



EPN 2024 RI

EUROPLANET 2024 Research Infrastructure

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Executive Summary / Abstract:

Europlanet is a Research Infrastructure (RI) that offers access to facilities and services to support the planetary community in Europe and around the world. Developed through a series of projects funded by the European Commission (EC), Europlanet was established in 2023 as an independent legal structure (an Association International Sans But Lucratif (AISBL) not-for-profit enterprise) based in Brussels, Belgium.

Europlanet has an active outreach and education programme with the main aims of:

- Promoting the socioeconomic impact of planetary science and the Europlanet research infrastructure
- Engaging European citizens and inspire the next generation with STEM
- Contributing to evidence-based policymaking relating to planetary science and its wider impacts
- Stimulating social innovation in the community
- Supporting diversity and inclusion within planetary science and related fields.

This Outreach and Education Sustainability Roadmap document reviews recent outreach initiatives organised through Europlanet and provides recommendations for core activities to be carried out through Europlanet AISBL, within the framework and resources of the newly established not-for-profit enterprise.

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1. Introduction

1.1. Overview of Europlanet

Europlanet links research institutions and companies active in planetary research in Europe and around the world. Planetary science covers the study of objects in our Solar System and those orbiting other stars, and is an interdisciplinary field that encompasses astronomy and geophysics, robotic and human exploration of other planets, as well as the search for extra-terrestrial life.

Europlanet dates back to a Coordination Action funded by the European Commission (EC) in 2005-2008. Through a series of further EC grants awarded between 2009 and 2024, Europlanet has subsequently developed into a distributed research infrastructure that offers coordinated access to services and facilities spread over 5 continents, supporting a community of thousands of users in academia, industry and in the wider community.

Europlanet was initially conceived to overcome fragmentation within the European planetary science community – an issue highlighted by NASA’s Cassini mission to Saturn, which had significant European academic and industrial involvement in nearly all 16 instruments, and the ESA-led Huygens probe, which explored the atmosphere and surface of Titan. The subsequent success of Venus Express, Mars Express ExoMars TGO and Rosetta heralded ESA and Europe’s emergence as a mature space actor with the ability to conduct successful planetary missions. In establishing a well-networked community that has access to state-of-the-art infrastructure – regardless of where individuals are based – Europlanet has helped to ensure that Europe is well placed to extend that leading role through ambitious upcoming missions such as ExoMars Rosalind Franklin, JUICE, Comet Interceptor and EnVision.

Today, Europlanet provides Europe’s planetary science community with a platform to:

- Exchange ideas and personnel.
- Share research tools, data and facilities.
- Define key science goals for the future.
- Engage stakeholders, policy makers and European Citizens with planetary science.

The ‘Europlanet family’ currently includes:

- The [Europlanet Association](#), a not-for-profit Association Internationale Sans But Lucratif (AISBL) established under Belgian law in 2023 to give an overarching, independent legal structure for Europlanet’s activities.
- The [Europlanet Society](#), an organisation for the advancement of planetary science that is open to individual and organisational members and is structured around 10 Regional Hubs.
- The [Europlanet Science Congress \(EPSC\)](#), an annual meeting of over 1000 participants from the academic and industrial sectors in planetary science around the world.
- The [Europlanet Early Career \(EPEC\) network](#) that supports young planetary scientists from undergraduate level to up to seven years into an independent career in academia or industry.
- The [Europlanet Research Infrastructure \(RI\)](#), which provides access to virtual services, state-of-the-art laboratories and field sites across four continents. Between February 2020 and July 2024, the RI has been supported through a €10 million grant from the European Union's Horizon 2020 research and innovation programme under grant agreement No 871149.
- FTP-Europlanet gUG, a not-for-profit enterprise company established in Weinheim, Germany, with a focus on astronomy education.

1.2. Overview of Europlanet Outreach and Education Activities

Planetary science is a topic with enormous possibilities for engaging the public with science, technology, engineering and mathematics (STEM) and inspiring the next generation of scientists and engineers. Indeed, according to the “Europeans' attitude to Space Activities Eurobarometer report” of January 2014, almost three-quarters of Europeans think that including subjects linked to space activities in educational materials would encourage students to choose careers in STEM. The Europe-wide shortfall in the workforce of scientists and engineers means that there is a pressing need to attract young people into the study of STEM subjects. The need for such a skilled workforce is growing, with the Space industry, including planetary science, generating €50 billion and employing 230,000 people in 17 EU Member States, plus Norway, Switzerland and Turkey.

