

Linking space to user needs

Unlocking opportunities for healthcare insurance companies

11 March 2025



Agenda

- 1** Welcome to the webinar

- 2** Introduction to EUSPA

- 3** Introduction to Copernicus

- 4** New opportunities for healthcare insurance

- 5** Example by RSQ Technologies

- 6** Q&A

- 7** Closing

Agenda

- 1 Welcome to the webinar**
- 2 Introduction to EUSPA
- 3 Introduction to Copernicus
- 4 New opportunities for healthcare insurance
- 5 Example by RSQ Technologies
- 6 Q&A
- 7 Closing

To ensure a smooth and engaging webinar experience for all participants, please...



mute your microphone when not speaking to minimise background noise



use the chat function to submit questions during the presentations.
Our speakers will address them during the Q&A section



feel free to unmute yourself during the Q&A to ask questions directly

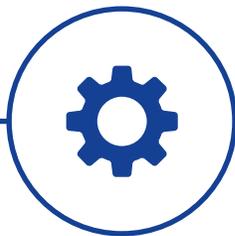
We will send the slides to all participants after the webinar.

We encourage you to review them if you'd like to explore the topics further

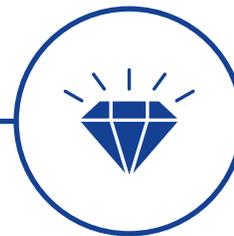
What will we look at throughout this session?



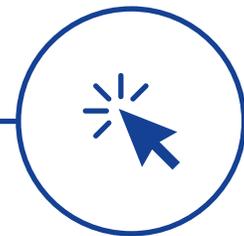
What is the Copernicus programme?



How can Copernicus data be used in healthcare insurance?



What value does Copernicus add to healthcare insurers?



How can I access & utilise Copernicus' free data?

Agenda

- 1 Welcome to the webinar
- 2 Introduction to EUSPA**
- 3 Introduction to Copernicus
- 4 New opportunities for healthcare insurance
- 5 Example by RSQ Technologies
- 6 Q&A
- 7 Closing

EUSPA promotes and maximises the use of data and services offered by EU space programme



EGNOS

EGNOS “Makes navigation signals more accurate and trustable for Safety-critical applications”

Operational in **400+ airports** & helipads in 23 countries



Galileo

Global satellite navigation and positioning system (GNSS)

More than **3 billion Galileo receivers** worldwide



Copernicus

Earth Observation (EO) and monitoring based on satellite & non-space data

Nr.1 world provider of space data and information (>20TB/day)



GOVSATCOM

Secure satellite communications for EU governmental actors

Rapid support over crisis areas



Space Surveillance and Tracking (SST)

Space Situational Awareness (SSA)

Collision Avoidance

Re-entry analysis

Fragmentation Analysis



Others

IRIS²

Research & Innovation

Entrepreneurship

Market Intelligence & Monitoring

Capacity Building

EUSPA is active on the health market



Agenda

- 1 Welcome to the webinar

- 2 Introduction to EUSPA

- 3 Introduction to Copernicus**

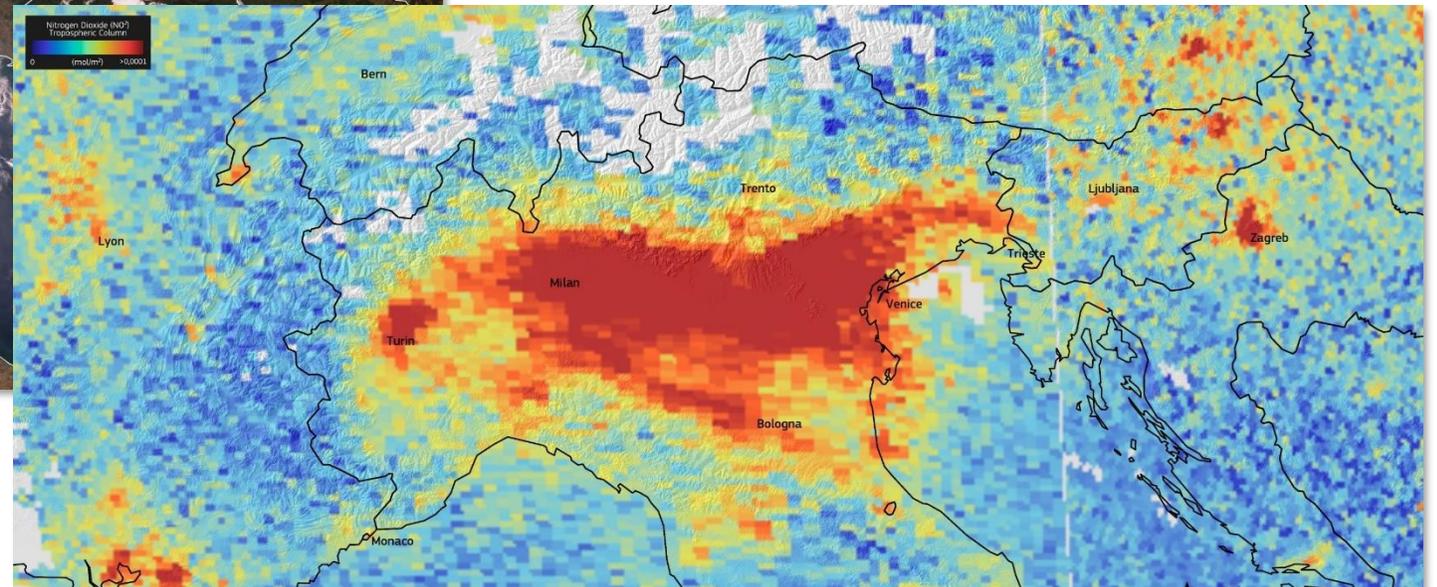
- 4 New opportunities for healthcare insurance

