework



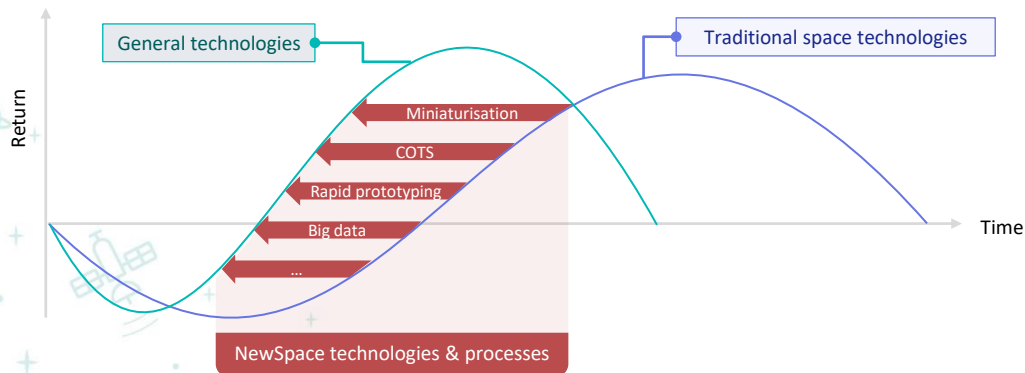
Innovation support in the NewSpace era: parallel development

The relevance for space start-ups

Space, as a deep tech industry, is characterised by high technology and market risks. This is especially true for start-ups targeting disruption in upstream services. These ventures face lengthy payback periods, although NewSpace processes such as miniaturisation and COTS have caused a contraction of the business life-cycle of traditional space technologies. The NewSpace approach has developed in parallel to innovation ecosystems, helping to democratise access to the space industry for new and emerging players as well as pushing diversification activities of traditional actors.

The SpaceTec Partners definition of NewSpace and its S-Curve

NewSpace is a global trend encompassing a series of technological and business model innovations leading to a reduction in costs, shorter lifecycles and a bolder approach to risk taking in the space sector. The NewSpace era has been characterised by the development of a private space industry primarily driven by commercial motivations and often backed by risk capital seeking a return, while simultaneously being supported by an innovative public sector aimed at promoting innovation and competitiveness, as well as creating business and demand.



Sources: SpaceTec Partners analysis.

Case study: Greece - a comparatively advanced space entrepreneurial ecosystem

The Greek space sector is an **emerging industry** covering a wide range of upstream, midstream and downstream technologies for space, such as Earth observation, navigation, satellite communications, operations, microelectronics, robotics, materials and structures amongst others.

Greece has successfully built upon several of its key strengths to foster the emergence of an advanced entrepreneurial ecosystem. For instance, its **strong technical expertise** and **active industry** has helped form international collaborations, while **supportive networks** and **clusters have emerged**, boosting the advancement of the Greek space sector. One such instance is the si-Cluster, - the Hellenic Space Technologies and Applications Cluster – **an industry-led** and **user-driven innovation** cluster bringing together private and public actors. More than 70 members from industry as well as academia and research have played an important role in supporting an organised Greek innovation ecosystem.

Furthermore, the country has fostered a strong mentality of **cross-sectorial** and international collaboration, establishing good frameworks of collaboration with **industrial players**. **Business incubation** and **acceleration programmes** have also been successfully established, both for start-ups and SMEs in space as well as non-space sectors, including an ESA Business Incubation Centre, operated by Corallia.

Greece has also established or participated in **several conferences, events** and **space gatherings** such as ActInSpace, the Copernicus Hackathons and HackOnEarth in order to provide a further push to the ecosystem. One of the main gaps appears to be academic institutions, which should look to introduce activities and programmes to invest in developing workplace and entrepreneurship skills of students, as well as coupling their activities with the entrepreneurial ecosystem at large.



Policy & regulation: fertile ecosystems through policymaking

National and regional policymakers are both at the core and the forefront of innovation

Government actors, including national and regional entities, are one of the core elements of a successful innovation ecosystem, and play a key role in establishing the conditions enabling inventions to be developed into innovations, bridging the so-called Valley of Death. While traditionally governments provide only a fraction of the total early-stage technology development funding, several enabling conditions are established through proactive initiatives, including financial support frames facilitating and accelerating space innovation.