Outreach and education have been a core part of Europlanet initiatives since its foundation the early 2000s. However, with a sphere of activity that covers over 20 countries, spread over 5 continents, a flexible, multi-lingual and culturally sensitive model of community engagement is required, as this cannot be effectively implemented through a centralised, ‘top down’ approach. Thus, Europlanet’s overarching strategy has been to support the planetary science community to do more public engagement and educational activities, and to share best practice, training and resources to increase the impact of those efforts.

Europlanet’s overarching objectives for outreach and education are to:

- Promote the socioeconomic impact of planetary science and the Europlanet research infrastructure
- Engage European citizens and inspire the next generation with STEM
- Contribute to evidence-based policymaking relating to planetary science and its wider impacts
- Stimulate social innovation in the community
- Support diversity and inclusion within planetary science and related fields

Over the past decade or so, Europlanet has provided a range of mechanisms to support grass roots outreach and education initiatives in Europe (and beyond) related to planetary science, including:

- Seed funding schemes
- A prize for public engagement
- Training
- Development of adaptable resources
- Best practice forums, including outreach sessions at EPSC
- Collaborative projects
- Expert exchanges
- Pilot community engagement programmes

Since 2010, Europlanet has fostered innovation in public engagement by providing more than 100K Euros of seed-funding for outreach projects across Europe. A number of projects initiated through the scheme have gone on to develop international significance, e.g. a “Tactile Moon” for the visually impaired, prototyped with funding from Europlanet, has now been distributed in Europe, South America, and Asia and evolved over the years to cover resources on Mars, Mercury, and Venus as well as the Moon. The bottom-up nature of the funding scheme enables Europlanet to build effective partnerships for communicating planetary science through projects that are adapted for linguistic and cultural differences. The Europlanet Prize, also established in 2010, reinforces Europlanet’s commitment to public engagement and education as a core part of the remit of researchers.

In recent years, the education and outreach teams in the Europlanet 2024 RI project, the Europlanet Society's Outreach Working Group and the Europlanet Early Careers (EPEC) network have developed a number of resources to support teaching of science, technology, engineering, arts and mathematics (STEAM) subjects. These include free planetary science/astrobiology lessons plans and associated hands-on activities that have been designed to be ready-to-use and adaptable for formal and informal teaching scenarios. The resources are available in several languages and can be downloaded in a variety of formats. A survey of 42 teachers in 2021-2022 highlighted [recommendations for future development](#) and the following best practices for the creation of new resources:

- The co-creation of resources with stakeholders is essential in order to tailor resources to the needs of the users and audience (teachers, science communicators, researchers);
- Users are paying attention to the "trustability" of the resource they use: best practices on that matter start with the acknowledgement of sources;
- Adapting or linking resources to national curricula is key!
- Some teachers may require a lead-time of a year to fit new resources into their programmatic plans.
- Most teacher did not feel that there would be an issue if training sessions were only available in English. However, ~40% felt that it was important that the resources themselves were translated.

One of the most effective ways that Europlanet can support education and outreach is by sharing best practice and expertise. The Outreach Working Group issues a quarterly newsletter highlighting activities and opportunities from Europlanet and members of the wider outreach community. The Outreach Working Group has a dedicated channel on the Europlanet Society's Discord server. Examples of outreach initiatives are also regularly shared on the Europlanet website and in webinars. All EPSCs, dating back to the first meeting in 2006, have included sessions and splinter meetings related to outreach and education, with special low-cost rates and bursaries offered to teachers and outreach providers.

Training sessions online, at EPSC, at early-career schools and at other conferences and meetings (Europlanet Summer School, EPEC Annual Week) have enabled members of the Europlanet Outreach Working Group and other experienced outreach providers to share expertise and resources. For example, 'Planets in a Room' (PIAR) spherical projection kits were distributed to the outreach points of contact in Europlanet's 10 Regional Hubs, and a number of online, in-person and one-to-one training sessions have been held over the course of the Europlanet 2024 RI project to develop a community of PIAR users.

