



Creating Mobile Apps with Big Data from Space at the free Space App Camp 2017

Big data from space produced by the European Earth observation programme Copernicus and its fleet of Sentinel satellites provides crucial economic and ecological information to many industry sectors: From energy, transport, logistics, and construction to aeronautics, healthcare, and mobile communications. Additionally, an increasing number of mobile phone users challenge the mobile app business.

However, huge amounts of data from space offer countless opportunities in connection with mobile applications. In order to make Earth observation (EO) data accessible to a wide range of citizens, the European Space Agency's (ESA) Space App Camp each year assembles programmers from across Europe to exchange ideas with like-minded people and tackle some of the world's greatest challenges – with a special treat: ESA is taking over food & beverage, hotel and flight expenses.

Since its initiative's inception five years ago, around 400 developers from nearly 30 countries have applied to the Space App Camps, and more than 30 apps have been developed. A number of former participants are currently finalising their applications, have already transformed their ideas into operational services, or have founded a startup in order to bring their apps to market maturity.

Space App Camp winner Saturnalia turns into new business branch for Ticinum Aerospace

Saturnalia was the winner of the Space App Camp 2016. They demonstrated how Earth observation can play a foreground role in different fields. The beautiful landscape of the hosting venue (Frascati, Italy) inspired Saturnalia: A system designed to monitor vine growth from space and from ground, based on key parameters like temperature, soil moisture and vegetation status. Saturnalia uses a sophisticated model to predict wine quality before bottling, which gives participating investors and distributors, as well as wine experts, a time advantage over review-based wine pricing. Continuous tracking of critical parameters will also help vine growers in determining when to apply the necessary treatments.

“The ESA Space App Camp created the opportunity to get Earth observation (EO) experts, developers, and application experts, in the same place working on a common idea, something not frequently seen elsewhere: Meeting Luca Parmitano* was definitely the icing on the cake. We strongly advise young innovators to join the Space App Camp, meet fellow visionaries and start

developing their business ideas based on EO satellites.” explained Daniele De Vecchi, Managing Director, Saturnalia.

Moreover, the Saturnalia app benefits retail consumers by suggesting suitable wines based on their menu as they walk through wine shelves in a supermarket. After the App Camp, Daniele De Vecchi continued investing on the idea launched in Frascati. Ticinum Aerospace, a spin-off company from the University of Pavia, Italy, took Saturnalia onboard and supported its development. The idea was submitted to more initiatives and challenges, each time collecting and integrating feedback. Saturnalia is constantly improving.

ESA’s [Space App Camp](#) brings programmers together to develop creative and innovative apps. The objective is to make EO data, particularly from Copernicus, accessible to a wide range of businesses and citizens. To achieve this, the Space App Camp seeks to introduce app developers to Copernicus: Create awareness for the numerous possibilities EO data offers as a means of enriching mobile apps. In order to make satellite data accessible on smartphones, the Space App Camp each year brings programmers from across Europe to exchange ideas with like-minded people and tackle some of the world’s greatest challenges. Participants learn about the many ways in which big data from space can be used for mobile apps. Additionally, they will make contacts all over Europe, and gain insights into how ESA operates.

Join the Space App Camp and write your own chapter of the success story

For the sixth time, the European Space Agency is inviting 20 programmers to their ESRIN location in Frascati, Italy, including travel expenses and accommodation. Professional app developers from all over Europe are welcome to apply until 24 July 2017 at www.app-camp.eu.

*Luca Parmitano is an Italian engineer and astronaut in the European Astronaut Corps for the European Space Agency. The astronauts work on missions at the International Space Station. He was selected as an ESA astronaut in May 2009.