



# GOOD HEALTH & WELL-BEING

## SUSTAINABLE DEVELOPMENT GOAL

3



The European Union is committed to implement the 2030 Agenda for sustainable development, both in its internal and external policies. Discover how the European satellite navigation and Earth Observation systems can contribute and support each SDG. EU space services and applications are benefiting the lives of people worldwide on a daily basis and can positively contribute to their well-being. EU Space data can help take the pulse of the Earth and support adaptation and mitigating actions. Complementing national governments in their efforts to improve and protect human health, Europe's space technologies account for monitoring and tracking of diseases, what can be instrumental for prevention activities, the reduction of child mortality and protection of people. The same applies for environmental conditions related to global health, the monitoring of our planet Earth and its protection.

### SMART HEALTH APPS

Data from EU Space Programme are key for the development of smart health services. Nowadays used in combination with in situ data or with other technologies such as 5G, Internet of things, Artificial Intelligence, for any physical device that can become a connected device, Copernicus and Galileo enable new applications to facilitate the end user's day-to-day life.

- To mention but a few examples, there are numerous **consumer apps for checking daily sport and fitness activity and performance levels**, encouraging a healthy lifestyle. There are apps used for patients monitoring like for instance for **localizing patients with Alzheimer's, to oversee patients with cardiac conditions and help with issuing emergency call warnings** if needed, or apps used for guidance to support for instance the visually impaired.

### MAKING HEALTH INFRASTRUCTURE RESILIENT AND RESPONSIVE

Space data support the infrastructure necessary to access telemedicine and disaster medicine for remote medical support in remote areas or in cases when the IT-infrastructure is broken. Copernicus helps identifying areas prone to the emergence and spread of epidemics by looking at the environmental factors that can contribute to the spread of certain diseases.

- By **locating hotspots and monitoring disease patterns** authorities are able to take eradicating measures and control the disease.

Galileo satellites support the management of epidemics in cases involving natural or human-made disasters providing data for early warning and for tracking and visualizing the real-time evolution.



## IMPROVING AIR QUALITY

Air pollution is a major environmental health problem affecting us and in particular people living in urban areas.

- Whether travelling by plane, train, boat or car, EU Space data are there to **make transport greener and safer**. Galileo and Copernicus can identify traffic jams, reduce travelling time and optimize travelling routes.

The Copernicus Atmosphere Monitoring Service **provides daily air quality forecasts at global scale** that are used by public and private entities to reduce exposure to pollutants and improve citizens health.

**Copernicus air quality information is used in many mainstream information channels** such as Apple's 'Weather' app, The Weather Channel website and Euronews.

- Copernicus data are used by apps and services to inform people with allergies about the forecasted concentration of pollen expected in the air of their city.
- TOPAS is a web application that provides up-to-date information on the places of origin of particulate matter in over 200 European cities
- VITO ATMOSYS-CAMS is an air quality toolbox designed to deliver policy oriented information on air quality both in terms of forecasts, assessments and evaluation of air quality plan
- Windy is a weather visualisation service that provides daily weather forecasts of various weather elements to more than 1 million users

## SAVING MORE LIVES

eCall devices using data from Galileo and EGNOS are now fitted in all new car types sold in the European Union to speed up emergency response times in case of a road accident. eCall is connecting the passengers of the car involved in an accident to the nearest emergency centre while also communicating their exact location.

- It is estimated that **eCall, in its first 10 years of operation, will save more than 2000 lives in Europe**, avoid almost 20,000 severe injuries and significantly reduce the severity of injuries in 15% of all accidents involving damage to health.
- The Copernicus Emergency Management Service **delivers warnings and risk assessments of floods and forest fires**, providing information that can help saves lives by better responding to natural and man-made disasters.
- The Copernicus Emergency Management Service is the only existing emergency response service rapidly **supplying satellite data to disaster responders** and humanitarian actors worldwide.
- Civil authorities all over the world use Copernicus Early Warning and Mapping systems to ensure the protection of lives.

## ABOUT EU SPACE PROGRAMME

Space applications play key roles in our daily life activities. The EU space programme enables solutions to tackle global challenges such as sustainability and climate change, safety and security, emergencies and mobility. The EU's flagship space programmes foster innovative services that meet the needs of users worldwide.

**COPERNICUS** is the EU's Earth Observation system: free, full and open access satellite data used to provide services in six areas: land monitoring, marine environment monitoring, atmosphere monitoring, climate change, emergency management and security.

**GALILEO** is the EU's global navigation satellite system, providing accurate positioning and reliable timing information. Galileo services are widely used by people and businesses, for example in transport, agriculture, health, finance and energy networks, search and rescue and emergency response.

**EGNOS** is the EU's regional navigation system. EGNOS services are used in safety-critical applications in aviation, maritime and land-based uses in most of Europe.

3



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PROGRAMME OF  
THE EUROPEAN UNION



#EUSpace #CopernicusEU #UseGalileo #EGNOS