In collaboration with partners, including 'Lecturers Without Borders', Europlanet has also integrated a programme of schools' engagement around its larger meetings. EPSC Goes Live for Schools, initiated in 2020 as a virtual programme of activities, aims to open the doors of EPSC to schools and give students a glimpse of how contemporary science is done. The first in-person version of 'EPSC Goes Live...' took place in Granada, Spain, in September 2022 and the programme was also extended to the Europlanet Research Infrastructure Meeting (ERIM) 2023 in Bratislava, Slovakia, in June 2023. Plans are currently in development for 'EPSC Goes Live for Schools 2024' in Berlin from 08-13 September 2024. This edition is likely to focus on teacher training, as well as schools' events.

Expert Exchange programmes, whereby funding is provided for short visits of up to one week, has also proved to have impactful outcomes for science communicators and educators.

1.3.Sustainable structures

To support the sustainability of Europlanet’s well-established outreach, education and media services, a not-for-profit company, FTP-Europlanet gUG, has been incorporated in Germany in January 2021. The relationship between Europlanet and the company is currently set out in an MoU, but it is anticipated that the Europlanet AISBL will become a shareholder in the gUG.

The form of company chosen has been a gemeinnützige Unternehmergeellschaft (haftungsbeschränkt), or gUG, a non-profit enterprise company with limited liability and charitable aims as recognised by the German tax office. 75% of the profit must be spent on charitable projects, and profits or income must be directly related to the non-profit business’s charitable purpose. German law stipulates that a gUG must form reserves from 25% of the profit.

The charitable aims of the company are:

- Promotion of astronomy, planetary science and space exploration across Europe
- Promote the educational and outreach activities of the Faulkes Telescope Project and Europlanet
- Teacher training and continuous professional development for STEM educators
- Innovative delivery of STEM subjects in schools through astronomy and planetary sciences
- Public engagement and outreach in astronomy and planetary sciences
- Development of research and education projects using robotic astronomy.
- Promote diverse, inclusive education in a sustainable way
- Provide media services to the astronomy and space community and press office support
- Support engagement with amateur astronomers.

The initial shareholders of the organisation, FTP-Europlanet gUG are DFET and Dr Lothar Kurtze (as an individual).

FTP-Europlanet gUG is currently part of two Erasmus+ projects:

- Clic-PoliT (Climate Action and Light Pollution Threat), led by Black Rock Observatory (Ireland), which runs from November 2021 to October 2024. The project is working with upper primary and secondary schools to develop strategies to address energy consumption and light pollution and debate them with policymakers in a Students’ Parliament.
- StAnD (StudentTs As plaNetary Defenders), led by INAF (Italy), which runs from September 2023 – August 2026). StAnD is an ambitious space science education project to involve school children in the search for asteroids and meteorites.

Following the end of the EU-funded Europlanet 2024 RI project in July 2024, no direct funding is currently foreseen to support an education and outreach team within the Europlanet Society/Association. Nonetheless, the Europlanet community has a number of voluntary structures that are capable of carrying out outreach and education activities. These include:

- **The Europlanet Outreach Working Group (WG)** – a group of volunteers drawn from the Society and its Regional Hubs that have an interest in public engagement and education.
- **The FTP-Europlanet gUG Science Advisory Board** – an advisory body comprised of members with special knowledge and experience in the field of science and research, education as well as the promotion of environmental protection with a focus on astronomy.
- **The Europlanet Society Executive Board** – the governing body of the Europlanet Society, with defined remits for the 11 members that include outreach and education.

- **The Europlanet Science Congress (EPSC) Executive Committee (EC) and Local Organising Committee (LOC)** – the committees responsible for organising Europlanet’s annual meeting overall and for local organisation.
- **The Europlanet Early Career (EPEC) Network** – the early career community within the Europlanet Society, covering undergraduate students through PhD candidates to professionals up to 7 years after their last degree, which has active programmes for outreach and education.
- **The Sustainability Committee** – the committee responsible for sustainability planning of Europlanet activities
- **The Europlanet AISBL Board** – the elected Officers of the Europlanet Society, who are directors of Europlanet’s legal entity, the Europlanet Association Internationale Sans But Lucratif (AISBL), hosted by the Planetary Atmospheres Group of the Royal Belgian Institute for Space Aeronomy (BIRA-IASB).

