The Results 2017/2018

Get a glimpse of the business ideas boosted
by the second edition of the Copernicus Accelerator

A programme of

Implemented by

Table of Contents

2018 Copernicus Accelerator Programme	03
Statistics	04
Success Stories 2016	08
Copernicus Accelerator Business Cases 2017	10
Mentors 2017	56
Mentees 2017	57

2018 Copernicus Accelerator Programme

After two very successful Accelerators in 2016 and 2017, the 2018 programme benefits from two main modifications. In previous years, participation in the Accelerator was reserved to the finalists of the Copernicus Masters and to the Commission Prizes. This year, two new entry gates have been opened: proposals through an open call and the 10 finalists of the Copernicus Hackathons. There is thus a broader variety of participants, which makes the programmes even more attractive. A total of 50 start-ups will benefit from this tailored business coaching for one year. The selected projects are of high technical quality and have high innovative potential, therefore many young starters require business and market support. The Accelerator fills this gap by offering those entities a unique opportunity to learn from the experiences of professional mentors from the relevant EO sectors. They also receive customised advice for the future development of their business or project.

The Accelerator thus contributes to the European Commission's often-declared objective: to make Europe the place to be for creating new markets, developing new applications and explaining the benefits of Copernicus data to citizens. Together with the other three Copernicus Start-up Programmes – the Copernicus Prizes, the Copernicus Hackathons and the Copernicus Incubation programme – the Copernicus Accelerator provides important incentives for the user uptake of Copernicus!

The European Commission thanks all participants in the 2018 Accelerator programme and welcomes everyone to the opening boot camp at Space Week in Marseille on 3 and 4 December 2018.

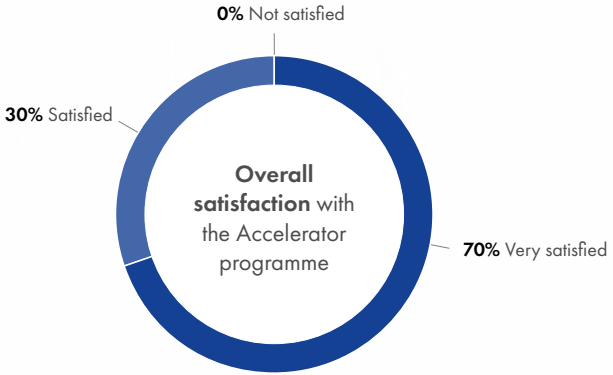
All the best for a successful market uptake for your great projects!

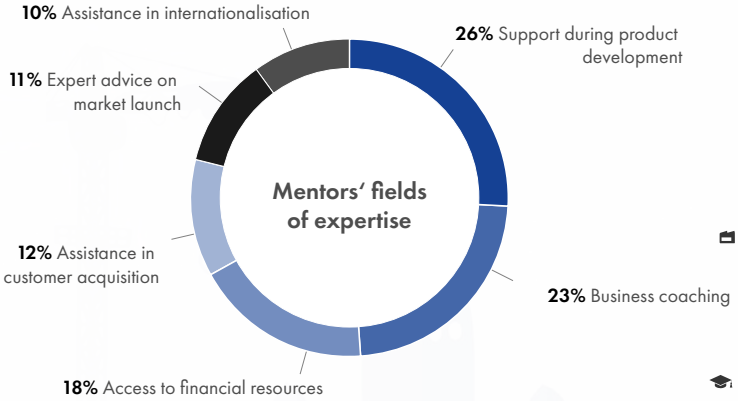
#CopernicusAccelerator

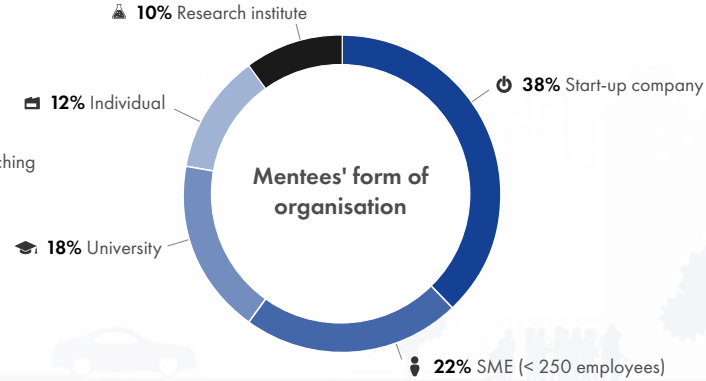
Copernicus accelerator

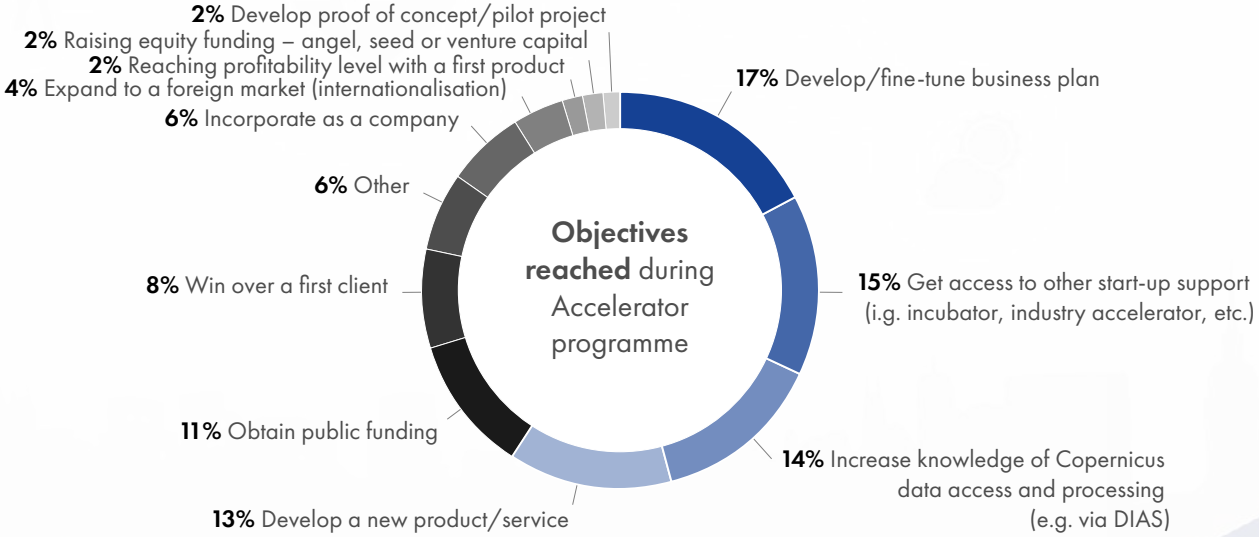
Statistics

The second edition of the Copernicus Accelerator was a remarkable success both in terms of participant satisfaction and the achieved results. All participating mentees were very satisfied with the programme and on average they achieved 71% of the objectives that they jointly defined with their mentors during the Accelerator Bootcamp 2017.