Innovation policy acts as the interface between research and technological development policy on the one hand and industrial policy on the other. As such, its primary aim is to create the overarching framework conducive to bringing ideas and inventions to the market. Innovation policy can help create a supportive environment by providing funding, resources, and incentives to encourage the development of new technologies and business models. It can also help to build partnerships between government, industry, and academia to promote collaboration and knowledge sharing. Ultimately, innovation policy can play a critical role in ensuring that the space sector remains competitive and innovative, driving growth, and creating new opportunities for businesses and individuals alike.

The implementation of innovation policy, both at large and in the space sector specifically, typically involves regulatory measures designed to foster a supportive environment for innovation. These are most commonly associated with creating favorable tax policies but include a wider range of public undertakings. These include providing grants and loans to support research and development, streamlining the regulatory process to make it easier for companies to obtain permits and approvals for new projects, establish favourable property rights and patent regulations, and in general alleviating the administrative burdens for young start-ups.

Recommendations

1

Ensure **favorable framework conditions through flexible policies** facilitating **development stages**, such as **regulatory sandboxes** and **fast-tracking approval processes**

A thriving innovation support ecosystem enables entrepreneurs not only by streamlining administrative or bureaucratic processes, but also ensuring policies and regulations do not stifle or impede R&D. For instance, sandboxes such as those for drones and air taxis (e.g., in Germany) would allow innovators to test new space technologies in a controlled environment, avoiding potential burdens and accelerating progress.

2

Establish policies for **technology transfer**, **funding programmes** or **tax incentives** for universities and public research institutions to **license technologies** and create **spin-off** companies

Focus should be placed on policies such as R&D tax credits, designed to encourage companies to invest in R&D, as well as capital gains tax exemptions, offering tax breaks to actors investing in spin-offs. Tax holidays (periods of time during which companies are exempt) can also support start-ups and spin-offs.

3

Collaborate with **industry experts**, **academia**, and other **relevant stakeholders** to gain a deep understanding of the current state of innovation and the potential impact of regulatory policies

Alignment between policymakers and active stakeholders through dedicated meetings and industry associations ensures policy optimisation for the development of the innovation ecosystem.



Academia: boosting research & spin-off potential

Academic institutions lead research efforts while supporting entrepreneurial education

Academia plays a critical role in supporting innovation, particularly in the development of new technologies and scientific breakthroughs. Universities and research institutions are often at the forefront of cutting-edge research and development in various fields, including the space sector. As such, academia serves as a source of knowledge, expertise, and talent that can help drive innovation in the industry, as well as driving the deal flow generation of innovation and start-up creation.

One way in which academia supports innovation is through research partnerships with industry. By collaborating with companies, researchers can apply their knowledge to real-world problems, helping to develop new technologies and products that can bring value to the space sector. Additionally, academic institutions can serve as incubators for start-ups and spin-off companies, providing mentorship, resources, and access to funding to help these new ventures grow.

Academic institutions can also help to train the next generation of innovators and entrepreneurs through educational programmes in science, technology, engineering, and mathematics (STEM) fields. These programmes provide students with the skills and knowledge they need to succeed in the space sector, whether as researchers, engineers, or business leaders. Furthermore, academic institutions can foster a culture of innovation by encouraging collaboration, creativity, and risk-taking among their students and faculty, promoting a mindset that is essential for driving innovation in any industry.

Academia can also engage in scientific outreach to the public, organising and hosting public events, hosting space-related activities, and offering online content that can help promote interest in the space sector as well as help establishing networks and boosting the region's international reputation. This outreach can also help to foster a new generation of enthusiasts and innovators who may go on to pursue careers in the space industry.

Recommendations

1

Incorporate **business and entrepreneurship courses** within technical degrees, **bridging the gap between academia and industry.**

Business courses within technical education enables students to develop skills and assimilate knowledge necessary to transform their technical ideas into successful businesses. By learning about topics such as finance, marketing, and entrepreneurship, students can gain a better understanding of how to bring their technical innovations to market and create value in the space sector. Technical and/or business courses should also be offered as vocational trainings outside of formal academic programmes, such as through the EUSPA Space Academy or the InnORBIT MOOC.