1.4. Audiences

Europlanet outreach and engagement activities have a number of core audiences, including:

- The planetary science community
 - Institutional outreach and education officers
 - Researchers in planetary science
 - Space professionals
 - Early career researchers
 - Research institutions, including laboratory facilities, field sites and observatories
 - Science consortia, including (European) research projects
 - Higher-Education
- The Education Sector
 - Teachers
 - Informal educators
 - Museums, planetaria and science centres
 - STEM education providers
- The astronomy community
 - Astronomical societies
 - Amateur astronomers
 - Observatories
- Policymakers
 - The EU (EC, Parliament, and related agencies)
 - Space Agencies (ESA, NASA, JAXA, ISRO etc)
 - National policymakers and funding bodies
 - Strategic organisations (e.g. ESFRI).

1.5. Objectives for Europlanet Outreach and Education Engagement

This section summarises the main objectives of the outreach and education activities currently carried out by Europlanet.

Table 1: Main Objectives of Europlanet Outreach and Education Activities

Main Objectives	Lead (e.g. FTP-Europlanet gUG, Outreach WG, Board, EPSC Executive Committee, EPEC)	Main Tasks
<ul style="list-style-type: none"> Foster teaching that will promote engagement with STEM for school students and inspire the next generation of planetary scientists and engineers Engage schools and teachers with Europlanet activities 	FTP-Europlanet gUG, Outreach WG, EPEC	<ul style="list-style-type: none"> Develop of planetary and astronomy related resources Organise teacher training workshops (in-person and online) to train teachers in using planetary science-related resources (lesson plans, activities) and equipment (e.g. telescopes) Organise events for schools and teachers around Europlanet events (e.g. EPSC Goes Live for Schools)
<ul style="list-style-type: none"> Develop skills within the Europlanet community for engaging effectively with the public and schools 		<ul style="list-style-type: none"> Provide comprehensive education and outreach skills training at levels from basic to expert for members of the planetary community, with a particular focus on Bring planetary science to schools in EPSC host cities. Encourage members of the planetary science community to share their knowledge and build experience in delivering lectures or workshops to schools
<ul style="list-style-type: none"> Public Engagement Funding Scheme 		<ul style="list-style-type: none"> Motivate European planetary scientists to participate in and initiate outreach and education activities, Highlight planetary science as a potential career for young people. Encourage planetary scientists to build partnerships within communities and demonstrate the relevance of their research. Create testbeds for innovative outreach and education projects
<ul style="list-style-type: none"> Prize for Public Engagement. 		<ul style="list-style-type: none"> Raise the profile of public engagement and education as valued activities within the scientific community
<ul style="list-style-type: none"> Commercial provision of training services 		<ul style="list-style-type: none"> Provide comprehensive education and outreach skills training at levels from basic to expert for members of the scientific community, both within planetary science and to the wider community.

		<ul style="list-style-type: none"> • Provide training on evaluation of programmes.
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2. Funding

2.1. Sources of Income

2.1.1. Europlanet AISBL and Society

Europlanet AISBL is a not-for-profit enterprise that offers key research infrastructure services developed and optimised over nearly 20 years. It is financed through:

- Community subscriptions:
- Individual memberships
- New organisational membership programme

EPSC settlement

- Fees
- Exhibition and sponsorship

Commercial services

- Industry access to facilities at commercial rates
- Consultancy

Members of the planetary science community must subscribe through individual or organisational membership to Europlanet to participate in its activities.

The day-to-day management of Europlanet is coordinated by an Executive Office with approximately 1FTE paid staff. Activities of the community are carried out by voluntary committees and working groups. The budget of Europlanet is set by the elected Executive Board. All requests for financial support (e.g. to attend meetings, organise events or produce resources) must be made to the Treasurer.

Funding for outreach and education fits within the wider picture of funding for the Europlanet AISBL and Europlanet Society, and the activities of FTP-Europlanet gUG.