- 5 Example by RSQ Technologies

- 6 Q&A

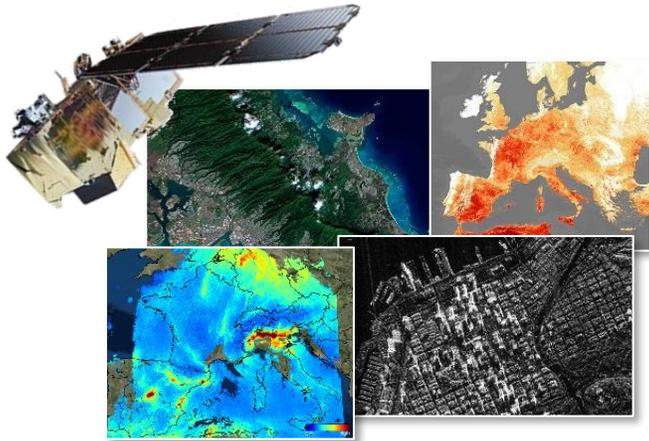
- 7 Closing

Copernicus, the EU Earth observation programme, is the largest space data provider in the world, offering free-of-charge data & analysis about our environment and climate



Degradation of northern Italy's air quality in October 2022

Copernicus offers state-of-the-art Earth Observation data

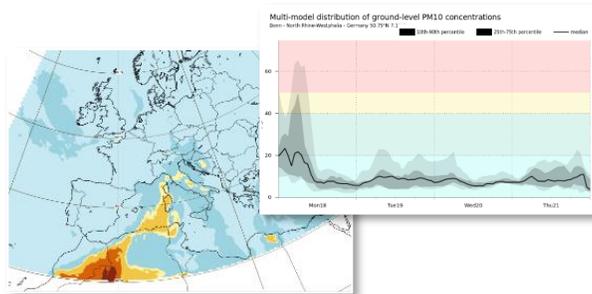
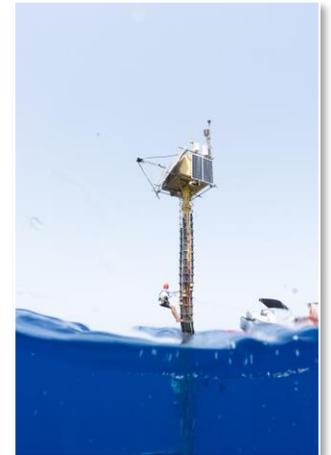


Satellite imagery

optical, SAR, and thermal sensors

In-situ data

from ground-based, air & sea borne monitoring systems



Analysis ready information

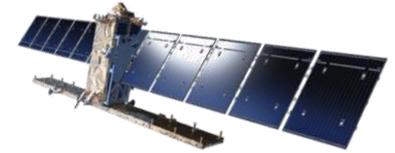
on land, atmosphere, climate, marine environment, emergency management & security



Agenda

- 1 Welcome to the webinar
- 2 Introduction to EUSPA
- 3 Introduction to Copernicus
- 4 New opportunities for healthcare insurance**
- 5 Example by RSQ Technologies
- 6 Q&A
- 7 Closing