2

Encourage universities to **foster the creation of spin-offs** from successful research projects, and gradually look to **establish a strong entrepreneurship culture**

To encourage the creation of spin-offs, universities should promote entrepreneurial awareness and cultivate a culture of entrepreneurship among their students, staff, and alumni. This can be achieved through inspiring entrepreneurial role models and success stories. Additionally, actively nurturing entrepreneurial talent and providing proactive support to founders can help mitigate challenges stemming from a lack of entrepreneurial legacy. Academic institutions should look to leverage initiatives such as hackathons, design sprints or space gatherings to instill an entrepreneurial spirit within their students.



Industry: improving cross-fertilisation with start-ups & scale-ups

Industry catalyses demand for innovative solutions and provides key expertise

Industrial players are a key component of a region's innovation ecosystem, covering a multitude of roles, including for the development and commercialisation of new products and services. Established companies in the space sector have the resources, expertise, and market knowledge to transform scientific breakthroughs into practical applications that can unlock various socio-economic benefits. Through research and development, industry players can directly drive innovation and create new opportunities for growth and expansion. Moreover, industry can play a vital role in commercialising innovations by taking them to market. Through product development, marketing, and distribution, companies can bring new products and services to consumers, driving demand and growth.

Additionally, industry can support start-ups and spin-off companies by providing resources, mentorship, and funding to help them grow and scale their businesses. By investing in these new ventures, established companies can help create a fertile and vibrant ecosystem of innovation, driving the development of new technologies, products, and services. Additionally, industry can provide valuable market knowledge, networking opportunities, and expertise to help start-ups and spin-offs navigate the complexities of the space sector and build successful businesses.

Industry also drives innovation through the development and adoption of new technologies and practices. Embracing digital transformation, automation, and other emerging trends, improves companies' productivity, efficiency, and competitiveness, while also driving innovation across the industry. As such, innovative solutions are often a result of engagement with new processes, as clearly shown by NewSpace. This can lead to the creation of new business models, products, services, and new markets, resulting in continued growth and evolution of the space sector.

Recommendations

1 Provide incentives for established industrial players to engage with the innovation ecosystem

Policymakers can offer fiscal benefits such as tax breaks and funding as well as non-fiscal incentives to encourage industry to invest in and support the region's innovation ecosystem. This could include incentives for research and development, collaboration with start-ups or local universities, or participation in and sponsoring of innovation-focused events, challenges or competitions.

2 Foster the emergence of innovation hubs and technology parks to help establish close connections and facilitate knowledge transfer from industry to start-ups

Establishing key infrastructure helps create regional innovation centres and hubs wherein start-ups and industrial players can collaborate, share knowledge and network; these environments are key to support partnerships between emerging and established industry as they can enable rapid scale-up.

3 Encourage industry to develop innovative solutions through innovation procurement or pre-commercial procurement

Public procurers can challenge industry from the demand side to develop innovative solutions, effectively acting as first customers for products and services. Public entities buy the development and testing of new solutions, fostering their industry's growth and international leadership.



Access to finance: fueling R&D and driving start-up growth

Swift access to finance ensures growth and materialisation of innovations

Access to finance is critical for the growth and success of start-ups in the space innovation sector. Start-ups require significant financial resources to bring their ideas to market, develop prototypes, conduct research and development, and scale their operations. Without sufficient funding, many promising innovations may never be materialised. Space start-ups often face challenges in securing funding from traditional sources, such as banks and venture capital firms. These sources often require a proven track record, a substantial amount of collateral, and high levels of risk aversion, which can make it challenging for start-ups to access the necessary capital. To address this challenge, several alternative funding models have emerged in recent years, including angel investing and venture capital or private equity.

Another important source of funding for start-ups in the space industry is government grants and subsidies. Government investments into supporting start-ups and SMEs in the innovation sector through grants and subsidies can provide new ventures with the financial resources they need to develop their technologies, hire talented employees, and scale their operations.

Public funding can also come from international organisations. For instance, the European Investment Bank has looked to increase its investments in space start-ups by providing venture debt, while the European Innovation Council Accelerator provide valuable financial support to space start-ups and established companies. Moreover, ESA Business Incubation Centres (BICs) have strongly supported the early development of space start-ups throughout Europe. These innovation mechanisms can offer low-interest loans, grants, and other financial instruments to help companies scale their operations and develop new technologies. By providing access to international funding, companies can tap into a wider range of resources and expertise, enabling them to grow and innovate more quickly.