2.1.2. Grants

2.1.2.1. Erasmus+

The Erasmus+ programme, initiated by the European Union, is designed to foster cooperation among organisations and institutions across various educational and training sectors, including higher education, vocational education and training, school education, adult education, youth, and sport. The programme aims to develop, transfer, and implement innovative practices at different levels—organisational, local, regional, national, and European.

Erasmus+ Focus Areas:

Erasmus+ operates across six key sectors, each with its own distinct objectives and target beneficiaries:

1. Higher Education: Erasmus+ supports initiatives aimed at enhancing the quality and internationalisation of higher education institutions. Through mobility programs, strategic partnerships, and capacity-building projects, Erasmus+ enables academic collaboration, student and staff exchanges, and the development of innovative teaching methods.
2. Vocational Education and Training: The program promotes excellence and innovation in vocational education and training (VET) by fostering partnerships between educational institutions, businesses, and other stakeholders. Erasmus+ initiatives in this domain focus on improving the quality and relevance of vocational education, facilitating work-based learning experiences, and promoting the exchange of best practices.
3. School Education: Erasmus+ initiatives in the school education sector aim to enhance the quality and accessibility of education for learners of all ages. By supporting teacher training programs, school partnerships, and innovative teaching projects, Erasmus+ contributes to the professional development of educators and the implementation of learner-centred approaches to education.
4. Adult Education: Erasmus+ promotes lifelong learning opportunities for adults through a range of initiatives designed to enhance skills, competencies, and employability. By supporting adult education providers, non-formal learning activities, and transnational cooperation projects, Erasmus+ contributes to the personal and professional development of adult learners, with a focus on promoting social inclusion and active citizenship.
5. Youth: The program seeks to empower young people to actively participate in society and contribute to positive change. Through youth exchanges, volunteering opportunities, and structured dialogue initiatives, Erasmus+ promotes intercultural understanding, social inclusion, and youth-led innovation, fostering the development of leadership skills and global citizenship among young Europeans.
6. Sport: Erasmus+ recognises the role of sport as a powerful tool for social integration, health promotion, and community development. Through partnerships, collaborative projects, and mobility actions, the program supports initiatives that promote grassroots sport, combat discrimination, and enhance the integrity and governance of sport organisations.

Erasmus+ Programme Budget

The Erasmus+ programme for 2021-2027 has a substantial budget of approximately €26.2 billion, nearly doubling the funding from its predecessor (2014-2020) which had a budget of €14.7 billion. This increased budget is complemented by an additional €2.2 billion from the EU's external instruments (<https://erasmus-plus.ec.europa.eu/news/erasmus-2021-2027-programme-brings-over-eu262-billion-to-support-mobility-and-cooperation-0>) (<https://erasmus-plus.ec.europa.eu/programme-guide/part-a/priorities-of-the-erasmus-programme/budget>)

Erasmus+ Strategic Objectives

The 2021-2027 Erasmus+ programme emphasises:

- Social Inclusion: Ensuring that all individuals, regardless of their socio-economic background, have access to opportunities.
- Green and Digital Transitions: Supporting initiatives that promote environmental

- sustainability and digital skills.
- Youth Participation: Encouraging young people to engage in democratic life and civic activities (<https://erasmus-plus.ec.europa.eu/about-erasmus/what-is-erasmus>).

Opportunities

Erasmus+ offers a variety of opportunities for individuals and organisations:

- For Individuals: Includes mobility opportunities for students, staff, trainees, and adult learners to study, train, or gain work experience abroad.
- For Organisations: Supports projects that focus on learning mobility, innovation, and policy reform in education, training, and youth sectors (<https://erasmus-plus.ec.europa.eu/opportunities>).

Horizon Europe

Horizon Europe Cluster 4 – Space (destination 5) is the civil Space research and innovation programme of the EU. Its purpose is to support the evolution of the operational “EU Space Programme” components and to foster the competitiveness of the European Space sector as a whole. Its programming is the responsibility of the European Commission’s DG DEFIS, in close coordination with stakeholders at European (such as ESA) and national level (such as national Space agencies), from industry and research. The estimated EU funding for Horizon Europe Cluster 4 – Space, destination 5, 2021-2027 is €1.5 billion.