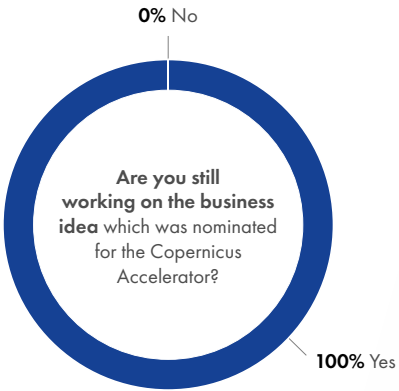


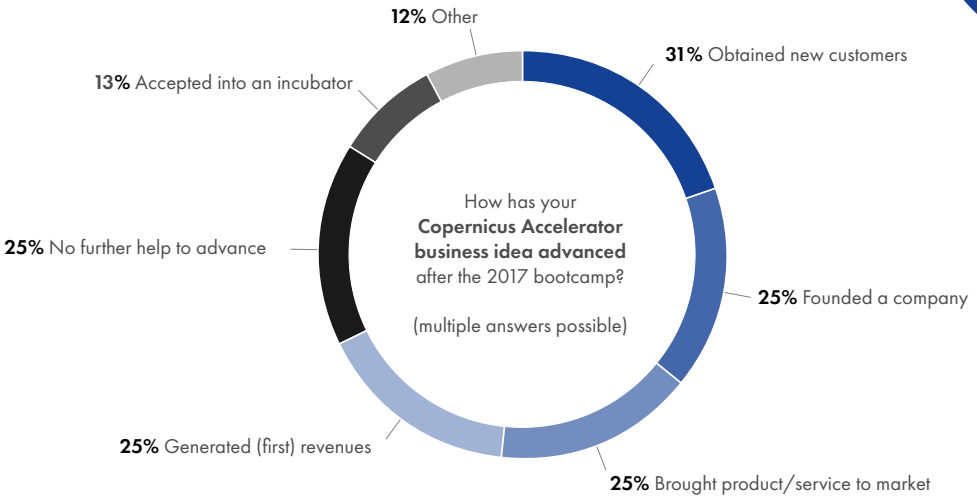


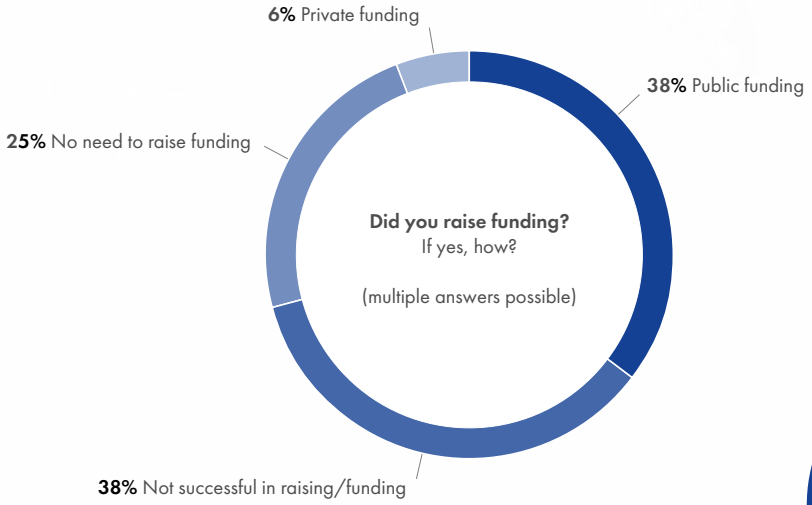

Objectives reached during Accelerator programme
17% Develop/fine-tune business plan
15% Get access to other start-up support (i.e. incubator, industry accelerator, etc.)
14% Increase knowledge of Copernicus data access and processing (e.g. via DIAS)
13% Develop a new product/service
11% Obtain public funding
8% Win over a first client
6% Other
6% Incorporate as a company
4% Expand to a foreign market (internationalisation)
2% Reaching profitability level with a first product
2% Raising equity funding – angel, seed or venture capital
2% Develop proof of concept/pilot project

Alumni statistics

All mentees of the first edition of the Copernicus Accelerator who have responded to a recent alumni survey are still working on the business ideas which have been supported by the programme and 75% stated that their business idea has further profited from the Accelerator even after the end of the programme.

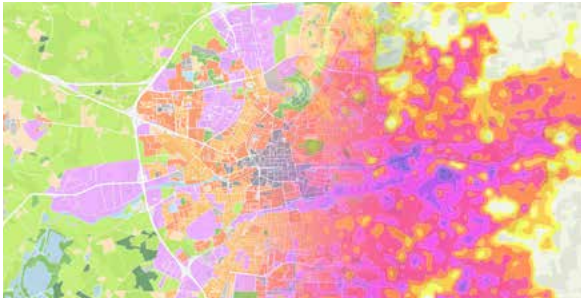





6% Private funding
38% Public funding
25% No need to raise funding
Did you raise funding?
If yes, how?
(multiple answers possible)
38% Not successful in raising/funding

94% Yes
Would you recommend the Copernicus Accelerator to other entrepreneurs or start-ups?
6% No

Success Stories 2016



KERMAP – An Innovative Way to Monitor Green Areas in Cities

Kermap is developing a niche service: the management of the sustainable city with a suite of services dedicated to urban planners. The aim is to establish diagnoses on adaptation to climate change, biodiversity, carbon storage, air pollution and, more generally, the comfort of city dwellers. Firstly, the start-up produces geographic information from satellite images. The company uses artificial intelligence (AI) to automatically extract land cover and generate analytics. Secondly, the team develops modelling and prediction services based on these analytics, especially biomass estimates and urban climate models. Thanks to the use of satellite imagery, Kermap's solution can be easily replicated in other cities across the globe and also respect homogeneous and objective specifications. The city of Rennes is one of Kermap's first customers, but Asia is interested in the start-up's services as well: in the city of Singapore, the company is currently developing a demonstrator and plans to further increase its activities internationally with a strong focus on Asia. The start-up's overall objective is to be viable beyond 5 years and to be able to successfully compete with the leaders in the Earth observation sector.

Mentee **Antoine Lefebvre, KERMAP**

*"**In less than 1 year, we have formed many partnerships.** We are supported by CNES and can benefit from several incubation programmes from Airbus Defence & Space and IGN as data providers. On the software side, we are working with ESRI and Dassault Systèmes to integrate our content."*

KERMAP linkedin.com/company/kermap

SOUL – Helping People by Forecasting Air Pollution

The air in European cities often does not comply with certain standards. Soul is a dynamic, open-source, environmental platform for geographical information that aggregates air quality data. The risk analysis and analytics it creates are useful for governance, insurance companies and other organisations, and end-users. It provides street-level spatial resolution and time forecasts based on satellite imagery, sensors in moving vehicles, and smart luminaires. These results, combined with machine learning and downscaling algorithms, help people avoid environmental health threats in cities.

Mentee **Pedro Jorge Caridade, SpaceLayer Technologies**

"Through the Copernicus Accelerator programme, ***we have transformed our technological idea into a business case.*** *The mentoring and webinars focused on business development have been key to the success of our project."*

Mentor **Pedro Branco, Virtual Angle BV**

"SpaceLayer Technologies's Soul delivers an innovative tool designed to detect air pollution. ***Its technology places the team among the leading companies looking for answers to this global health emergency.***"

spaceXlayer technologies www.spacelayertech.com

Business Case

ForestRadar – A New Weekly Forest Alert Service

How can you know that your forest property is still in place and has not sustained any damage? It is easy to tell with ForestRadar, a new forest security service that delivers the latest data from the sky. It guarantees high-quality weekly data updates regarding new clear-cuts, windfalls, and fire-burnt areas with proven detection accuracy of over 90%. Alerts regarding changes detected by the Copernicus Sentinel-2 satellites and the weather -independent Sentinel-1 are pushed by SMS, WhatsApp, or e-mail – or as a data stream that feeds into existing forest management systems. The application of EO data plays an important role in responding more effectively to changes and managing valuable forest resources that are designated for timber or pulp and paper production.

Mentee

Ilze Barga, Baltic Satellite Service, Ltd.

*"Copernicus Accelerator has provided professional mentoring to build the valuable business project ForestRadar, **which is capable of attracting modern forest owners**. The mentor shared our enthusiasm and coached us on shaping our business and technical approach."*

ForestRadar

Mentor

Alexander Kaptein, Airbus Defence and Space GmbH

*"Businesses like contractors and forest companies need actionable information that alerts them whenever their attention is required. **The ForestRadar service is bringing the power of Copernicus to the real business world** in a ready-to-use format involving push messages or data feeds into professional enterprise management systems."*

Business Case

Mysnowmaps – Integrating Copernicus Sentinel-2 Data for Worldwide Snow Mapping

MobyGIS has developed a new algorithm capable of tracking changes in snow in real-time at a large scale. Unlike other approaches, its snow model integrates multiple sources of data (from Copernicus satellite images to in-situ measurements and numerical weather predictions) to provide accurate and operative snow-monitoring services. The possible applications range from the large-scale monitoring of avalanche risks by public administrations to predictions of water inflow at hydroelectric power plants. The developers have also created a Mysnowmaps app to engage outdoor explorers in sharing snow measurements during their off-piste excursions.

Mentee

Matteo Dall'Amico, MobyGIS Srl

"Copernicus Accelerator has been a great opportunity, both in terms of visibility and networking. ***It enabled us to gain important insights into funding opportunities and technological innovations****. Furthermore, the mentorship has been a powerful means of improving our business model and making valuable connections."*

Mentor

Dimitris Matsakis, P.L.A.N. Ltd.

"While the role of snow in the hydrological balance is generally overlooked, the need for accurate predictions of inflow and discharge is crucial. ***MobyGIS has created a cutting-edge service for predicting water resources****. I am very proud to have provided active support to MobyGIS and I am sure their venture will scale up worldwide."*

Business Case

MyPlanetEarth – The Platform that Helps Communities to Plant Trees

With the MyPlanetEarth application (MyPEG) it is now possible for anyone to plant a tree and instantly add its location to the worldwide map of trees planted by a community supported by municipalities and various environmental NGOs. Tree growth is monitored using Copernicus Land Monitoring Service maps, and the areas with the best planters will be rewarded with high-resolution Sentinel-2 images. MyPEG is intended for people, communities, and corporations that want to make a serious commitment to social and environmental action.

Mentee

Damien Giolito, MyPlanetEarth.global

"Copernicus Accelerator and my mentor supported me in shaping what began as just an innovative idea into a real application with a defined business model. ***It has a great deal of potential to contribute to development and the environment****."*

Mentor

Marcello Maranesi

*"**MyPEG is an innovative application** that provides people with updated information regarding our environment, especially in relation to trees planted in our cities. People can monitor the evolution of an area and the trees they have supported or planted themselves. This enables them to visualise their contribution to our planet's health."*

Business Case

All4Elevation – Monitoring Road Quality from Earth and Space

All4Elevation is developing a predictive road maintenance tool which advises public and private road organisations when and where road segments need to be maintained. The system uses Sentinel-1 satellite imagery combined with smartphone and car data on the ground. This provides the developers with unique insights. The tool translates information about road wear into faster and more accurate predictions, which saves users time and money while improving road safety for the general public.