Copernicus helps healthcare insurers to stay competitive



Key market trends in healthcare insurance



Growing impact of **climate change** on health risks



Increasing demand for **data-driven risk assessment**



Rise of **preventive & personalised** healthcare models



Digital transformation, e.g., use of **AI & customer / patient apps**

Key healthcare insurance needs

- Cost reduction
- Differentiation of services
- Enhanced customer experience
- Accurate global data

Copernicus empowers healthcare insurance to stay on top of these trends with data & insights

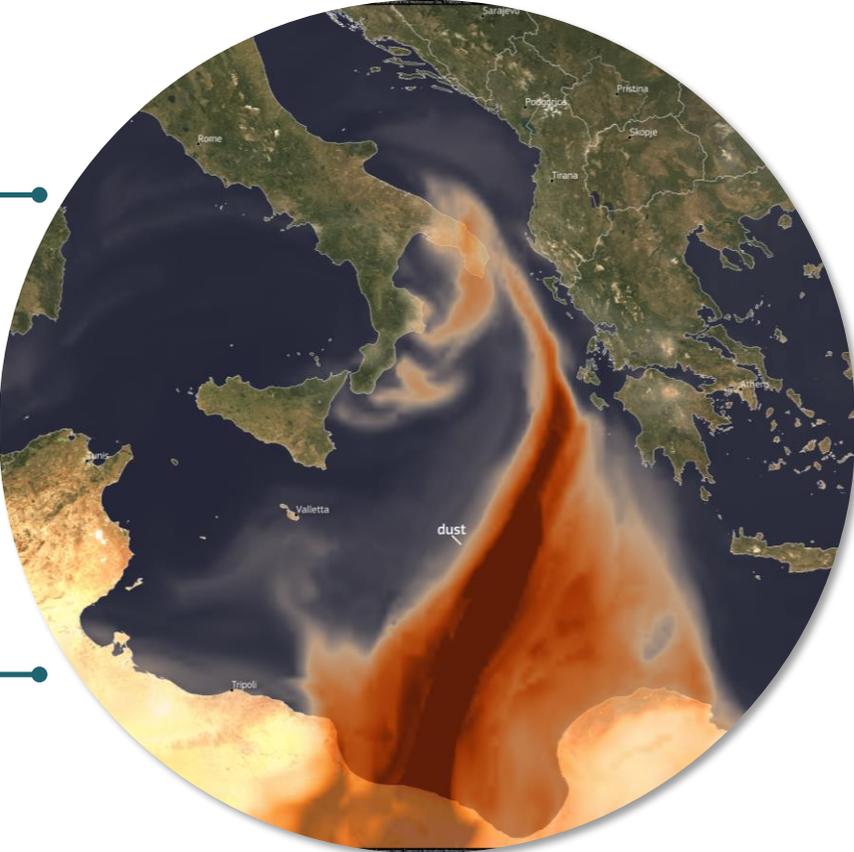
Past, present & future, global & regional datasets:

- **Air quality** (e.g., pollution, NO₂, O₃, CO₂, humidity)
- **Heatwaves** & temperature extremes
- **UV** radiation levels
- **Floodings & extreme weather** monitoring
- **Forest fires** & emissions
- **Natural disaster monitoring** (e.g., landslides, earthquakes)

Copernicus enables health insurers to strengthen risk assessment, improve prevention & deliver more personalised solutions

Example use cases

- 1 Predicting health risks for improved service offering
- 2 Individual risk analysis for personalised premiums
- 3 Preventive health programmes
- 4 Patient triage support



Saharan dust transported over the Mediterranean Sea 04.02.2025

1 Predicting health risks for improved service offering

Context & problem

- **Healthcare insurers are shifting towards proactive, data-driven** risk mitigation strategies to reduce long-term costs
- **Climate change is intensifying environmental stressors**, e.g., heatwaves, air pollution, and vector-borne disease outbreaks, leading to a rise in medical complications, and a **shift in geographic distribution of diseases**



How space data can help

Historical, current & future data on environmental factors as air pollution, temperature and humidity support predictive modelling for both incommunicable diseases (e.g., lung cancer) and vector borne diseases (e.g., malaria)

Impact for health insurance companies

Early risk identification



Better estimation of necessary services for specific regions, resulting in **cost savings & minimising unexpected expenses**



Example: vector-borne disease tracking by VECMAP

2 Individual risk analysis for personalised premiums

Context & problem

- Traditional health insurance models often rely on broad demographic data and historical claims patterns to set premiums, **which usually does not account for individual risk factors**
- Insurance markets are shifting from standardised premiums to **individualised pricing models**, in order to offer improved and more cost-efficient services, **but they fail to incorporate individual environmental risks**