Recommendations

1 Strengthen and expand **government funding programmes** dedicated to space start-ups

Dedicated public investment funds in support of the space start-ups ecosystem should be established and bolstered. Efforts should be made to ensure that this targeted funding reaches a diverse range of players, including those in different stages of development and those focusing on different aspects of the sector, while ensuring alignment with the overall national or regional space strategy.

2 Encourage the development and use of **private funding models**, including **business angel investments, (corporate) venture capital, crowdfunding** among others

Establishing key infrastructure (such as the InnORBIT Space Track) helps create regional innovation centres and hubs wherein start-ups and industrial players can collaborate, share knowledge and network; these environments are key to support partnerships between emerging and established industry as they can enable rapid scale-up.

3 **Leverage international funding** fostering collaboration between established space nations and new emerging players in the ecosystem

Policymakers should actively engage with international organisations such as the European Investment Bank and the European Innovation Council to secure funding and support for local start-ups.



Talent attraction: boosting innovation through talent pipelines

Talent attraction & retention perpetuates the ecosystem's innovation capacity

Talent attraction is critical for innovation support and is particularly important for start-ups and young enterprises. Building a team of skilled, talented and dedicated individuals is essential for creating a culture of innovation and for developing new and groundbreaking products and services. As such, policymakers' focus is often placed on fostering local talent attraction and retention.

One of the key ways in which talent attraction can support start-ups is by bringing in individuals with diverse skill sets and backgrounds. By hiring employees with a wide range of expertise, start-ups can create a dynamic team that is able to approach problems from multiple perspectives and develop creative solutions that may not have been possible with a homogenous team. Successful talent attraction helps start-ups stay competitive by bringing in individuals with experience and knowledge of the latest trends and technologies. By staying up-to-date with the latest developments in their field, young ventures can stay ahead of the curve and continue to innovate in their industry.

Attracting talent to the space sector will require a comprehensive approach including both academic and industry involvement. As stated above, academia plays a key role in attracting talent to the sector through educational programs that cater to the demands of the industry, while industry partners can provide students with internships, mentorship, access to vocational training as well as access to cutting-edge technologies.

In addition to attracting new talent, a well-established and healthy innovation ecosystem must also ensure that talent successfully attracted to the space industry is then retained. Overall, talent attraction plays a critical role in innovation support for start-ups. By building a talented and diverse team, staying ahead of the latest trends and technologies, and offering opportunities for growth and development, start-ups can create a culture of innovation that fuels their success and helps them to stay competitive in their industry.

Recommendations

1

Facilitate partnerships between start-ups, established companies, and academic institutions to **create internships** and **mentorship** programmes

Students and young professionals can acquire valuable hands-on experience and exposure to cutting-edge technologies while providing start-ups with a pipeline of skilled talent. In addition, mentorship programs can help start-ups access the knowledge and expertise of experienced professionals in the space sector, supporting their growth and development. These frameworks could be expanded to target the up-skilling of existing space professionals, supporting their career development through dedicated courses as well as establishing key conferences and events.

2

Establish a **talent retention strategy** leveraging financial incentives, professional development opportunities, and supportive infrastructure

Incentives should be developed in order to make space start-ups more attractive for skilled professionals. These could include tax incentives, financial support for professional development, assistance with housing, as well as other non-financial benefits. Additionally, policymakers should consider providing support for start-ups to retain their top talent, such as offering tax credits to young companies retaining employees for two or more years.



Business support & incubation: empowering entrepreneurs

Access to business support unlocks various benefits facilitating start-up development

Business support mechanisms are a cornerstone of innovation support frameworks, providing entrepreneurs with the tools and resources necessary to turn their ideas into successful businesses. Incubators offer a wide range of services, such as mentoring, training, and access to funding, that can help start-ups overcome common challenges and accelerate their growth. By providing a supportive environment, incubators can help entrepreneurs validate their business ideas, test their products, and develop the necessary skills to succeed in the market.

In addition to incubation, other business support mechanisms include accelerators, which are designed to help start-ups scale quickly by providing access to mentorship, networking opportunities, and funding. Accelerators typically work with startups that have already established their product-market fit, helping them to develop and execute a growth strategy. Additionally, innovation hubs can provide startups with affordable infrastructure, access to equipment, and networking opportunities with other entrepreneurs and industry experts.