The Directorate-general for Defence Industry and Space (DEFIS) has given a mandate to European Health and Digital Executive Agency (HaDEA) and the European Union Agency for the Space Programme (EUSPA) for the implementation of Horizon Europe Cluster 4 - Space, and works with ESA as a partner. HaDEA funds grant agreements tackling challenges in these domains of the programme:

- Fostering competitiveness of space and related ground systems:
- Reinforcing the EU capacity to access and use space
- Contributing to the evolution of Copernicus services;
- Developing and advancing innovative space capabilities such as Space Situational Awareness (SSA) and Quantum;
- Supporting the EU space sector with a number of targeted and strategic actions in the areas of critical space technologies for EU non-dependence and competitiveness, space science activities, outreach, education and international cooperation activities, as well as cooperating with ESA for the establishment of regular and cost-effective flight opportunities for In-Orbit Demonstration/In-Orbit Validation (IOD/IOV).

A major benefit for organisations in engaging with Europlanet remains the opportunity to form consortia for EC space bids, with at least 10 successful projects that can at least partially trace participation to Europlanet projects.

The present Europlanet 2024 Research Infrastructure (RI) project is expected to be the last RI in the format that we have become used to. Future EC-funded initiatives are likely to operate under different financial models and/or be larger consortia. Nonetheless, in collaboration with other partners, there will continue to be opportunities for Europlanet through Horizon Europe Infrastructures Calls.

2.1.3. National and Organisational Funding

Various sources of funding from national bodies and research organisations are available to support outreach and education programmes related to astronomy, covering planetary science, e.g.:

- Science and Technology Facilities Council (STFC) Spark and Nucleus awards (UK)
- Royal Astronomical Society grants (UK)
- [European Geosciences Union](#)
- [IAU National Outreach Coordinators Funding Scheme](#)
- [King Baudoin Foundation / Ernest Solvay Fund](#)

2.1.4. EPSC

The call information for EPSC in 2026 and 2027 has included a requirement for the Local Organising Committee to propose an active programme of community engagement, including outreach to the public, teachers and schools.

2.1.5. Sponsorship

Europlanet outreach programmes, particularly the outreach funding scheme and prize, offer opportunities for sponsorship. During the Europlanet 2024 RI project, beneficiaries including the University of Kent and the Dill Faulkes Educational Trust (DFET) supported Europlanet Society outreach programmes through overheads associated with the project. Similar arrangements could be built into collaborations on future projects.

External sponsorship opportunities could also be investigated. However, sponsorship does bring reputational risks of association with third-party organisations. A clear policy for due diligence in pursuing, reviewing and accepting potential sponsorship opportunities should be drawn up by the Europlanet Board.

2.1.6. Co-funding and in kind contributions

The European Commission is increasingly moving towards a co-funding model, at present with 70% of expenses covered by grants (but possibly aspiring for a 50:50 funding model in the longer term). While participants in early co-funding calls (e.g. HORIZON-INFRA-2023-SERV-01-03) report that the experience is challenging, lobbying of the European Commission is ongoing to try and ensure that this mechanism is significantly improved in potential future calls.

In-kind contributions may be considered in the context of outreach and education e.g. offering free membership of Europlanet or access to a Europlanet service in exchange for personnel contributions related to public engagement or educational services.



2.2.Expenditure

Activity	Description	Resources needed	Potential Funding Source	Priority
Teacher Training	Training teachers in using planetary science-related resources and equipment (e.g. telescopes)	5-10K€ per workshop	Erasmus+ grants	
Resource Development	Development of planetary and astronomy related resources	5K€ per resource	Erasmus+ grants	
Network of Key Schools	Network of 20+ schools with experience in planetary/astronomy activities that can collaborate, test resources, share best practice e.g. at EPSC	5K€ for annual meeting	Sponsorship (Vega, DFET, Local/regional grants)	
EPSC Goes Live for Schools	20+ Participants at EPSC visit local schools around city/region	10 days work	EPSC Budget	High
Early Careers Training	Training on public engagement and working with schools	5-10K€ per workshop	Horizon projects, EPEC Annual Week	
Regional Hub Teacher Training	Hybrid conference for teacher training	5-10K€ per event	AISBL, Co-funding	
Public Engagement Funding Scheme	Grants of 5-10K per year to fund outreach projects	5-10K€ per round	AISBL, Overheads, Co-funding, Sponsorship	
Prize for Public Engagement	Award	1.5K? per prize	AISBL, Co-funding, Sponsorship	
Education and Outreach Key Events	Attendance at Key events and conferences			
Commercial provision of training services	Training in communication skills, public engagement, working with schools, evaluation	Fee per workshop (750€?)	Customers	

Amount of outreach prize to be defined along with other Europlanet Prizes.