Mentee

Alexander Gunkel, All4Elevation

"Copernicus Accelerator has helped us really pivot towards presenting a useful and valuable proposition ***that has gotten major traction in the last six months****!"*

ALL4ELEVATION

Mentor

Dr Manfred Krischke, Cloudeo AG

"All4Elevation is built on excellent technical ideas and ***has proven to fulfil the needs of real customers****. Alex has received real industry interest in his approach. I am proud to be able to help him and his team as a sounding board and am happy to provide a bit of support as they learn more and strive for success."*

Business Case

Working Towards a Digital Earth by Removing Data Access Barriers

MEEO has been working for many years on removing barriers to data access. With the advent of the Copernicus Data and Information Access Services (DIAS) and the strong demand for improved traditional services for accessing geospatial data, its team has found great opportunities to put their consolidated experience to work.
EO data service prevents data duplication and enables fast, easy access to geospatial data to support time-series analysis by offering interoperable discovery, access, sub-setting, visualisation, and processing services. The tool has been adopted by private and public actors that deal with geospatial big data. In the marine domain, the CNR-ISMAR research community is saving around 70% of the time it previously required for data preparation.

Mentee

Simone Mantovani, MEEO – Meteorological and Environmental Earth Observation

"Being one of the most promising ideas submitted to the Copernicus Masters was not as exciting as it has been to see our EO data service become the success it is today. Powerful technology is nothing without a plan, and this is what Copernicus Accelerator does: ***it helps you raise your profile and build an effective promotion plan with the support of a strong mentor****."*

MEEO
Meteorological Environmental Earth Observation

Mentor

Fabrice Testa, Luxembourg Space Tech Angels

"Eodataservice is a ***truly remarkable and novel service*** *that enables scientists to query and analyse multiple petabyte-scale datasets spread over multiple data providers using a single query. This extraordinary big data platform facilitates fast and easy access to geospatial data to support time-series analysis."*

Business Case

ALMaS – An Automatic Landslide Mapping Service

Using the most recent Sentinel images, the Z_GIS team is developing a web service that contains image processing tools to automatically identify areas affected by landslides. The web service also allows for integration of external data to indicate potentially affected populations and infrastructure. Users get landslide information shortly after satellite images become available. National and regional authorities and infrastructure providers in mountainous regions can use this service for immediate response actions, the planning of repair and maintenance activities, and event documentation.

Mentee

Florian Albrecht, Daniel Hölbling, Elisabeth Weinke, Department of Geoinformatics – Z_GIS, University of Salzburg

"The Copernicus Masters competition and the Copernicus Accelerator programme were excellent opportunities for our team. It ***enabled us to elaborate on our idea in detail together*** *with our highly experienced and supportive mentor, Mario Hernandez. "*

Z_GIS

Mentor

Dr Mario Hernandez, International Society for Photogrammetry and Remote Sensing

"New trends in Earth observation data processing include automatic methods of processing big data. The application developed by these mentees combines this with free, easy access to Copernicus (Sentinel) data for evaluating areas affected by landslides. ***The mentees are very close to a commercial product****."*

Business Case

WARM-SAR – Water Resources Management in Semi-Arid Regions

The team behind Latitudo 40 have set up a new service for water resource management that exploits Sentinel-1 semi-arid regions (SAR) data. An innovative processing chain was implemented to provide customers with high-resolution surface water maps (including flood maps) at a regional and national scale. Users can thus focus their efforts on building applications that rely on such information instead of worrying about data processing. Governments, civil protection agencies, and insurance companies are making extensive use of satellite data for environmental monitoring and risk assessment and management. Latitudo 40 is designed to deliver state-of-the-art information from satellite data.

Mentee

Dr Donato Amitrano, Latitudo 40

*"Copernicus Accelerator was an exciting and fruitful experience that **provided Latitudo 40 with international contacts and high-level business mentorship**. Our mentor was fully committed to the project and personally established several business connections which have helped us expand our company's network."*

latitudo 40

Mentor

Lluc Diaz, Rhea on behalf of ESA

*"Latitudo 40 is proposing an innovative and user-friendly SAR-based solution to address any water management challenge. The unique platform under development allows easy use of SAR data and integrates into new or existing products. Mr Donato and his colleagues are a **highly energised and driven team with awesome technical skills**."*

Business Case

SandMap – Tangible Interactive Maps to Foster Earth Observation Awareness

SandMap is a tangible visualisation system that delivers colourful, interactive map projections on which users can freely shape sand patterns. The developers believe that childhood education needs to be inspiring and taken out of the classroom. 3D spatial and Earth observation (EO) data can assist this process. Furthermore, custom virtual-reality STEM (science, technology, engineering and mathematics) and geography lessons support the learning objectives of older users in areas such as spatial intelligence. SandMap also aids decision making and real-time scenario execution on a wider application scale.It is the first system to include all Copernicus EO data, which fosters spatial awareness among non-experts.

Mentee

Dr Panagiotis Partsinevelos, SenseLab space informatics Lab

*"The Copernicus Accelerator programme **provided us with business insights and a strategy on our way to establishing a concise company structure and gaining our first customer**. Our mentor delivered experienced guidance to augment our strengths and steer us towards business success."*

Mentor

Fabrice Testa, Luxembourg Space Tech Angels

"SandMap is a remarkable solution for visualising with geospatial information on 3D soil or sand formations based on real-time interactions. The product has great potential to penetrate a wide array of markets beyond school education, including in emergency management, hospitality and tourism, healthcare, and more."

Business Case

GeoRisk – Predict Flood Events

GeoRisk provides a disruptive service that delivers predictive models for flood risk assessment to insurance and reinsurance companies. These risk maps rely on innovative models based on a combination of deep-learning algorithms and the latest Copernicus Sentinel data. Customers benefit from reliable and regularly updated geospatial data. This enables them to identify and delimit areas which are (or may soon be) exposed to increasingly frequent flood events caused by climate change. By providing unprecedented predictive risk models, GeoRisk will save customers a significant amount of money while making their business processes more efficient.

Mentee

José Santos and Francesco Cataldi, GeoRisk

"Participating in Copernicus Accelerator gave our team the chance to take our project to a higher level thanks to the benefits of mentoring. Our mentor established relevant business connections and gave us valuable input which ***allowed us to reach our objectives and develop the project even further****."*

GeoRisk
Predict Before It Happens

Mentor

Inês Plácido, Science Park Graz

"GeoRisk is led by 2 strong-minded and capable entrepreneurs who are tackling a business opportunity in the fields of environmental hazards and insurance. I am very pleased to have supported GeoRisk in their business approach and believe ***the team has what it takes to be successful in the future****!"*

Business Case

LiveEO – Monitoring Large-Scale Infrastructure Grids

Monitoring infrastructure grids like railways, pipelines, and electricity lines consumes a big part of the maintenance budgets of affected companies due to the high cost of aerial and/or grounded observation. With a combination of Sentinel-1 and -2 data, commercial datasets, and machine-learning algorithms, LiveEO provides a cost-efficient solution companies can use to monitor their large-scale infrastructure grids. The system also increases the efficiency of infrastructure maintenance at every level, from managers to inspection teams. Since winning Copernicus Masters in 2017, LiveEO has grown to more than 10 employees, developed a paying customer base, and became part of the Copernicus Incubator.

Mentee

Daniel Seidel, LiveEO

*"Within the Copernicus Accelerator programme, we significantly expanded our connection to the Earth observation community and had help with other funding opportunities. Furthermore, we were guided through our pilot project with SAP. T**he programme prepared us for upcoming challenges, which is why we highly recommend it**. "*

LiveEO

Mentor

Hinnerk Gildhoff, SAP

*"LiveEO delivers answers in a way which is highly relevant to SAP. By combining satellite imagery with UAV data, their solution aligns perfectly with the goal of the brand-new SAP product HANA Spatial Services. **The success of an initial proof-of-concept with a customer has already shown the potential of these combined solutions**."*

Business Case

EO-Compass – Validating The Feasibility of EO Project Ideas

The challenge is that end users usually spend a lot of time evaluating data suitability for their applications because the volume of data is overwhelming. EO-Compass indicates the feasibility of an Earth observation (EO) project within just a few clicks. The project provides a new perspective on the Sentinel-2 satellite data archive by generating visual means of assessing global distribution, availability, and suitability. Furthermore, upcoming satellite acquisitions are paired with weather forecasts. EO-Compass will benefit academics, start-ups, and other project-oriented applications by aiding their difficult decisions on which data to use.

Mentee

Martin Sudmanns, Hannah Augustin, Department of Geoinformatics – Z_GIS, University of Salzburg

"The Copernicus Accelerator programme was useful in identifying our idea's potential and seizing the opportunities provided by the European space sector. Our mentor provided personal support, recommendations, and constructive comments that allowed us ***to tackle the tasks at hand in a more efficient and beneficial way****."*

Z_GIS

Mentor

Hinnerk Gildhoff, SAP

"EO-Compass is very useful in validating the feasibility of EO project ideas. With the help of derived information that is combined with coverage numbers and revisit statistics, EO projects become much easier to plan and set up. ***EO-Compass will help increase EO adoption and the success rate of related projects****."*

Business Case

Polisensio – Measurements, Data Collection & Visualisation of Urban Air Pollution

People inhale and exhale 20,000 times a day. By default, they assume the air they breathe is clean. According to the WHO, 92% of the world's population is exposed to dangerous air pollution. Polisensio is empowering the decision makers of (smart) cities and businesses to take action with outdoor air-quality data by installing environmental sensors on fleets of urban vehicles. Polisensio registers and sends the resulting data-sets to its servers, where data from Copernicus Sentinel-3 and Sentinel-5P (Level 2) is added. Analytics are performed and the results are displayed on the web platform as heat maps, forecasts, and simulations.

