

## **CopHub.AC Citizen App - The Window to Copernicus Knowledge & Innovation**

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### **Abstract**

The Copernicus application and web service will provide information about the Copernicus Academy to interested people. 'All you need to know' about the Copernicus Ecosystem will be available on 'your' device anytime. The user will be able to see who the network partners are and what they can provide (gateway, knowledge landscape).

The focus of the CopHub.AC Citizen App is to spread information about Copernicus and the Copernicus Academy. Beyond this rather "dry" information, some playful and interactive ways are needed to gain the interest of the users. To this end, an interactive web map will show the broad public which information is freely available and therefore creates interest for the Copernicus services. Like Google Maps, different layers will be able to show the current state of the users surrounding environment, which is located by the persons device using GPS (Galileo). The information provided, will consist of different Copernicus Service information layers such as temperature, soil moisture, air quality, aso. The displayed layers are implemented as a WMS. For the first prototype, two layers of common interest will be implemented to show what the application can achieve.

The information layers are provided through the Copernicus Services ([www.copernicus.eu](http://www.copernicus.eu)) by using the fleet of Sentinel satellites, contributing missions, dedicated sensor-webs and in-situ observations. Europe and partly global-wide information consisting of surface, atmosphere, and marine parameters of e.g. water bodies (lakes and wide rivers), soil moisture or different land cover types (cropland, grassland, forest, built-up areas, transport network, etc.) can be shown to the interested users. These information layers shall attract interest to the Copernicus Services and the facility of the Copernicus Academy with the objective to stimulate awareness of free and open information available of the user's surroundings.

The users can communicate questions about layer information by indicating their position directly on the map. Copernicus Academy members of the dedicated thematic working groups will then answer these questions visible to everyone. As an easy alternative, a moderated forum could be used; however, this option would have the disadvantage of losing the explicit location of participants.

The CopHub.AC Citizen App is not targeting to a specific user segment - everyone who is interested in earth observations should be able to use the website and application. Although for design purpose, pupils and students in the age range of 15 to 25 years are presently used. The objective is to keep the website and application short, simple and entertaining. The focus will be state-of-the-art progressive web apps, which combine features offered by most modern browsers with the benefits of a mobile experience. Advantages of this approach are that only the website is coded and it will appear to the user as traditional applications or native mobile application for Android and iOS – thus there is no need to design web services for three different platforms.

There are many other possibilities that can be implemented with this application. For example a time sequence of each layer can be built up that demonstrates the changes of the different information layers. This will help to show the public different outlooks and the continuity of information services. Another idea is to use the information provided in those layers to calculate different scenarios using indicators. These raster calculations can be carried out for different circumstances, which will (1) bring more information to the users and (2) provide insights and understanding of earth related science.



**Figure 1.** Mockup of the future CopHub.AC Citizen Smartphone application