How space data can help

Historical data on **environmental conditions that influence health, such as air pollution and heatwaves** helps assess long-term individual exposure to harmful conditions, leading to more precise, data-driven personalised premiums

Impact for health insurance companies

More accurate assessment of individual risks



- **Cost optimisation for insurers**, due to more accurate assessment of future risks of its customers
- **Personalised premiums improve coverage for users**, enhancing client satisfaction



*Example:
Bathing Water
Monitoring by
EOMAP*

3 Preventive health programmes

Context & problem

- Preventive healthcare is becoming a priority to reduce long-term medical costs and improve population health
- Insurers are increasingly rewarding policyholders for healthy behaviours, such as exercise, diet, and wellness habits



How space data can help

Copernicus data can support personalised health recommendations. EO data helps insurers design location-based incentives, rewarding policyholders for living in healthier environments.

Impact for health insurance companies

More accurate assessment of individual risks

- Reduces healthcare claims by encouraging preventive behaviours and early interventions
- Improves customer loyalty by offering value-added services like personalised health alerts



Example: digital medical device for solar protection by SiHealth

4 Patient triage support

Context & problem

- **Environmental factors** like air pollution, heatwaves, and disease outbreaks **significantly influence hospital admission rates**
- **Overcrowded emergency rooms** and rising healthcare costs are driving demand for **better triage and remote health solutions**
- **Telemedicine and AI-driven symptom checkers** are becoming essential tools for healthcare insurers and providers



How space data can help

EO data can inform environmental risks affecting patient symptoms (e.g., pollution-triggered asthma), and **support AI-driven triage models** (prioritising sensitive patients) **by adding contextual health risk factors.**

For telemedicine, environmental data can help determine whether symptoms require self-care or hospital visits. Additionally, it can **aid resource allocation and emergency planning.**

Impact for health insurance companies

Improved assessment of health risks

- Reduces unnecessary hospital visits and emergency claims, **lowering costs**
- **Enhances health services and outcomes** by prioritising sensitive patients
- **Improves customer satisfaction** by offering smarter, more responsive health services



Example: air pollution, pollen, temperature forecasts by Brezometer

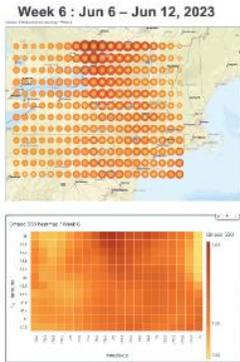
EUSPA is developing demonstrators of Copernicus data in partnership with renowned companies

Exemplary

Pollution data combined with Patient's Digital Inhaler data



teva

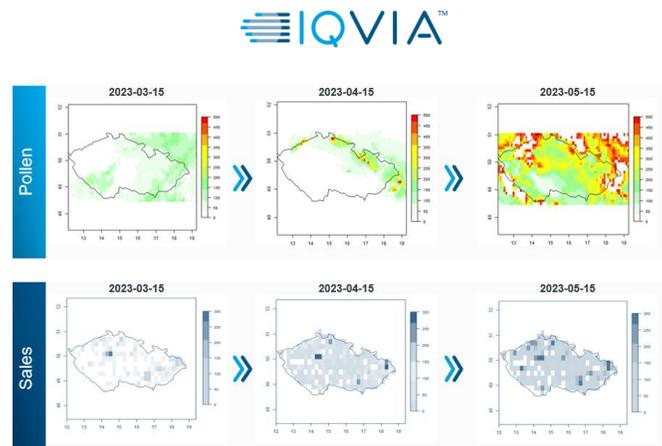


OMAO (Organic Matter Aerosol Optical Depth) + AQI data + Patients' Digital inhaler data

Potential to **improve asthma medicine dosage**

Copernicus services supports Global Pharmaceuticals | EU Agency for the Space Programme (europa.eu) Sept 2023