Mentee

Razvan-Gheorghe Suta, PoliSensio (former IntelFlows)

"We gained some solid benefits from Copernicus Accelerator. The best of them was probably the good relationship with our mentor, which ***resulted in him becoming part of the company's advisory board****."*

polisens.io

Mentor

Armengol Torres, Intelligent Consulting

"Fresh air represents a big concern for citizens and administrators who are responsible for taking care of public health in connection with local air pollution. ***This is the engine driving Polisensio's entre-preneurship*** *and efforts towards a practical environment-monitoring solution."*

Business Case

Copernicus Climate Forecasts for Optimising Crop Yields

Agricultural decisions are impacted by weather extremes, which in turn are exacerbated by climate change. Copernicus Climate Change Service data can help farmers make better decisions by delivering reliable weather trends up to 15 weeks in advance. WeatherLogistics will provide growers of fresh produce with field-level weather information to improve their crop models. Using the company's algorithm, more accurate long-range weather forecasts can reduce food waste, environmental damage, and input costs. Further, the system can ensure fresh produce supplies for supermarket shelves. Copernicus Accelerator helped WeatherLogistics obtain funding from the European Space Agency.

Mentee

Dr Christopher Nankervis, Weather Logistics Ltd.

"Copernicus Accelerator provided me with the opportunity ***to meet many other space start-ups, interact with experts during online webinars, and undergo training from high-quality business coaches*** *at the bootcamp hosted in Tallinn."*

Weather Logistics

Mentor

Matthew Edwards, ESA Business Incubation Centre UK

"WeatherLogistics has developed models that utilise Copernicus data to create more accurate long-term, field-level weather forecasts. These are crucial insights that enable agricultural growers to prepare adequately for weather extremes and reduce wastage – ***leading to a more efficient and secure food supply****!"*

Business Case

OptOSS AI – Detecting Imminent Dangers During Natural and Man-Made Disasters

Humans under stress make mistakes when overloaded with big data, which results in incidents during crisis management. OptOSS artificial intelligence (AI) helps detect imminent dangers presented by natural and man-made disasters. Due to the vast quantity of observational data, only small portions can be analysed at present. The team behind OptOSS has developed new capabilities on the OptOSS AI platform to process in-situ environmental data in combination with data provided through Copernicus data portals. The AI improves performance and effectiveness in localising and mapping extreme conditions. In this way, OptOSS will help emergency services with timely detection and assessments of emergency situations and enable the smart, prioritised allocation of resources to the most affected areas.

Mentee

Taras Matselyukh, OptOSS AI project, OPT/NET BV

"Copernicus Accelerator provided the OptOSS AI project with visibility and recognition in both our home country and the EU. Our mentor was engaging and helped us ***establish business connections which may lead to substantial business opportunities****. At this moment, our team is applying for the Den Haag emergency room pilot."*

Mentor

Victor Rijkaart, CGI

"OptOSS proved to be a worthy player in the Copernicus Accelerator programme. Taras and his team worked relentlessly on bringing their relevant proposition for an AI-enriched Copernicus data platform to the market. ***This has led to partnerships with world-class companies and great opportunities to conquer the world in the near future.****"*

Business Case

SatMetrics – Satellite Measurements of International Development

The idea behind SatMetrics is to use and process satellite data to help development projects in rural areas. The project addresses the challenge that lies in effectively monitoring the progress of large-scale rural development initiatives and evaluating related outcomes. This challenge is especially apparent in developing countries, where government institutions may benefit from its support. Pertinent satellite data from the Copernicus constellation is processed to evaluate each individual project based on certain heuristics. For irrigation and drainage facilities, past and current Normalised Density Vegetation Index and soil moisture indices for this area are used. Similarly, surface water area based on SAR readings is used for reservoir projects, and additional evaluation techniques can be developed.

Mentee

Parth Aggarwal, SatMetrics

"Although we have been unable to get off the ground so far, it has been a pleasure working with our mentor, Mr Teemu Tares, and having the generous ***support and guidance of Copernicus Accelerator****."*

satmetrics

Mentor

Teemu Tares, Envia Oy Ltd.

"The idea behind SatMetrics is to provide satellite measurements of international development projects. It was a pleasure to work within the Copernicus Accelerator initiative as a mentor while ***suggesting and setting scientific and/or commercial EO objectives*** *based on the Sentinel satellite constellation."*

Business Case

Skindex – Air Satellite Data for Skin Health

Skindex has been created by a team of data scientists from Randbee Consultants who share a passion for satellite data and a love of nature. Their mission is to protect the environment and our skin against the effects of the pollutants present in the air we breathe. The Skindex team has thus developed a skin ageing index tool. Using an indicator based on air quality and UV levels, it informs users about the risk of skin ageing and the potential damage they are exposed to every day. At the same time, it recommends the best protective measures to decrease the damaging effects on individuals and the environment in general. The Skindex app works globally and in real time.

Mentee

Juan Arévalo Torres, Randbee Consultants

*"Copernicus Accelerator is a great opportunity **to move our business idea forward** and **to connect with other entrepreneurs working in the field of Earth observation**."*

Randbee

Mentor

Maarten Laga, Flemish Acceleration Platform

*"Skindex takes advantage of the latest Earth observation data to provide citizens with relevant information on the effect of sunlight and pollution on the skin, as well as on the best options for protection. Equipped with a rare combination of technical skill, commercial insights, and a broader vision, the team behind Skindex **is determined to make it a reality**. "*

Business Case

Forest Sentinel – App-based, Near-Real-Time Deforestation Alerts

Deforestation is a threat to the world's forests. Global Forest Watch statistics show that in 2017, 78 football fields of forest were destroyed every minute. Timely interventions against illegal logging require rapid access to deforestation alerts. Forest Sentinel delivers alerts to users' mobile phones within 24 hours of Sentinel-2 image acquisition every five days. The alerts are also pushed to a big data analytics engine, where they can be accessed via a user-friendly dashboard. App users can upload photos, voice and text messages, and survey responses. The head office can see them on the dashboard and trigger appropriate responses to protect forests.

Mentee

Prof Heiko Balzter, University of Leicester

"Copernicus Accelerator provided great support on our path to commercialising Forest Sentinel. Our mentor was ***highly knowledgeable and opened our eyes to new ways of thinking about business opportunities****."*

Forest Sentinel

UNIVERSITY OF LEICESTER

Mentor

Tor Erland Fyksen, Atlas Gobi Sarl

"Already an attractive solution for detecting illegal logging, Forest Sentinel is highly innovative as a mobile app that integrates Earth observation, data analytics, and cloud computing. ***It has significant potential to succeed with its services.****"*

Business Case

FORTCAST – Solar Irradiance Forecasting Service

Fortcast offers a state-of-the-art tool based on deep learning that provides information on future solar irradiance. Its forecasts provide information on the values expected at a given location some hours in advance. In doing so, the Fortcast algorithm considers different atmospheric parameters obtained from the Copernicus Climate Service and satellite images that are automatically processed online in real time. As a result, potential users such as photovoltaic power plant developers and managers, battery integrators and owners, electricity traders, and even transmission system operators can focus their efforts on optimising the operation of their systems to maximise their revenues.

Mentee

Hector Beltran, Universitat Jaume I

"Taking part in Copernicus Accelerator has been a very fast-paced, intense, and exciting experience. The opportunity to profit from the webinars and the great support of our mentor has helped us ***turn our ideas into an initial viable product that we can now commercialise.****"*

Mentor

Meritxell Gimeno, Draco Systems

"It has been a pleasure accompanying these mentees during a year in which they have been building the basis for their future business. I believe they have the potential to make their ***project grow and reach the next level soon****. Boldly go!"*

Business Case

FSSCat – Federated Satellite Mission for Sea Ice and Soil Moisture Monitoring

Golbriak Space is a company located in Tallinn, Estonia. Its mission is to develop and implement services and enable technologies for distributed and federated satellite missions. This brings several advantages for the space industry by not only optimising data distribution, but also increasing overall mission performance and reducing operational costs. Golbriak Space's initial objective is to enhance the communication capabilities of small and micro-satellites by offering affordable optical terminals that can transmit data at 100 megabits per second. FSSCat is the first mission in which this technology will be validated.

Mentee

Simone Briatore, Golbriak Space OÜ

*"**Copernicus Accelerator has played a key role in our development.** Ivo has been a great mentor in the past few months in helping us integrate more into the Estonian industrial environment, finding the local specialists we need, and steering us away from the common mistakes young start-ups usually make."*

Mentor

Ivo Remmelg, ESTBAN

*"Golbriak Space has proven to be a very capable start-up with a great deal of upside. It has been a great experience to work with the founders of the company and **witness their remarkable success**."*

Business Case

AquaX – A Water Quality Monitoring Tool for the Marine Aquaculture Industry

Combining the use of the Sentinel-2 and -3 data, CMEMS, proprietary algorithms, in-situ ground-truth and theoretical models, ColomboSky is developing detailed risk maps of daily ocean water threats. The information is presented in an online portal, AquaX, which helps track water quality in marine aquaculture locations. AquaX is currently being used by companies in Italy, Spain, Chile, and Mauritius. The plan is to double its commercial coverage by next year. Aquaculture production managers can use the AquaX web platform to analyse water parameters and programme their daily routines accordingly to optimise their farming production.