3. Roadmap for 2024-2027

3.1. Recommendations

3.1.1. Outreach and Education Infrastructure

Objective: Provide the infrastructure needed for sustainable outreach activities within Europlanet.

Scope: Organise and coordinate structures to underpin Europlanet education and public engagement activities.

Activity Leads: Outreach Working Group, Executive Board.

Resources Needed: Committee and Working Group efforts

Details:

1.1.a.1 → [Outreach Working Group](#)

- **Objective:** Organise regular internal coordination meetings to plan activities and logistics for all Europlanet outreach and education activities.
- **Format:** Online meetings, discussions on Discord private channel.
- **Frequency:** Monthly/Quarterly.
- **Participants:** Europlanet Hub outreach representatives, Executive Board members with outreach remits, EPEC and EPSC representatives.
- **Outcome:** A list of budgeted actions that are achievable within the resources of Europlanet AISBL and the Europlanet Society.
- **Logistics:**
 - **Participant List:** Compile and maintain an up-to-date list of participants.
 - **Agenda Preparation:** Draft and circulate the agenda in advance, including key discussion points and objectives.
 - **Invitation Management:** Send out invitations well in advance, with reminders as the date approaches.
 - **Technical Setup:** Ensure reliable virtual meeting platforms with all necessary features for presentations and breakout sessions.
 - **Follow-Up:** Send summaries and action points post-meeting. Make costed proposals to the board for funding requests.

1.1.a.2 → [Collaboration Between Outreach and Europlanet Board and Structures](#)

- **Objectives:** The collaboration between the Outreach Working Group, the Europlanet Board, and structures including the Diversity Committee and EPEC is key to developing outreach initiatives that are aligned with the broader goals of Europlanet and its community, strategically prioritised, and effectively implemented and disseminated.

- **Format:** Periodic reporting to the Board and other committees on policy activities. Reporting to the Europlanet Community during the Europlanet General Assembly.
- **Participants:** Outreach WG, Europlanet Executive Board, Europlanet Committees and Working Groups, EPEC Network.
- **Outcome:** Awareness across Europlanet structures of outreach activities and opportunities for engagement.
- **Logistics:**
 - Biannual reports for the Europlanet Board.
 - Ad-hoc cross-representation at meetings of Europlanet bodies.
 - Annual outreach report for inclusion in the Europlanet General Assembly and AISBL Annual Report.

3.1.2. Educational Support

3.1.2.1. Resource Development and Teacher Training

Objective: Support teaching of STEM and inspire the next generation of planetary scientists and engineers.

Scope: Work with partner organisations to produce educational materials and associated training for teachers.

Activity Leads: FTP-Europlanet gUG, Outreach Working Group.

Resources Needed: Schools Education Erasmus+ grants, contributions by Outreach Working Group in validating, translating and disseminating project resources and results.

Details:

- Develop strategic partnerships with other organisations to seek opportunities, build consortia and submit proposals for Schools Education Erasmus+ grants.
- Involve the Europlanet community through the Outreach Working Group, EPSC and Discord in the development, dissemination and evaluation of resources.
- Present outcomes of projects at EPSC and other relevant conferences for astronomy education.

3.1.2.2. EPSC Goes Live For Schools

Objective: Maximise the social impact of EPSC in engaging schools with the conference

Scope: Organise lectures and workshops by conference participants in EPSC host cities and online.

Activity Leads: Outreach Working Group, Diversity Committee, EPSC Committee/LOC

Resources Needed: Volunteer effort.

Details:

- Work with EPSC Local Organising Committee and partners (Lecturers Without Borders, Scientix) to plan programme for future EPSC Events (6-9 months ahead of meeting) and to circulate information to teachers and schools.
- Include check-box for expressions of interest about participating in EPSC Goes Live for Schools in abstract submission form.
- Match schools and scientists for online and in person events
- Produce guidelines for participants
- Prepare feedback forms and evaluate responses.