Moreover, business support mechanisms can provide entrepreneurs with access to funding, which is essential for startups to grow and expand. This can include traditional financing options such as loans and equity investments, as well as alternative forms of funding such as angel investments. Business support organisations can also help start-ups navigate the complex world of funding, providing guidance on the best funding options for their business and connecting them with potential investors.

Finally, legal and regulatory support can be provided to start-ups through business support. This includes providing guidance on intellectual property protection, compliance with regulations, and legal structures such as incorporation. By accessing legal and regulatory expertise, entrepreneurs can avoid costly mistakes and focus on growing their business.



Recommendations

1

Develop public or support private initiatives for **business incubation**, providing emerging entrepreneurs access to **mentorship, funding, infrastructures** and other resources

Business incubation programs are designed to foster start-ups by providing them with the resources and support they need to grow and succeed. Grants, loans or seed funding can help ventures cover initial set-up costs, while access to experts can enable networking, mentorship and training for start-ups to develop key skills and garner space-specific knowledge. Policy-makers should thus look to increase involvement with opportunities such as CASSINI and other comprehensive business support initiatives.

2

Establish **acceleration programmes** for promising start-ups and scale-ups looking to advance to the next stage of their development

Accelerator programmes act as key business support mechanisms for in an innovation ecosystem. They are designed to expedite the transition between proof-of-concept and product commercialisation, facilitating access to funding, resources, mentoring and education to young companies.



Conferences & events: platforms to spread culture of innovation

Conferences and events boost the international reputation of an innovation ecosystem

Conferences, events and local initiatives support the development of a healthy innovation support ecosystem by providing a platform for knowledge sharing, networking, and collaboration. These events bring together researchers, entrepreneurs, investors, policymakers, and other stakeholders in the innovation ecosystem to exchange ideas, discuss trends, and showcase new technologies and products. By doing so, conferences and events can help to facilitate new partnerships and collaborations, as well as accelerate the commercialisation of innovative ideas.

Conferences, events and informal gatherings such as those fostered by InnORBIT also provide a valuable networking opportunity for attendees. Further, supporting informal gatherings can offer a low-efforts and high-return initiative to boost networking and entrepreneurial culture in the ecosystem. They offer a chance to meet potential collaborators, investors, and customers, and to build relationships that can lead to new partnerships and business opportunities. Moreover, conferences and events can help to foster a sense of community within the innovation ecosystem, providing attendees with a platform to share their experiences, discuss common challenges, and find support from others in the industry.

Conferences and events can not only help raise awareness about the importance of innovation and entrepreneurship, but also bolster the international reputation of an innovation support ecosystem. This is particularly important in relation to the ecosystem's attraction capacity, both for new and foreign businesses as well as potential investors. Furthermore, by showcasing innovative ideas and products, these events can inspire and motivate attendees to pursue their own entrepreneurial ambitions. They can also help build support for policies that promote innovation, and create a sense of excitement and enthusiasm about the potential impact of new technologies and ideas on society. More generally, conferences and events support the emergence of an overarching regional or national culture of innovation, periodically attracting diverse international stakeholders to the ecosystem.



Recommendations

1

Support the **organisation of conferences, events** and **local initiatives** that focus on key areas of interest for start-ups and are well-aligned with the **national or regional space strategy**

Policymakers can provide financial support, help secure high-profile speakers, and use their influence to attract a diverse range of participants, incl. local and international investors, and industry experts. Further, conferences and events aligned with the overall space strategy, such as the Space Resources Week in Luxembourg, help establish the region's international reputation for specific areas or themes.

2

Enhance networking and **collaboration** at events with structured sessions and innovative approaches

Conferences and events should be designed to maximise networking and collaboration opportunities. This could involve including structured networking sessions in the event programme, creating online platforms for attendees to connect, and providing spaces for one-on-one meetings between start-ups and investors.

3

Leverage initiatives such as InnORBIT to provide support for **both mature and emerging space** innovation ecosystems

As discussed at the PODIM conference, the versatility of local initiatives such as those within InnORBIT ensures that both less experienced innovation intermediaries and established actors can be supported. Awareness raising activities such as space cafes can help propel new ecosystems towards more complex activities, while mature players can tackle gaps towards stronger systems through local events & initiatives.