Mentee

Simone Campara, ColomboSky

*"The Copernicus Accelerator programme came at **the right time to contribute to the first steps in commercialising** AquaX. The support of our mentor regarding the management and definition of the best business strategies enabled us to focus our energies in the right direction and avoid trivial errors."*

Mentor

Alain Arnaud, Mercator Ocean

"ColomboSky has the ability to put a spotlight on our oceans. With AquaX, the team has the potential to improve not only the marine aquaculture industry, but the whole maritime industry. This tool is capable of providing a detailed, actionable, and easy-to-use

*view of the oceans **that could become the standard in just a few years**."*

Business Case

Agrinav – A Variable-Rate Fertiliser Spreader

Agrinav is a project that is developing a variable-rate fertiliser spreader. With the world's population expected to increase to nine billion by 2050, food production will need to increase by up to 70%. Farmers often use excessive amounts of fertiliser, causing toxic algae overgrowth in rivers and other environmental harm. The market for precision fertilisation, meanwhile, is valued at USD 65 billion (source: Goldman Sachs). Agrinav's precision fertiliser spreader reduces fertiliser usage by up to 40%, thus decreasing costs and benefiting the environment. The project has received funding to bring its product to market in partnership with the Swedish company Vultus and the Agricultural University of Athens.

Mentee

Michael Castle, Adept Communications Systems Ltd.

"Copernicus Accelerator ***enabled us to get selected for a spot in the Oxford Innovation Space Incubator and obtain further public funding to develop our product****. Our mentor helped us structure our business proposal and gain that funding."*

AGRINAV

Mentor

Dr Stavri Nikolov, Digital Spaces Living Lab & Attentive Displays Ltd

*"****Agrinav has made significant progress****. The project's original idea was variable-rate irrigation, but following extensive market research, it pivoted to variable-rate fertiliser spreading. Having gained funding,* ***the realigned project is now moving ahead****."*

Business Case

Qirate – Location Intelligence APIs and Widgets for Travel and Real Estate

Studiomapp is developing Qirate, a location intelligence service that measures the liveability of a place for the travel and real estate market. Hotels, online travel agencies, and real estate agencies can now integrate official third-party information and ratings that describe the characteristics of a given property location in detail in order to promote it and increase their conversion rate. Qirate analyses Copernicus and very high-resolution satellite images using innovative deep-learning models to better understand the environment, land use, green areas, urban development, traffic, pollution, and noise.

Mentee

Leonardo Alberto Dal Zovo, Studiomapp

*"Thanks to our mentor and our participation in Copernicus Accelerator, we **gained useful insights and improved our market strategy**. The boot camp in Tallin during EU Space Week 2017 was also an amazing experience that **expanded our network and gave us a lot of visibility in the media and national newspapers**."*

Qirate

STUDIOMAPP
maps and apps for quality of life

Mentor

Luísa Bernardes, EMPIS

*"Being a mentor in the Copernicus Accelerator has been a fantastic experience and a great opportunity to work closely with innovative companies. The Qirate team is dynamic and has many ideas for developing this project. I had the chance to **share my knowledge regarding their market strategy and growth options**."*

Business Case

Saturnalia – Assessing Wine Quality from Earth and Space

Saturnalia is a service for forecasting the quality of fine wine through intensive monitoring of vineyards from both Earth and space. Knowledge of wine quality before bottling is a key factor wine investors and importers use to access the best prices and reduce investment uncertainty. This innovative approach unlocks the use of Copernicus Earth observation data in addition to ground measurements for forecasting wine quality prior to the publication of official reviews (which affect prices). Data collected on vineyards and their derivatives also holds benefits for other players in the wine industry, such as growers, sommeliers, and wine experts.

Mentee

Dr Daniele De Vecchi, Ticinum Aerospace

*"Copernicus Accelerator gave us **the chance to advertise our service and attract attention**. Our mentor helped us establish useful contacts."*

Mentor

Dr Paolo De Stefanis, DayOne Srl

*"There is a segment of the wine value chain that is always neglected even though it plays a key role in the global trade of wine: importers. **Saturnalia is unique in how it provides these users with predictions of wine quality**. I am sure that the next time I'm drinking a bottle of wine, I'll think about how Saturnalia has brought it there!"*

Business Case

HeraSpace – Technology for Smart, Sustainable Fishing

HeraSpace is an app that helps fishermen locate the most profitable and sustainable fishing grounds. As a consequence of decades of overfishing, fishermen today must sail longer distances than ever before, wasting petrol and resources. In combining Copernicus marine satellite data with actual fishing data, HeraSpace aims to considerably improve the selection of optimal fishing grounds and efficient fishing routes by dynamically predicting and updating fish distribution patterns. The system thus optimises operating budgets while reducing environmental impacts, which in turn supports healthy food production, income generation, employment, and sustainable fishing.

Mentee

Isaac Durá, HeraSpace Ltd.

"Copernicus Accelerator provided HeraSpace with appropriate visibility and helped improve our business network. Our mentor supported HeraSpace with key goals like getting accepted to the ESA Business Incubation Centre in Madrid and personally ***established some strategic connections that helped take our project to the next level.****"*

HERASPACE
Sustainable Fish Solutions

Mentor

Prof José Antonio Blanco, Excelenzia

"Copernicus Accelerator was an amazing experience that gave me the chance to interact with the EO data business network and support a disruptive, technologically advanced project such as HeraSpace. I am proud to see that ***HeraSpace has already gained recognition from ESA BIC Madrid and Copernicus Masters.****"*

Business Case

UVSAT – A Low-Cost CubeSat Constellation for Air Quality Measurements

UVSat's mission is to help address the global challenge of monitoring air quality and emissions. It delivers a unique dataset capable of adding value to air quality services across the world. To rapidly validate air quality models that inform air quality management and enable mitigation strategies, spectroscopy optimised for CubeSat platforms, tropospheric ozone, nitrogen dioxide, and aerosol optical depth (amongst other air quality indicators) will be retrieved and used. The project is building a constellation of CubeSats that will provide data to customers in near-real time to enhance new applications for megacities, the airline industry, harbours, and seafaring vessels.

Mentee

Alberto Garbayo, AVS Added Value Solutions UK Ltd.

*"The Copernicus Accelerator programme has helped us **advance our idea for a CubeSat constellation** to contribute to global air quality monitoring. Our mentor has given us helpful **guidance and feedback on our path forward**. Being part of the Accelerator programme has also helped us **raise the profile of our mission**."*

Mentor

Malcolm Macdonald, University of Strathclyde

*"The UVSat's concept is an exciting idea that could provide a wealth of new data for monitoring air quality and enhancing life around the world. The Copernicus Accelerator programme has really helped the team **focus on a clear path forward**. I look forward to seeing the project progress."*

Business Case

Earth10 – Consistent Surface Reflectance Mosaics at 10m from Merged Satellite Data

The Earth10 project exploits novel big-data processing frameworks and cutting-edge machine learning tools in order to merge Earth observation (EO) data for a vast variety of applications. In particular, the project is efficiently harmonising EO data and unleashing their value. Based on computer vision and machine learning algorithms, it efficiently addresses all the geometric and radiometric issues at hand and creates consistent surface reflectance mosaics at 10-metre spatial resolution from Sentinel-2, Landsat-8, and other data from missions contributing to Copernicus. Earth 10 exploits harmonised datasets and offers competitive, cutting-edge estimation services for precision agriculture and water quality monitoring.

Mentee

Athanasios Karmas, EOfarm

"Through fruitful collaboration with our mentor and frequent and effective meetings, ***we gained a better understanding of the business aspects of our technology and solution.*** *We now have a revised strategy and go-to-market plan, a strong and quite promising business plan, and a viable financial forecast."*

EOFARM

Mentor

Christophe Bodin, CBO Consulting

"EOFarm's Earth10 project is on its way to demonstrating its potential through different use cases in agriculture and water management. The team's efforts must now be focused ***on reaching out to investors to fuel the project's early growth potential with substantial capital****."*

Business Case

A Spatial Decision Support System to Promote Adoption of Precision Agriculture

Precision agriculture presents opportunities for European agriculture to gain competitive advantages and increase production to meet the needs of Europe's expanding population. The adoption of precision agriculture has been low until now due to cost and complexity barriers. To increase the use of precision agriculture by European farmers, a spatial decision support system has been developed that uses Copernicus Sentinel-2 data, crowdsourced data, mobile technology, and open geospatial data. This system enables users to overcome cost and complexity barriers and make better decisions through the use of open data and intuitive technologies.