3.1.3. Outreach Support

3.1.3.1. Europlanet Public Engagement Funding Scheme

Objective: Provide grass-roots support for outreach and educational initiatives by the Europlanet Community, enabling effective, community-focused projects that are adapted for linguistic and cultural differences.

Scope: Annual call for applications of grants of 1-5K Euros.

Activity Leads: Outreach Working Group.

Resources Needed: Funding (at least 5K Euros per call). Infrastructure to launch the call.

Details:

- Define budget, prepare guidelines and form to launch annual call.
- Prepare and implement evaluation process for applications submitted.
- Involve the Europlanet community through the Outreach Working Group, EPSC and Discord in the dissemination of the call.
- Present outcomes of projects at EPSC and other relevant conferences for astronomy education.

3.1.3.2. Europlanet Prize for Public Engagement

Objective: Reinforce Europlanet's commitment to public engagement and education as a core part of the remit of researchers.

Scope: Annual call for nominations for the prize, which includes a cash award and a lecture at EPSC.

Activity Leads: Outreach Working Group.

Resources Needed: Funding for award, EPSC waiver. Infrastructure to launch the call.

Details:

- Define budget, prepare guidelines and form to launch annual call.
- Prepare and implement evaluation process for nominations submitted.
- Involve the Europlanet community through the Outreach Working Group, EPSC and Discord in the dissemination of the call.
- Organise prize ceremony and lecture at EPSC.

3.2. Risks

→ Regarding section above under “Outreach and Education Infrastructure”

- **Lack of Functional Outreach Working Group:** The Outreach Working Group is the engine that drives Europlanet outreach activities. No activities will be possible without a motivated and well organised group of volunteers.
- **Lack of Safeguarding Procedures:** All Europlanet activities involving the public and schools should be subject to safeguarding procedures, including guidelines, codes of conduct and risk assessments.
- **Low Participation and ineffective engagement:** There is a risk of low attendance from key stakeholders, which can undermine the effectiveness of activities. Outreach and education activities can only be impactful with the support of the wider community (e.g. fact checking of resources by scientists, translations, feedback from teachers)
- **Technical Issues:** Technology may fail, causing disruptions (e.g. virtual meeting platforms, specialist equipment e.g. Planets in a Room)
- **Resource Constraints:** Limited funding and reliance on volunteer expertise may restrict the depth and quality of the research and prioritisation process.

→ Regarding section above under “Educational Support”

- **Targeting and Dissemination of Resources and Activities:** There are many resources out there already and educators are very busy. Links to curricula need to be highlighted and resources need to be clearly targeted, with awareness of the constraints imposed by the timetable of the school year.
- **Quality Control:** Implement a rigorous review and editing process, with a glossary for unfamiliar terms and clear links to resources. Carry out formative and summative evaluation to maximise effectiveness and track impact.
- **Distribution Inefficiency:** Use multi-channel distribution and maintain an up-to-date contact list of core contributors.

- **Resource Allocation:** Plan resource allocation and leverage volunteer expertise.
- **Feedback Incorporation:** Collect and integrate stakeholder feedback.

→ Regarding section above under “Outreach Support”

- **Resource Allocation:** The budget for funding activities is limited. Minimise the barriers to entry (so that applicants don't feel that they have wasted time on unsuccessful proposals) and ensure clear evaluation procedures (to ensure resources are best targeted).
- **Tracking Outcomes:** Follow up on a regular basis with funded projects to track outcomes, share best practice and ensure that resources are embedded into the Europlanet community.

4. Appendices

[Consultation on The Mars Collection](#) - Practices of teachers and science communicators with regards to online planetary sciences educational resources (Report on the online education landscape and the dissemination of Europlanet's resources)

Authors: Ulysse Pedreira-Segade, Anita Heward

[Report - Survey of key external stakeholders for Europlanet](#) - How are Europlanet outreach activities and services perceived by partners and external stakeholders?

Author: Ulysse Pedreira-Segade

[Report - ERIM 2023](#): Organising the Europlanet outreach and education community: from global to local scales

Author: Ulysse Pedreira-Segade