EUROPEAN COMMISSION
Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs

Space Policy, Copernicus and Defence
Space Data for Societal Challenges and Growth

CALL FOR EXPRESSION OF INTEREST

COPERNICUS ACADEMY NETWORK

Open call

1 DESCRIPTION OF THE INITIATIVE

1.1 Background

In the framework of Copernicus user uptake activities, the Commission has undertaken a study with the purpose of identifying strength and gaps from existing user and market initiatives across the Copernicus Participating Countries[1]. The final report of the study can be found on copernicus.eu website[2].

The study examined current running initiatives and it has identified many uptake activities; it also identified a need for coordination among the educational actors dealing with knowledge transfer and skills development on space (earth observation) with a focus on data uptake. An important recommendation was to build an extended Copernicus's network of universities and research institutes and to leverage the user uptake initiatives across borders by involving new actors (downstream and societal challenges areas).

The Commission, therefore, decided to develop different channels of promotion, targeting intermediate and end-user communities. An awareness structure is to be set-up for the mid- and long-term perspective, ensuring a sustainable and homogeneous coverage of Copernicus Participating countries.

Consequently, Copernicus is envisaging a multiple set of actions in support to the skills needs in EU in the Earth Observation (EO) and Geomatics. Numerous applications are outside the usual space-related application domains and it is crucial to create awareness on EO within universities, research centres and business schools. Therefore those actions while targeting to develop peculiar skills for potential space data users will have to be interdisciplinary and cross-sectorial skills focussed. This is key for the Copernicus space data uptake strategy, targeting to answer the needs of different downstream value chains and devising mechanisms for transferring know-how and experience to practitioners worldwide (sustainable solutions to

[1] Copernicus Participating Countries include the EU28 plus Norway and Iceland
[2] Final report is available to the following link: http://www.copernicus.eu/sites/default/files/library/Copernicus_User_Uptake_Engaging_with_Users_0.pdf.

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skills gaps, entrepreneurial education, educational and training materials dissemination, enabling tools for applications, digital environments, etc…).

The key value added is given from increasing the knowledge about satellite data typology, earth observation data, geomatics, maps, digital skills, data hybridation, statistics and data handling skills. In particular the aim is to boost the following knowledge areas: Cartography and Visualization, Data Modelling, Data Manipulation, Geo-computation, Geospatial Data, GIS&T and Society.

1.2 Objective

The European Commission has decided to create the "Copernicus Academy Network" to develop the potential benefits behind the Copernicus data and information products offer. The network has the mission to support the Commission in tackling the challenge of bridging the gap between skills and data use and enable Copernicus data uptake in new sectors (f.i.: dedicated university curricula for geology, forestry management).

Key outcome of the network would be the development of interdisciplinary and international masters and educational classes, new skills boosting programmes for vocational training, industry-university traineeships agreements, spin-offs creation, best practices building and reference tools and materials. The Commission also intends to foster awareness of the Copernicus programme by reinforcing the Copernicus branding.

Dedicated and recurring training opportunities for users in the public sector are advisable, using the train-the-trainer concept to ensure onsite and recurring training. The Copernicus Entrusted Entities (CEEs) should complement the network initiatives and develop specific activities on key domains in synergy. The Commission will make the liaison between the network and the CEEs.

Considering that there are numerous applications outside the usual space-related application domains, it is crucial to create awareness on them within universities and business schools to stimulate both young and experienced people to the opportunities for their professional profile specialisation. Shaping future generations is fundamental for the visionary long term goals, while current workers are key targets to boost the use of the Copernicus and satellite data.

Members of the Copernicus Academy Network will formally be labelled "Copernicus Academy" and will then benefit from any support office(s) set up by the Commission to animate the network and to foster these activities.

Without the engagement of stakeholders at national and local level, the user uptake of the Copernicus programme will be very difficult. The Commission is therefore inviting stakeholders on the ground to engage to become part of the Copernicus Academy Network, an international network of universities, schools and private organisations dealing with bridging the gap between skills and the use of satellite data.

1.3 Opportunities

The deployment of the Copernicus Academy Network will be linked to the identification and the combined used of existing and available tools (both technical and financial ones).

Overall, in the framework of its strategy to promote Copernicus Users and Market Uptake, the Commission is setting up a **toolbox** for users' uptake measures which will be put at the disposal of the Members of the Copernicus Academy Network.