Mentee

Marc Harrington, Precision Agriculture Applications

"Copernicus Accelerator brought valuable business focus and insights to this precision agriculture project. The mentoring and webinars ***helped develop a vision for the project, identify potential markets, and stay abreast of new developments in the European space industry****."*

Mentor

Inês Plácido, Science Park Graz

"It was once again very rewarding to introduce a motivated and talented tech entrepreneur to business thinking and ***take some first exploratory steps into the market****!"*

Business Case

Aquaculture Area Allocation and Management Based on Multi-Criteria Analysis

The BF_MCA tool enables customers to produce suitability maps for specific aquaculture typologies. Its main functions include mid-term forecasting of mussel growth and information for optimising husbandry practices, which reduces waste and costs. The tool is an advanced and smart combination of geospatial data derived from different sources with eco-physiological models, which makes it possible to relate biomass production to environmental parameters. From this starting point, the team has continued developing a service that targets the aquaculture industry and supports farmers in decision making. The service will be provided through the Rheticus Aquaculture platform in partnership with Planetek Italia.

Mentee

Dr Erika M.D. Porporato, Prof Roberto Pastres, Bluefarm Srl

*"Being part of Copernicus Accelerator was an exciting experience for Bluefarm and **had an important impact on the development of our project**. Our mentor, Sergio Samarelli from Planetek Italia, helped us address and clarify many business-related aspects that **resulted in actual opportunities**."*

BLUEFARM

Mentor

Dr Sergio Samarelli, Planetek Italia

*"Bluefarm is generating value in a specific niche market by bringing the benefits of Copernicus EO data to fish farmers and helping them make the right choices at the right time. It has been very stimulating to work with Bluefarm **on bringing their considerable scientific value to the market**."*

Business Case

HYperspectral BRIdge for Sentinels (HYBRIS Nanosatellite Mission)

The HYperspectral BRIdge for Sentinels (HYBRIS) mission is a project to create the first hyperspectral European EO nanosatellite capable of acquiring data on more than 200 visible (VIS) and nano infrared (NIR) spectral bands. Hyperspectral observations are highly valuable and support a great variety of applications because they allow for the detection of surface objects and accurate discrimination in case of similar spectral responses. The hyperspectral observations provided by Hybris are designed to be integrated with Sentinel-2 and Sentinel-3 data through an un-mixing approach, with the eventual aim of achieving an integrated product with improved spectral and spatial resolution.

Mentee

Alessandro Piro, Serco Italia

*"Being part of Copernicus Accelerator provided the Hybris project **with good visibility and support**. Our mentor was engaging and personally provided guidance with regard to business development and services useful in the creation of new applications."*

serco

Mentor

Dr Richard Hilton, Catapult

"HYBRIS offers exciting prospects for space technology development and a highly innovative opportunity to feed spectrally rich, yet affordable data into major international programmes. With a variety of business models being investigated for this concept,

***the team's approach is maximising their likelihood of success**."*

Business Case

EO-based Applications for Safe Maritime Navigation

Maritime transport is a major economic sector in the EU and a necessary component of international trade. This team aims to develop the necessary infrastructure that will facilitate vessel navigation in the area of ports. Datasets and services provided by the Copernicus initiative and other international programmes will be used to identify critical aspects related to ship routes, such as traffic levels, route structures, ships' geometric properties, physical port geography, and different environmental conditions that affect ship maneuvering (e.g. shallow areas). The outcome of this data processing will be used as an early warning system, thus increasing the overall level of safety.

Mentee

Eleni Krikigianni, Chrysovalantis Tsiakos, Harokopio University

"The Copernicus Accelerator programme helped us familiarise ourselves with the execution of such a demanding, challenging, and ambitious idea. ***The continuous interaction with our experienced mentor made us understand that: it does not matter how slowly you go, so long as you do not stop!"***

ΧΑΡΟΚΟΠΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ
HAROKOPIO UNIVERSITY

Mentor

Prof Thomas Blaschke, University of Salzburg

"The mentees started with the ambition to develop marine safety services partially based on the Copernicus Marine Environment Monitoring Service, beginning with harbour areas and surroundings. They are ***highly motivated to make ships and other vessels safer*** *– and are never daunted by any setbacks."*

Business Case

DroneSAR – Integrating Copernicus EMS Data with Affordable Drone Technology

The DroneSAR product enables affordable "off-the-shelf" drones with a range of rescue-specific functions, including live drone tracking and first-person video streaming from any location via the DroneSAR web-browser interface. The DroneSAR project is seeking to exploit the attributes of the Copernicus Emergency Management Service (EMS) to further develop scalable, configurable, and interactive geospatial map visualisations to support emergency management activities. These deliverables are directly aligned to the Copernicus EMS remit of providing timely and accurate geospatial information on a wide variety of natural and man-made disasters directly to end users.

Mentee

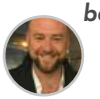
Oisin McGrath, DroneSAR – Search & Rescue

"Being part of Copernicus Accelerator ***was instrumental in ensuring that we can deliver effective and accurate geospatial satellite data*** *as an integral part of the DroneSAR service and for our business proposition: delivering the right information to the right people at the right time."*

DRONE SAR
SEARCH AND RESCUE

Mentor

Steve Lee, Astrosat



"For DroneSAR we got the furthest. ***On sales channels, we have now connected them with all our global disaster users. We are also looking at raising some development funding based on a full pricing structure****. It was a 100% success."*

Business Case

Spatio-Temporal Prediction System for Epidemiological Risk Factors

Data Lions has identified the need to build a system for quick detection and prediction of rare disease outbreaks in Europe. This system will aid networks of pharmaceutical stores in planning their drug supplies and optimising their ordering time and storage costs. It combines Earth observation (EO) data from Sentinel-2, Sentinel-3, and the Copernicus Land Monitoring Service with the latest machine-learning algorithms to predict future disease outbreaks. This new transformative approach creates operational efficiency all along the pharmaceutical supply chain while informing the public about the potential risk of disease.

Mentee

Anna Molińska, Data Lions

*"Copernicus Accelerator has provided us with an opportunity to discuss our initial idea and **bring it to maturity** with the help of our mentor's experience. Our idea has subsequently evolved, which has enabled us **to find additional business opportunities and diversify Data Lions' offerings**."*

DISEASE CONTROL TOOL

DATA LIONS

Mentor

Stephen Spittle, Catapult

*"Data Lions is an exciting, high-energy start-up with outstanding data-science expertise. **It demonstrates the power of combining satellite EO data with artificial intelligence (AI) to create rapidly scalable solutions across many sectors**, including the pharmaceutical and transport industry. I look forward to watching this company grow in strength."*

Business Case

BeeNebulaApp® – Precise Monitoring of Bee Activity

The BeeNebulaApp® application, a part of the NebulaSystem®, is designed to enhance knowledge of bee-keeping and apiculture. It uses satellite and meteorological data, supplemented by Sentinel series and the data from terrestrial and aerial sensors, to determine the times and locations of bee foraging. Approximately 11 million agricultural holdings in the EU can benefit from the app, as legal regulations prohibit spraying during bee activity. Thanks to the app, pesticides will be used more precisely to increase honey production, yield, and environmental quality. BeeNebulaApp® processes global data in a simple and accessible format for everyone to use.

Mentee

Mariusz Kacprzak, BeeNebulaApp

"Our team has benefited from Copernicus Accelerator and the collaboration with Mr Hilton in multiple aspects. Our mentor's professional knowledge and expertise has added great value to our business solution. During the coaching period, our team ***has focused on getting new funds and reaching out to potential investors and customers****."*

Mentor

Dr Richard Hilton, Catapult

"The BeeNebula concept uses a simple app to address one of today's most critical ecological issues: the preservation of pollinators to ensure biodiversity and the survival of wild and agricultural plant communities. It has been a pleasure to work with the team, and I'm sure ***that future success awaits them****."*

Business Case

Huli – Activity Route Planning

Imagine yourself on holiday in the Italian Alps. You have two hours of spare time before meeting friends for dinner and you really want to train for that 10k race you're running next month.
The problem is you don't know where to go as the area is new to you. Huli takes your preferences (start/end point, distance, max time, incline, etc) and generates matching routes. No more wasting time searching through maps, running down dead-end trails, or being late; just perfect routes every time. Huli can also be applied to road cycling, mountain biking, and hiking.
It is suitable for everyone who is interested in exercise and uses Copernicus data to display real-time route conditions.

Mentee

Dr Steve Owens, Dr Chris Lowe, Huli

*"Being part of the programme has given us **great press coverage** and access to a mentor who is on a very similar journey. Benedikt used his personal experiences to help **guide us through the early stages of start-up development**."*

huli

Mentor

Benedikt Seitz, evalu

*"Chris and Steve are building a technology that will not only be helpful to bikers, but will also be a powerful tool for many other industries and sports. Smart, personalised recommendations in route/adventure planning **are essential to the future of smart personal assistant systems**."*

Business Case

SentinelMap – An Open Mapping Platform for Copernicus Data

SentinelMap aims to build a mapping solution that allows users to access Earth observation (EO) data with ease. It plans to enable the integration of government and crowdsourced open data, user-defined information, and EO data to create web and mobile applications. In the next nine months, this vision will be developed further through the creation of an innovative map of accessibility and services for people with sensory and cognitive disabilities. This map will be part of the project "In..Forma", an initiative recently financed by public funds to promote quality tourism for people with disabilities in two major municipalities on the Adriatic coast.