Networks: unlocking global connections & fostering collaboration

Networks connect actors throughout the ecosystem and in the international scene

Innovation support ecosystems rely heavily on the networks established within them and between the various key components of the entrepreneurial ecosystem. These networks can include a variety of players, such as industrial actors, universities, research institutes, businesses, investors, and government agencies, all working together to support innovation. The primary importance of networks lies in their ability to connect individuals and organisations with diverse skillsets, backgrounds, and experiences, creating opportunities for collaboration, knowledge-sharing and cross-fertilisation that can lead to new breakthroughs.

Through networking, individuals and organisations within a space innovation ecosystem can identify new opportunities and form strategic partnerships. For example, a business might connect with a university to form a research partnership, or an investor might encounter and support a start-up looking for funding. Networks also offer access to valuable resources, such as funding opportunities, mentorship, and expertise. For start-ups and entrepreneurs, these resources can be crucial for survival and growth. They can also access mentorship and guidance from experienced business leaders who can provide insights on how to scale their operations and navigate challenges.

In addition to providing resources and opportunities for collaboration, networks also contribute to the overall culture of innovation within an ecosystem. By connecting like-minded individuals and organisations, networks foster an environment of creativity, risk-taking, and experimentation. This culture of innovation can drive progress and create a positive feedback loop, as successful ventures within the ecosystem attract more attention, leading to greater opportunities for collaboration and growth. Leveraging established networks such as CASSINI and the ESA Space Solutions can further facilitate connections between diverse players, providing access to resources and fostering an innovation culture.

Recommendations

1

Set up a dedicated **matchmaking programme** for the space sector to **support start-ups, scale-ups and SMEs** in establishing connections and partnerships with **corporates and investors**

Matchmaking programmes provide support and networking opportunities to start-ups, scale-ups and SMEs, connecting them with corporates and investors. Matchmaking efforts should be geared to improving the ability of these companies to attract venture capital funding as well as forming partnerships with key industrial players, thus increasing survival and growth rates.

2

Establish or leverage existing **online networking platforms**, including forums and communities, wherein start-ups, entrepreneurs, partners and investors can interact and connect

Policymakers should look to help the emergence of virtual networks through online platforms, either establishing new ones or encouraging local actors to engage in existing ones. Through tailored initiatives such as those within InnORBIT (e.g., Space Coffees, Investment Tracks, Info Days, etc.) start-ups and entrepreneurs can connect with and engage with companies, research institutions, potential partners and other relevant stakeholders, developing their network of contacts.



Innovation is nourished through national space strategies



Space strategies and space innovation ecosystems operate in symbiosis, each supporting the other to reach more ambitious goals

National or regional space strategies set out the overall vision, goals, and priorities for a country's space sector, providing a roadmap for innovation and growth. By defining clear objectives and targets, a national space strategy can guide the development of new technologies, services, and applications that have the potential to transform the space sector and drive economic growth. As such, a space innovation ecosystem is materialised by providing a framework for collaboration and common goals for different stakeholders, influencing the emergence of each of the eight key components and setting the boundaries and conditions for their further development.



Collaborative approaches to both the definition and implementation of a space strategy are needed to ensure its success

Policymakers should take a comprehensive and holistic approach when defining their space strategy in support of innovation. Space strategies do not exist in a vacuum; key stakeholders such as industry leaders, research institutions, start-ups, and entrepreneurs should be engaged to gather insights and perspectives on the existing ecosystem and identify areas for improvement. This collaborative approach ensures that the strategy reflects the needs and aspirations of the stakeholders and encourages ownership and commitment to its implementation.

Policymakers should prioritise measures that foster collaboration, knowledge-sharing, and entrepreneurship within the ecosystem, not only by establishing favourable policy frameworks but supporting each of the other components of a successful space innovation ecosystem. This includes initiatives such as establishing innovation hubs or incubators, creating funding mechanisms specifically targeted at space startups, and facilitating partnerships between academia, research institutions, and industry. By nurturing an environment that encourages cross-pollination of ideas, facilitates access to funding and resources, and supports the development of entrepreneurial skills, policymakers can catalyse the growth of a robust and dynamic space innovation ecosystem, positioning the country or region at the forefront of space commercialisation.

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