This toolbox includes a wide range of targeted initiatives such as supporting business creation through the Copernicus Start-ups Programme, supporting the internationalisation of Earth observation companies, ensuring the most of EU financial instruments for Copernicus, setting up new financial tools (Framework Partnership Agreement) to co-finance local initiatives in the Copernicus Participating Countries, or again addressing the skills gap through the development of dedicated educational programmes and trainings. In this respect, DG GROW is coordinating with DG EMPL and DG EAC, the European Institute of Innovation & Technology **(EIT)** and the Knowledge Innovation Communities (**KICs)** to ensure a structured partnership and dialogue for the outreaching and up taking of Copernicus data and services.

Main actions planned:

- The uptake of Copernicus space data through the dedicated dissemination systems and measures enabling/ matching current KICs objectives for education, training, network partnership development. Copernicus dedicated educational programmes, scholarships and trainings could be implemented in cooperation with KICs in the areas of **climate change impact, raw materials and smart cities management**.
- Develop synergies with projects already financed under the ERASMUS+ programme and coordinated assessment of the instruments for education and skills development.
- Long term roadmap for a dedicated **KIC on space for societal challenges** for the next MFF cycle. Key Assumption: s*pace data and systems are key enabling technology with a cross sectorial dimension, societal benefits impact and dual use potential*.
- A **Blueprint action** is defined to build sectorial skills partnership focusing on the education and skills needs[3]. For the needs of the space (earth observation) sector. A dedicated **Erasmus+ Sector Skills Alliances** call is planned for publication by Dec 2016 with the following objectives:
  - *Translate the sectorial strategy for the next 5-10 years based on sectorial skills needs.*
  - *Develop concrete solutions, e.g. design and contribute to delivering new curricula, promote relevant sectorial qualifications and certifications.*
  - *Analyse EU funding opportunities (e.g. European Structural Funds, European Fund for Strategic Investment, Erasmus+, sectorial programmes), and identify examples and develop models to promote a focused use of such funding.*
  - *Scale up successful projects and best practices. The platforms will build on European tools on skills and qualifications (e.g. EQF, ESCO, and Europass).*

  This partnership will set the basis for a sustainable approach at national, regional and local level to ensure the creation of common tools for "digital ecosystems" based on space (earth observation) with common language about skills, professional profiles,

[3] The need of education and skilling of the young generation for the uptake of space data and their integration and use for the benefit of the society was highlighted both at the latest EU Competitiveness Council (26/27 May) and the European Space Solutions week at The Hague. Moreover it reflects the draft Council conclusions on the "Digital Single Market Technologies and Public Services Modernisation" package, that "*underlines the importance to increase the digital talent pool of Europe, and to engage in a comprehensive dialogue of all stakeholders to identify and address the challenges of the impact of the digital transformation of European industry on skills requirements and on the nature of work, employment levels and income distribution.".*

certifications. This measure will be able to raise the level of understanding of the potentiality of the satellite data and to match concretely the needs of main actors.

Moreover, under the Blueprint action, a dedicated **COSME call** will be able to support the creation of didactic tools to support education and training measures targeting the use of Copernicus. Moreover, it will accompany the development of the cooperation partnership under the ERASMUS+ call and the strategic vision of the Commission on actions to fill the gap of skills needs.

The members of the Copernicus Academy Network will have access to existing communication tools (e.g. products portfolio, Copernicus market report, Info brochure on space funding instruments, data access flyer, success stories, etc…) and would be consulted for future tools to be developed by the Commission. A new series of informative and didactic materials including on data access and funding instruments is under development in order to support activities to be developed by the Copernicus Academy Network members.

The Commission encourages and target to support interactions and best practices sharing between members of the network and other networks established under both space and other Commission's policy sectors, and external relevant ones.

1.4 Profile of the Members

The Network should be created around members that have the competences and/or the willingness to become pioneers, benchmarks and ambassadors of the knowledge potential behind Copernicus data and information. The following categories of members are identified:

- Universities (not only engineering faculties, all Athenaeum faculties);
- Research institutions;
- Business schools;
- European Schools;
- Private organisation (dealing with educational activities in business and space);
- No profit organisation (dealing with educational activities in business and space);
- Primary and Secondary schools (long term objective to achieve).

Members can come from Copernicus Participating Countries and also third countries.