Mentee

Carlo Palermo

"Experiencing the Copernicus Accelerator boot camp and collaborating with Sergio Samarelli throughout the acceleration period has been ***fundamental in defining a suitable business idea around the initial project****. For me, it also presented a unique opportunity for professional growth."*

Mentor

Sergio Samarelli, Planetek Italia

"Carlo Palermo has broad technical expertise that can be used to provide operative solutions. ***The definition of the exact mission of his company is still ongoing****. He is enhancing his ability to focus on an objective, and I am sure he will have an appealing solution ready in the short term."*

Business Case

Agricolus – A Remote-Sensing Component for Agricultural Management

Representing a complete solution for any agronomic need, the Agricolus platform offers decision support systems, forecast models, and smart pest and disease control tools in combination with remote sensing. It aims to provide farmers with a reliable and easy-to-read management tool. Based on Sentinel-2 satellite data, field monitoring, and other data, a prediction model will be built. In addition to using this model as a foundation for making data-driven predictions with its integrated machine-learning mechanism, Agricolus will be able to increase its accuracy and lower the quantity of data required year after year.

Mentee

Andrea Cruciani, Agricolus

*"Copernicus Accelerator has been a great opportunity, in particular in gaining knowledge of satellite data management (Sentinel-2). We met other companies and our mentor, Willem, has been a key figure: he has expert vision regarding software products and **helped us in defining business models and reviewing prices**."*

AGRICOLUS

Mentor

Willem Bulthuis, WBX Consulting

*"The Agricolus team has not only strong IT and satellite experience, but also in-depth agricultural expertise. Plus, they really understand their customers. Copernicus Accelerator helped the team **gain significant market traction** – and I probably learned just as much from the team as they did from me!"*

Business Case

THERMI – A 3D-Printed CubeSat for High-Resolution Temperature Data

At Fraunhofer EMI, the developers of Thermi are empowering CubeSats to provide temperature data from Earth's surface with unmatched spatial and temporal resolution. Together with their partners at OHB, the team's technology combines Copernicus data with CubeSat thermographic imagery to measure the precise temperature of buildings, city districts, plantations, and other locations. In the near future, clients will be able to use this data to monitor ships in marine protected areas, measure the energy efficiency of buildings in their cities, localise and mitigate urban heat islands, quantify water stress in crops, and detect (and even prevent) forest fires.

Mentee

Dr Max Gulde, Fraunhofer Institute

"Copernicus Accelerator helped us ***complement our initial focus (which was mainly technical) with a business perspective.*** *More importantly, we were introduced to the start-up community within the Earth observation ecosystem, which* ***enabled us to establish the business connections we needed to make our project a success****."*

Mentor

Peter A. Grognard, Von Karman Institute for Fluid Dynamics

"With Thermi, Dr Max Gulde and his team are providing novel, powerful insights into the world's most pressing challenge: global warming. Thermi is ideally suited to monitoring the world's hotspots, which are large urban areas. Copernicus Accelerator has enabled the team to ***identify serious investors in the space industry****. Thermi is hot!"*

Business Case

Copernicus Satellite Data for Machine Learning in Forestry

This team's idea is to use Copernicus satellite data as a basis for machine learning in the context of CollectiveCrunch's forestry solution. The objective is to predict moisture in stored logs to reduce transport costs and optimise supply chains. Moisture and the drying process are influenced in particular by wind and temperatures. A key aspect of satellite data is its scalability across regions, which eliminates the need to gather in-situ data for each country and geography. During this project CollectiveCrunch gained deep insights into the value remote sensing brings to the analytics of nature and climates. This helped shape its product development.

Mentee

Rolf Schmitz, CollectiveCrunch

*"Copernicus Accelerator provided us with **insights into adding satellite data to our business model.** Wolfgang Wagner's mentoring and recommendations **shortened our learning curve and got us from our idea to a commercial pilot within eight months.** This was also the foundation for our acceptance into the ESA BIC Finland programme."*

COLLECTIVE CRUNCH

Mentor

Prof Wolfgang Wagner, Technische Universität Wien

*"The CollectiveCrunch team brings together the right mix of expertise to make their enterprise a success. What distinguishes them from many other companies in remote sensing is their **strong customer orientation and financing expertise**, which will be key in translating their machine-learning expertise into a market-ready product."*

Business Case

POSEIDON – An AI Routing Solution for Maritime Navigation

Deep Blue Globe (DBG) has developed Poseidon, a solution that optimises ship routing to save time, fuel, and money. The system works on any kind of route, from regional to international journeys, while considering real-time maritime traffic and weather conditions. Any maritime fleet operator can use Poseidon to follow optimal routes using only existing infrastructure. The benefits of Poseidon include reductions in fuel consumption, CO2 and SOx emissions, and time requirements; automatic route optimisation and re-planning; increased safety, and support for maritime unmanned navigation systems.

Mentee

Mario Castro de Lera, Deep Blue Globe UG

*"**Copernicus Accelerator allowed DBG to consolidate its business plan, get a spot at the ESA Business Incubation Centre with additional funding from the Copernicus Incubator, and establish further negotiations with ESA to develop its products.** The programme also enabled DBG to build a network of companies focused on EO data."*

Deep Blue Globe

Mentor

Simon Drake, Space Ventures Investors

*"Working with DBG and getting insights into a vibrant ecosystem of the latest Copernicus data in use in the marine industry has been amazing. The team's goals, from algorithms that plot cou rses across the oceans to ship navigation based on deep learning, are disruptive forces **that hold many opportunities in other business fields.**"*

Business Case

DANTE – A Warning System for Rapidly Extinguishing Forest Fires

Dante is an early warning system which features advanced reporting and operational management methods that help rapidly extinguish forest fires. Compared to current methods, Dante provides a notification of the nature and location of a given fire source in less time, with higher accuracy, and at a lower cost. It accurately tracks the fire as it evolves and guides firefighting operations as a real-time navigator by merging in-situ and Copernicus datasets. Dante addresses a global market that represents over EUR 15 billion in potential business opportunities. The team behind it has won grant funding through the H2020 Programme and engaged administrations and end-users in operational pilot testing.

Mentee

Luis Crespo, Ad Telecom

"Copernicus Accelerator is an excellent framework for moving Dante forward. Edmond's mentorship has played an essential role ***in refining our business case, making it more attractive to clients and investors, and obtaining grant opportunities****."*

Mentor

Ed Boulle, Orbital Witness

*"****I'd certainly recommend Copernicus Accelerator to other would-be mentors****. Working with the team at Dante has been very rewarding. I've been able to share some of my own experiences and perspectives as an entrepreneur, but also learned a lot from my mentees in talking through their particular approach to each new challenge."*

Business Case

OpenMapTiles – Ready-to-Use Maps for Businesses

OctoGEO is collecting satellite data from various open-data providers and creating a single map layer. The core of its aerial map is based on imagery provided by ESA Sentinel-2 satellites. Maps from different open-data providers are collected, merged together, cleaned, and colour-balanced so that end users see no difference when zooming in or panning the map to different places. Companies and institutions can easily launch independent global map services powered by OctoGEO's software and geodata packages and integrate them into their websites and mobile apps. Maps are already being used by Siemens, IBM, Bosch, Amazon, Swiss Federal Railways, and others.

Mentee

Petr Pridal, OctoGEO s.r.o.

*"Copernicus Accelerator opened the door to **lots of achievements**. Our mentor supported us in **developing and fine-tuning our business plan, incorporating as a company, and finding our first client**. We also had the chance to participate in other start-up programmes, which helped **promote our brand on the international market**. "*

maptiler

Mentor

Jakub Nosek, Atwave Consulting

*"The MapTiler team brings excellent map products of the whole world to your desktop, tablet, or computer. Thanks to ESA, an almost year-long cooperation proved the value of business mentoring and knowledge transfer to the company. **It grew significantly, developed additional services, and made important business accomplishments**."*

Business Case

Sustainable Agricultural Production Using Earth Observation Services

The Speos project is designed to enable the sustainable intensification of modern agriculture and address increased pressure in food production. Considering the projected world population of 10 billion in 2050 and the relative inflexibility of policies and markets, a more local solution is needed. The team behind Speos has thus developed a digital toolset that integrates Earth observation (EO) services, crowdsourcing, and a social networking platform for citizen science to simultaneously measure agricultural production, environmental conditions, and socio-economic dynamics. Copernicus data was used to create a prototype service for farmers in Finland and Kenya.

Mentee

Andrew Rebeiro-Hargrave, University of Helsinki

*"Regular mentoring sessions **enabled new ideas to be fed into the project**. And thanks to the working environment created by Copernicus Accelerator, **the project developed smoothly**!"*

UNIVERSITY OF HELSINKI

Mentor

Simon Chambers, Axsysnav

*"Working with Andrew was a rewarding experience and it was great **to see this business idea develop into a prototype service for farmers in Scandinavia and Kenya**. The crowdsourcing function should enable local farmers to make use of local data and ensure that Copernicus will help food production increase in a sustainable manner."*

Business Case

Tethys – Saving Water

Tethys is a smart farming application designed to help farms and golf clubs optimise their water management. It captures Copernicus satellite images and combines thermic data with weather station data to provide accurate reports on the water demands of fields of crops. Tethys is an affordable and robust alternative to drone flight and ground sensors. Through Copernicus Masters the team became part of a broad and exciting Earth observation "ecosystem".