Pollen data combined with sales of anti-allergy drugs

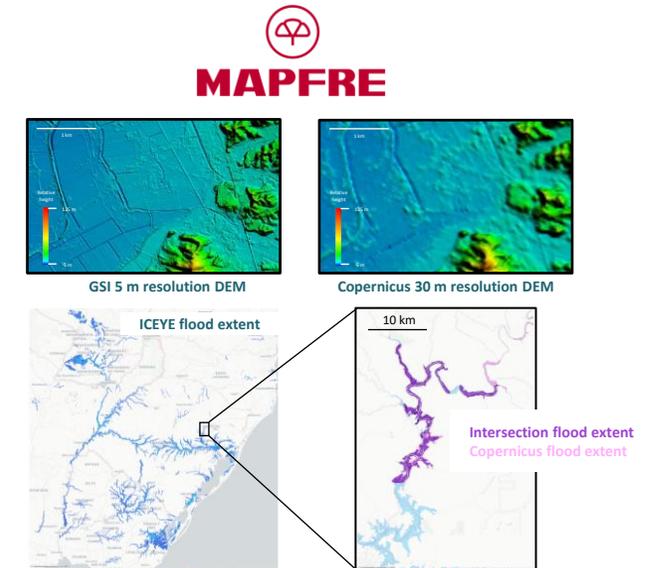


IQVIA™

Can predict **anti-allergy drug demand**, optimize production, distribution and apply tailored marketing strategies.

Copernicus fuels healthtech innovation | EU Agency for the Space Programme (europa.eu) June 2024

EMSR and GloFAS supporting event loss sizing



MAPFRE

EMSR (Emergency Management Service - Rapid Mapping) and GloFAS (Global Flood Awareness System) can support **speeding up flood event loss sizing and make it more accurate across different regions**

Agenda

- 1 Welcome to the webinar
- 2 Introduction to EUSPA
- 3 Introduction to Copernicus
- 4 New opportunities for healthcare insurance
- 5 Example by RSQ Technologies**
- 6 Q&A
- 7 Closing

Agenda

- 1 Welcome to the webinar

- 2 Introduction to EUSPA

- 3 Introduction to Copernicus

- 4 New opportunities for healthcare insurance

- 5 Example by RSQ Technologies

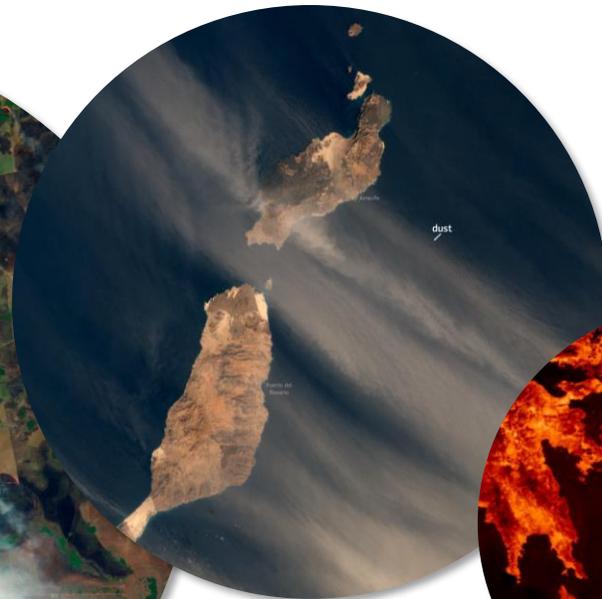
- 6 Q&A**

- 7 Closing

Questions? Insights?



*Wildfires in Paraguay
20.03.2024*



*Dense dust affects the
Canary Islands, Spain
19.02.2024*



*Early heatwave in the
Aegean Sea region
24.06.2024*



Agenda

- 1 Welcome to the webinar

- 2 Introduction to EUSPA

- 3 Introduction to Copernicus

- 4 New opportunities for healthcare insurance

- 5 Example by RSQ Technologies

- 6 Q&A

- 7 Closing**

Explore the possibilities of Copernicus

Access Copernicus free data & services

Discover different use cases



HEALTH HUB

<https://health.hub.copernicus.eu/>



Atmosphere
Monitoring Service

atmosphere.copernicus.eu

<https://atmosphere.copernicus.eu/>



Climate
Change Service

climate.copernicus.eu

<https://climate.copernicus.eu/>

Copernicus empowers insurers with free, global environmental data

Key takeaways:

- Copernicus can empower insurers **become more resilient against climate change**
- Copernicus provides **global environmental data free of charge**
- Copernicus can enable **innovative use cases** in healthcare insurance, making them on top of market trends, including:
 - Predicting health risks for improved service offering
 - Individual risk analysis for personalised premiums

These are just a few examples.

Other use cases can arise from healthcare insurance's specific needs.

If you have a particular challenge or opportunity in mind, we would love to know more.

Get in touch with us!



Linking space to user needs

Your contacts

Gerda Kuum

Gerda.KUUM@euspa.europa.eu

Larissa Mussarelli

larissa.mussarelli@nova.space

Annekatrien Debien

annekatrien.debien@nova.space