



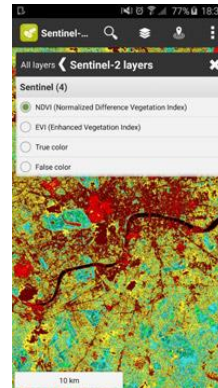
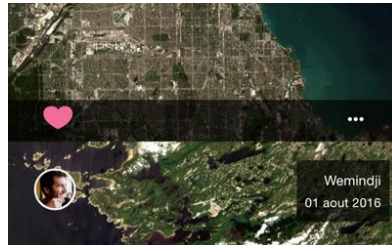
# Developing a mobile application with Copernicus

Copernicus for Entrepreneurs and Developers



# Mobile applications for citizens

- Copernicus often used in B2B
- Some companies have started offering B2C services, and provide citizens with information:
  - Wave – the city assistant (Subzero): air quality in the city
  - WeSenselt (University of Sheffield): flood monitoring
  - SnapPlanet: Social media network
  - Sentinel-2 NDVI Maps (Sinergise): vegetation monitoring





User  
Uptake

## Use case: Wave – the city assistant

- Navigating and real time information on air and water quality on your phone
- Available for Vienna
- Uses the following Copernicus data:
  - Water temperature
  - UV index
  - Ozone and pollen levels
- Natural language processing:
  - Where can I swim today?
  - What is the air quality today?



© subzero.eu software



User Uptake

# How Wave got started

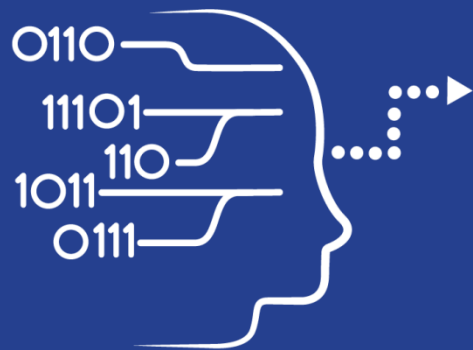
Copernicus for entrepreneurs



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# The entrepreneurial journey of Wave

- iOS developer of many apps
- Winner of the 2015 ESA App challenge
  - Receives a support package, which can include tech support, design, marketing, ...
  - Has chance to develop their idea further in one of the ESA Business Incubation Centers (BICs) in Europe



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# Demonstration

Copernicus for Developers





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## DEMO: INTRODUCTION

- Creating a web map or web app with open source and ESRI tools, and open Copernicus data
- Links:
  - QGIS: <http://qgis.org>
  - ESRI: <http://www.arcgis.com>
  - Copernicus Services:
    - CAMS: <http://atmosphere.Copernicus.eu> - <https://software.ecmwf.int/wiki/display/MACSUP/Accessing+public+CA+MS+WMS+products#space-menu-link-content>
    - CLMS: <http://land.Copernicus.eu>
    - CMEMS: <http://marine.Copernicus.eu>



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# Creating a web map with Open Source

The screenshot shows a web browser window displaying the Copernicus Emergency Management Service - Mapping page for EMSR045: Floods in Czech Republic. The page features the European Commission and Copernicus logos, a navigation menu, and a sidebar with categories like EMS - MAPPING, RAPID MAPPING, and RISK AND RECOVERY. The main content area provides details about the flood event, including event time, activation time, reference maps, and affected countries. A map of the Czech Republic is shown, highlighting the affected area. The page also includes a filter by map type and product section.

**COPERNICUS**  
Emergency Management Service - Mapping

Home » »  
Home | What is Copernicus | EMS - Mapping | EMS - Early Warning System | News

LATEST NEWS - 2017-12-06 | [EMSN046] Detailed flood delineation in Hildesheim, Germany

**EMS - MAPPING**

- Service Overview
- Who can use the service
- How to use the service
- Products: Rapid Mapping
- Products: Risk and Recovery
- Quality control / Feedback
- User Guide

**RAPID MAPPING**

- List of Activations
- Map of Activations
- GeoRSS Feed

**RISK AND RECOVERY**

- List of Activations
- Map of Activations
- GeoRSS Feed

**OTHER**

- Map of Activations of Other Organizations

**EMSR045: Floods in Czech Republic**

**Event Time (UTC):** 2013-06-03 10:00  
**Event Time (LOC):** 2013-06-03 12:00  
**Event Type:** Flood  
**Activation Time (UTC):** 2013-06-05 13:50  
**Reference maps produced:** 12  
**Delineation maps produced:** 18  
**Grading maps produced:** 0  
**Activation Status:** Closed  
**Affected Countries/Territories:**  
Czech Republic  
**Area Descriptor:** City Prague, Central Bohemia region, Ustecky region  
**Authorized User:**  
Czech Republic|Ministry of Interior - General Directorate of the Fire Rescue Service of the Czech Republic  
**Activation Reason:**  
Heavy rains in central and western Europe have been causing floods on major rivers.  
**Requested Product:** Pre event reference maps and post event flood extent and grading maps

**Filter by map type:** **ALL** · DELINEATION · REFERENCE

**Filter by product:** **ALL** · Brandys [05] · Kralupy [04] · Lovosice [01] · Melnik [03] · Praha [06] · Steti [02]

Coverage map: GeoRSS:





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# Online apps with commercial software

Building Height 2012

Global Pan-European Local Reference data

You are here: Home / Local / Urban Atlas / Building Height 2012

Map View Metadata Download

Kaartlagen Legend Web services

Print

User corner

- Contract opportunities
- EAGLE
- Use Cases
- Publications
- Technical library
- Looking for national products?

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# Online apps with commercial software