Mentee

Fabrizio Tenna, Centrale Valutativa Srl

"Participating in the Copernicus Accelerator programme ***provided us with constant external feedback on our project development****. Our mentor assisted us* ***refining our marketing strategies and branding****. This resulted in the creation of a brand and kept us on track."*

TETHYS Water Saver

centrale valutativa

Mentor

Dr Panagiotis Ilias, ILVO

"Tethys is a living lab that brings interdisciplinary experts together with ideas, expertise, and a passion for innovation. Working together with this team has been a great experience. ***In less than a year the concept materialised into a product that is ready to offer valuable smart services to the farmers****. Thanks, guys!"*

Business Case

Hello Earth – A Hyperspectral Satellite Constellation for Earth Observation

Currently, there are no up-to-date hyperspectral data sources for monitoring rapidly changing processes on Earth. The satellites involved in Hello Earth – which are equipped with novel, in-orbit, tuneable spectral imagers – are the smallest in the world with performance comparable to larger satellites. As part of a constellation, they can gather timely information with greater coverage than ever before. The data will benefit companies in many sectors (such as agriculture, energy, and insurance) and could also aid environmental monitoring. In addition, Hello Earth can contribute to Copernicus data by combining high-quality measurements from Sentinel satellites with high time-resolution images of specific locations on the ground.

Mentee

Tuomas Tikka, Reaktor Space Lab

"Being part of Copernicus Accelerator ***provided us with good feedback from experts in the field of Earth observation, which helped sharpen our vision in both the technical and business aspects*** *of providing hyperspectral data from our satellites."*

Reaktor Space Lab

Mentor

Steve Lee, Astrosat

"Our objective was to support business case planning for Hello Earth and to look at sales channels. We ***certainly have tentative routes to market and will continue to work with the team on data exploration on our platforms and with our customers****."*

Business Case

Augmented Reality Platform for Visualising Earth Observation Data

Cotheta is working on the theasi.io platform (from the Greek Θέαση: "enjoying the view"), which converts geospatial datasets into three-dimensional visual content for smart virtual reality (VR) and augmented reality (AR) glasses. The data is aggregated from Copernicus Sentinel missions and processed by the Copernicus data providers. Cotheta's vision involves layering EO data on top of physical environments and around the actual positions of end users in interactive, high-resolution 3D visualisations. The theas.io team wants to provide an innovative, enjoyable, and fully immersive Copernicus experience to both EO professionals and EU citizens.

Mentee

Alkiviadis Poulis, Cotheta

"Being part of Copernicus Accelerator from the beginning ***provided us with visibility and recognition for achieving our long-term business goals****. It also enhanced our product idea with real-world requirements,* ***enabled us to network with great teams, and put us in touch with potential clients at an early stage****."*

theasi.io
an enjoyable experience by cotheta

Mentor

Michael Zoelzer, No Tie Ventures GmbH

"The combination of augmented reality (AR) and Earth observation (EO) data leads to amazing visualisations of data in the real world. The ability to see where to lay a submarine cable based on satellite data on your smart glasses is a game-changer. I am really ***impressed by the results the Cotheta team has achieved****."*

Business Case

Eye-Over Health – Smart City Analysis Tool

Eye-Over Health is a smart city analysis tool which is designed to evaluate urban typography and highlight locations that could negatively impact the health of local residents. Factors such as access to green space, density of buildings, and air quality (all derived from Copernicus Sentinel data) have an impact on people's well-being. Understanding and highlighting areas that have a concentration of negative factors assists municipal authorities and other stake-holders in tackling these issues. This results in huge benefits to both social and physical health, which can make residents less susceptible to a multitude of negative and preventable conditions.

Mentee

Alan McLarney, Envisage Space Ltd.

"The help Envisage Space ***received from Copernicus Accelerator was invaluable****. Our mentor, Rüdiger Suess, became a de facto member of the team. Besides answering our questions, he challenged our assumptions and* ***helped us meet with clients****."*

Mentor

Ruediger Suess, mygroshn/DLR

"Envisage Space is looking for new approaches to improve people's living and working conditions and overall well-being using space-related data. With this tool, municipalities, infrastructure providers, and architects will have an instrument for making their offerings more human-centric."

Mentors

Alain Arnaud, Space business consultant
Luísa Bernardes, EMPIS
Prof José Antonio Blanco, EXCELENZIA/UPM Research Group
Prof Thomas Blaschke, University of Salzburg
Christophe Bodin, CBO Consulting
Ed Boulle, Orbital Witness
Willem Bulthuis, WBX Consulting
Simon Chambers, Axsysnav
Dr Paolo De Stefanis, Day One Srl
Lluc Diaz, Rhea on behalf of ESA
Simon Drake, Space Ventures Investors
Matthew Edwards, ESA BIC Harwell
Tor Erland Fyksen, Atlas Gobi Sarl
Hinnerk Gildhoff, SAP
Meritxell Gimeno, DRACO SYSTEMS
Peter A. Grognard, Von Karman Institute for Fluid Dynamics
Dr Mario Hernandez, International Society for Photogrammetry and Remote Sensing
Dr Richard Hilton, Catapult
Dr Panagiotis Ilias, ILVO
Alexander Kaptein, Airbus Defence and Space GmbH
Manfred Krischke, CloudEO AG
Maarten LAGA, Flemish Acceleration Platform
Steven Lee, Astrosat Ltd.
Malcolm Macdonald, University of Strathclyde
Marcello Maranesi, Individual
Dimitrios Matsakis, P.L.A.N. Ltd.
Dr Stavri Nikolov, Digital Spaces Living Lab & Attentive Displays Ltd.
Jakub Nosek, Atwave Consulting
Inês Plácido, Science Park Graz
Ivo Remmelg, ESTBAN
Victor Rijkaart, CGI
Dr Sergio Samarelli, Planetek Italia
Benedikt Seitz, evalu GmbH
Stephen Spittle, Catapult
Ruediger Suess, mygroshn/DLR
Teemu Tares, Envia Oy Ltd.
Fabrice Testa, Luxembourg Space Tech Angels
Armengol Torres, Intelligent Consulting
Prof Wolfgang Wagner, TU Wien
Michael Zoelzer, No Tie Ventures GmbH

Mentees

Parth Aggarwal, SatMetrics
Florian Albrecht, Dept. Geoinformatics – University of Salzburg
Dr Donato Amitrano, Latitudo 40
Hannah Augustin, Dept. Geoinformatics – University of Salzburg
Prof Heiko Balzter, University of Leicester
Ilze Barga, Baltic Satellite Service Ltd.
Hector Beltran, Universitat Jaume I
Simone Briatore, Golbriak Space OÜ
Simone Campara, ColomboSky
Michael Castle, Adept Communications Systems Ltd.
Mario Castro de Lera, Deep Blue Globe UG
Francesco Cataldi, GeoRisk
Luis Crespo, Ad Telecom
Andrea Cruciani, Agricolus
Leonardo Alberto Dal Zovo, Studiomapp
Matteo Dall'Amico, MobyGIS Srl
Dr Daniele De Vecchi, Ticinum Aerospace
Isaac Durá, Heraspace Ltd.
Alberto Garbayo, AVS Added Value Solutions UK Ltd.
Damien Giolito, MyPlanetEarth.global
Dr Max Gulde, Fraunhofer Institute
Alexander Gunkel, All4Elevation
Marc Harrington, Precision Agriculture Applications
Daniel Hölbling, Dept. Geoinformatics – University of Salzburg
Mariusz Kacprzak, BeeNebulaApp
Athanasios Karmas, EOfarm
Eleni Krikigianni, Harokopio University
Dr Chris Lowe, Huli
Simone Mantovani, Meteorological and Environmental Earth Observation
Taras Matselyukh, OptOSS AI project, OPT/NET BV
Oisin McGrath, DroneSAR – Search & Rescue
Alan McLarney, Envisage Space Ltd.
Anna Molińska, Data Lions
Dr Christopher Nankervis, Weather Logistics Ltd.
Dr Steve Owens, Huli
Carlo Palermo, Individual
Dr Panagiotis Partsinevelos, SenseLab space informatics Lab
Prof Roberto Pastres, Bluefarm Srl
Alessandro Piro, SERCO ITALIA SPA
Dr Erika M.D. Porporato, Bluefarm Srl
Alkiviadis Poulis, Cotheta
Petr Pridal, OctoGEO s.r.o.
Andrew Rebeiro-Hargrave, University of Helsinki
José Santos, GeoRisk
Rolf Schmitz, CollectiveCrunch
Daniel Seidel, LiveEO
Martin Sudmanns, Dept. Geoinformatics – University of Salzburg
Razvan-Gheorghe Suta, PoliSensio (former IntelFlows)
Fabrizio Tenna, Centrale Valutativa Srl
Tuomas Tikka, Reaktor Space Lab
Juan Arévalo Torres, Randbee Consultants
Chrysovalantis Tsiakos, Harokopio University
Elisabeth Weinke, Dept. Geoinformatics – University of Salzburg

Notes

Stay tuned!

Sign up for the
Copernicus Accelerator
newsletter at

www.accelerator.copernicus.eu
/#news

Copernicus accelerator

A programme of

Implemented by