1.5 Examples of possible actions

The members of the Copernicus Academy Network should benefit of the service given by the Copernicus Support Office that would play a key role on these areas of activities:

- **Map, monitor and liaise** between them initiatives of interest for the network, such as events and educational opportunities (summer schools, post-graduate scholarships, etc…) delivered by members of the Network and/ or external actors, in order to build up network externalities.
- **Maintaining and sharing communication tools to ensure** update about latest events, info sessions, Copernicus lectures, new members, new training tools availability, best practices, academic curricula, funding opportunities (H2020 calls, ERASMUS+ call for sectorial cooperation on skills, COSME call for earth observation skills etc..

- **Foster user uptake and spin-offs strategies** of the members of the Network by interacting with the Copernicus Entrusted Entities, Copernicus partners and local actor, as tomorrow's entrepreneurs are today's students.
- **Foster the memorandum of understanding between the Copernicus Academy N**etwork members by facilitating the network development.
- **Provide tailored lectures and presentations to the members.**
- **Disseminate communication and educational material and tools.**

The members of the Copernicus Academy Network would play a key role, on a voluntary basis, on:

- **Developing publications and reference lectures for training** on Copernicus data and information use, under a public license.
- **Including** Copernicus-related material and modules in existing courses**.**
- **Strength the synergies and cooperation between members** by sharing knowledge building, best practices and Copernicus-related research and applications outcome and by enabling developed innovations to 'hit the market' as quickly as possible.
- **Establish dedicated vocational training and thesis scholarships** coordinated in the frame of cooperative arrangements between universities delivering higher educational programmes, or public institutions supporting career training in partnership with universities, and private business actors. Start-ups involvement is privileged for the thesis so that there is a virtual cycle.
- **Building up a knowledge culture** and a **strategic think-thank** around the benefits of the Copernicus programme and its potential for both public services needs and societal challenges.
- **Taking advantage of the synergic actions** identified and communicated by the Copernicus Support Office and by the members their selves in order to established best practices such as **clustering EU funding** for tailored interdisciplinary education programmes between different faculties (engineering, geography and economics) and/or more than one university with the inherent cooperation and participation of industry, associations, incubators, financial institutions and public actors; inter-university exchanges of human resources.
- **Develop a synergic relation** also with the Copernicus Relays Network and other key networks through the coordination of the Commission, in particular with the ESA Education Office the Knowledge and Innovation Communities (KICs).
- **Contributing to the development of the ecosystem** that the Commission is building around Copernicus and space data overall with a focus on the match with the market needs and the economic dimension (spin-offs development, etc.).

These combined actions should allow the uptake of the existing open and free space data and information products by boosting the development of the professional skills needed by space data potential users, where a key value added is given to merging skills and knowledge from different sectors, in particular transversal skills such as IT, GIS and data handling skills.

1.6 Duration of the labelling

The labelling shall enter into force on the date, on which the letter is signed by the last contracting party.

The label "Copernicus Academy" shall be granted for 12 months.

In order to be eligible for the renewal of the labelling, Members will have to provide a yearly action plan to the Copernicus User Uptake Support Office no later than 90 days before the termination of the 12 month period.

Unless either of the parties gives a 30-day written notice in advance, the labelling is automatically renewed (with the same terms and conditions).

2 EXPRESSION OF INTEREST

2.1 Process

Applicants should send their expression of interest to **GROW-I3@ec.europa.eu** with in the subject line: **"Copernicus Academy - Expression of Interest"** and fill the 1 page information template (see Annex 1).

The deadline for the submission is targeted for the **13 October, 2016**. Within 25 working days, the Commission will inform applicants about the established list of Copernicus Academy Network members and communicate the validated membership[4].

2.2 Selection criteria

The following selection criteria will be applied:

No	Qualitative selection criteria
1.	Relevance of the applicants for developing training and awareness activities related to Copernicus and space applications (e.g. experience in relevant sectors of space applications, ability to gather important stakeholders…).
2.	Ambition and nature of the actions foreseen by the applicants.

2.3 Launch of the Network

Once notified, members of the Copernicus Academy Network will be invited to attend the official kick-off meeting to be organised in Brussels on January 2017.

[4] The Commission keep the right to decide to revert its decision and to remove any members at any time.

ANNEX: BACKGROUND INFORMATION ON THE COPERNICUS PROGRAMME

The legal basis of this open call for tender is Regulation No 377/2014 of the European Parliament and the Council of 3 April 2014 establishing the Copernicus Programme and repealing Regulation (EU) No 911/2010.

According to Article 5, support activities shall be undertaken consisting in measures to promote the use and uptake of Copernicus data and Copernicus information including capacity building, development of standard procedures and tools to integrate Copernicus data and information into users' workflow, outreach, and training and dissemination activities.

The Copernicus Programme[5]

Environmental information is of crucial importance. It helps to understand how our planet and its climate are changing, the role played by human activities in these changes and how these will influence our daily lives. The well-being and security of future generations are more than ever dependent on everyone's actions and on the decisions being made today on environmental policies. To take the right actions, decision makers, businesses and citizens must be provided with reliable and up-to-date information on how our planet and its climate are changing. The European Union Earth observation and monitoring programme, Copernicus, provides this information. The Copernicus programme is coordinated and managed by the European Commission.

Copernicus consists of a space component, a service component and an in situ component. The space component provides sustainable space-borne observations (satellite data) for the service component. The in situ component refers to all non-space borne data with a geographic dimension, including observation data from ground-, sea- or airborne sensors as well as reference and ancillary data for use in Copernicus.

Copernicus integrates satellite and in-situ data with modelling to provide reliable and up-to-date data and information through the Copernicus Service Component[6] which comprises of the following already operational services:

- Land monitoring
- Emergency management
- Atmosphere monitoring
- Climate change
- Marine environment monitoring
- Security

The programme has recently moved from a research to an operational phase. The space infrastructure is being put in place, and the volume of data from Copernicus is expected to grow dramatically in the coming years (over 8 TB/day). The key challenge is now to maximise the socio-economic benefits of the programme, by ensuring that all user groups are

[5] More information on http://copernicus.eu

[6] Currently organised in thematic websites: e.g. http://land.copernicus.eu/; http://emergency.copernicus.eu/; http://marine.copernicus.eu/; http://www.copernicus.eu/pages-principales/services/security/; http://www.copernicus.eu/pages-principales/services/climate-change/; http://atmosphere.copernicus.eu/.

able to easily access Copernicus data; creating favourable conditions in the downstream sector and maximising the use and value of space data for public and private end users.

Copernicus data and information

- Dedicated Missions data: spaceborne Earth Observation data from dedicated Sentinel missions; these data are available on a full, open and free-of-charge basis. At today, Sentinel 1-A/B, Sentinel 2-A and Sentinel 3-A satellites have been launched and related data are available[7].
- Contributing Missions data. There are around 30 existing or planned missions contributing to Copernicus. These include missions from ESA, their Member States, Eumetsat and other European and international third party mission operators. Even when all Sentinels are operational, the Contribution Missions will be available under a specific Copernicus licence scheme, as complementary data.
- In situ data: these are observation data from ground-, sea- or air-borne sensors as well as reference and ancillary data e.g. geological data, INSPIRE data; some in situ data are available on a full, open and free-of charge basis and some are licensed for Copernicus.
- Copernicus information products resulting by the processing or modelling of Copernicus data and other data sources. They are produced by the Copernicus Services.

Copernicus is a user-driven programme

Copernicus user uptake refers to both the intermediate users (downstream users) as the end-users. Intermediate users build upon the Copernicus data and information to deliver value-added information (services) to the end-users. Such value-added products can be created for e.g. by combining Copernicus data with other Earth Observation (EO) or non-EO data. Industry players (and in particular SMEs) are particularly encouraged to create and base their business plans on such services.

Copernicus users include Union institutions and bodies, European, national, regional or local authorities, research users like universities or any other research and education organisations, commercial and private users, charities, NGOs and international organisations.

A further distinction can be made between the non-technical experts (manager, decision maker) and the technical expert. The non-technical expert can look for a better comprehension of a challenge or issue by using information which has been enhanced by the technical expert who has processed and integrated/combined the Copernicus data and information in synergy with existing data/info into a more comprehensible output.

A Copernicus user may be either using direct satellite data (from the Copernicus Sentinels and contributing missions) or obtaining data/information/products from the existing Copernicus Services. Nevertheless, Copernicus Services users do not need to necessarily identify themselves only as users of a specific thematic service, e.g. Emergency Management Service user, but may also be users/integrators of all possible Copernicus data and information available across the different services (cross-cutting services).

[7] More information on http://copernicus.eu