

#EUSpace 

EU SPACE WEEK 2023

7 - 9 November - Sevilla, Spain

Ready to use EO based indicators
for decision making for Insurance
and Utilities markets

Environment and Climate session

Laura Moreno, EarthPulse CEO





AGENDA

- Company overview
- PULSES. Easy & ready to use aggregated indicators
- How EU space assets are used
- What are the user needs for EO
- Future evolutions needed

Our mission

·earthpulse!

≡ Democratize the use of satellite analytics



Unlocking the value of **satellite imagery**

through **artificial intelligence**,

making **satellite analytics accessible, easy, and useful for everyone.**



Satellite

*data access
data exploitation
data integration*



Artificial Intelligence

*unsupervised learning
data fusion
custom architectures*



Infrastructure

*Managed cloud
Storage*



Innovation

*fast for developers
easy-to-use for end users
accessible for everyone
useful for everyone*

- Funded in late 2020
- Turnover approx 1M€
- 15 staff now

- **Expertise AI4EO:** Unsupervised learning, Analytical Building blocks, NLP interface, labelling tool
- **AI4EO projects:** AI pathfinder, AI4EO Challenges platform, EO TDL, GDA APP & GDA FFF



EOTDL

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Cesar Manso / AFP / Getty Images





David Swanson/Reuters



Daniel Bockwoldt/dpa / Picture alliance



Jacob King/AP Photo /Picture alliance

CLIMATE CHANGES

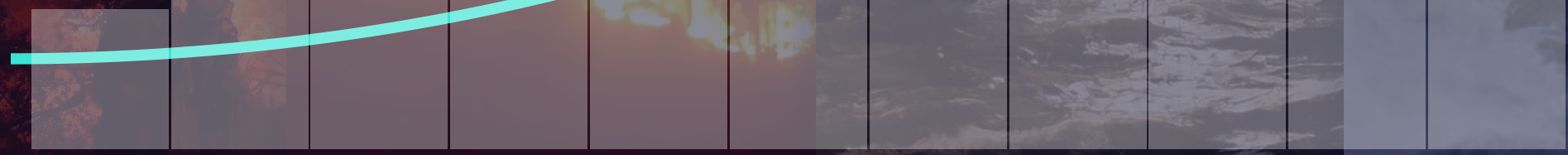
IMPACT FINANCES EXPONENTIALLY





\$270bn

in 2022



1981 1985 1989 1993 1997 2001 2005 2009 2013 2017 2021

*Munich Re, 2022

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2000M€ OF LOSSES

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2000M€ OF LOSSES

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Ebro river, Dec 2021

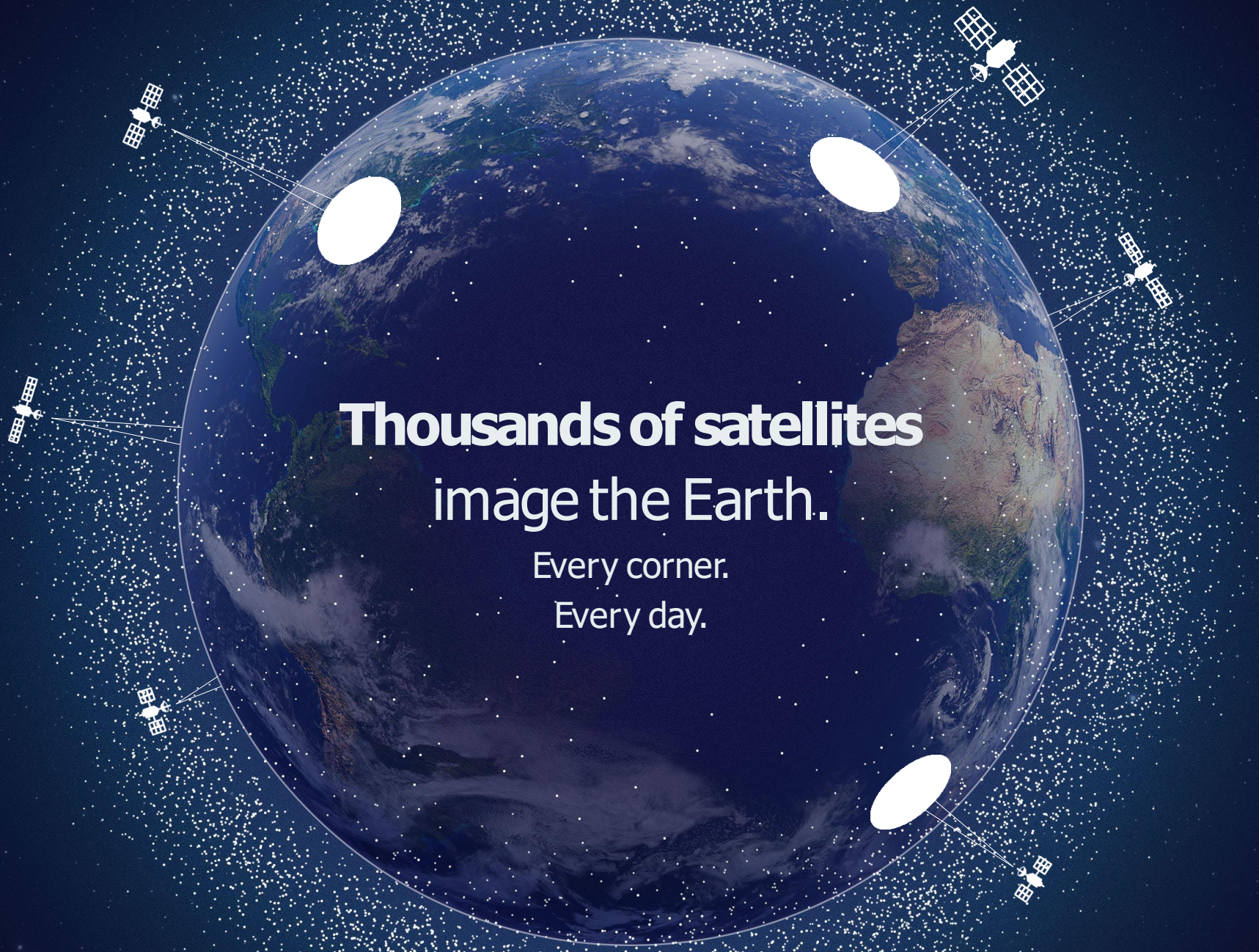
**200M€
OF LOSSES**



Ebro river, Dec 2021

**200M€
OF LOSSES**





**Thousands of satellites
image the Earth.**

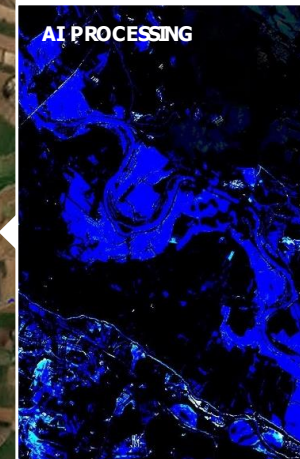
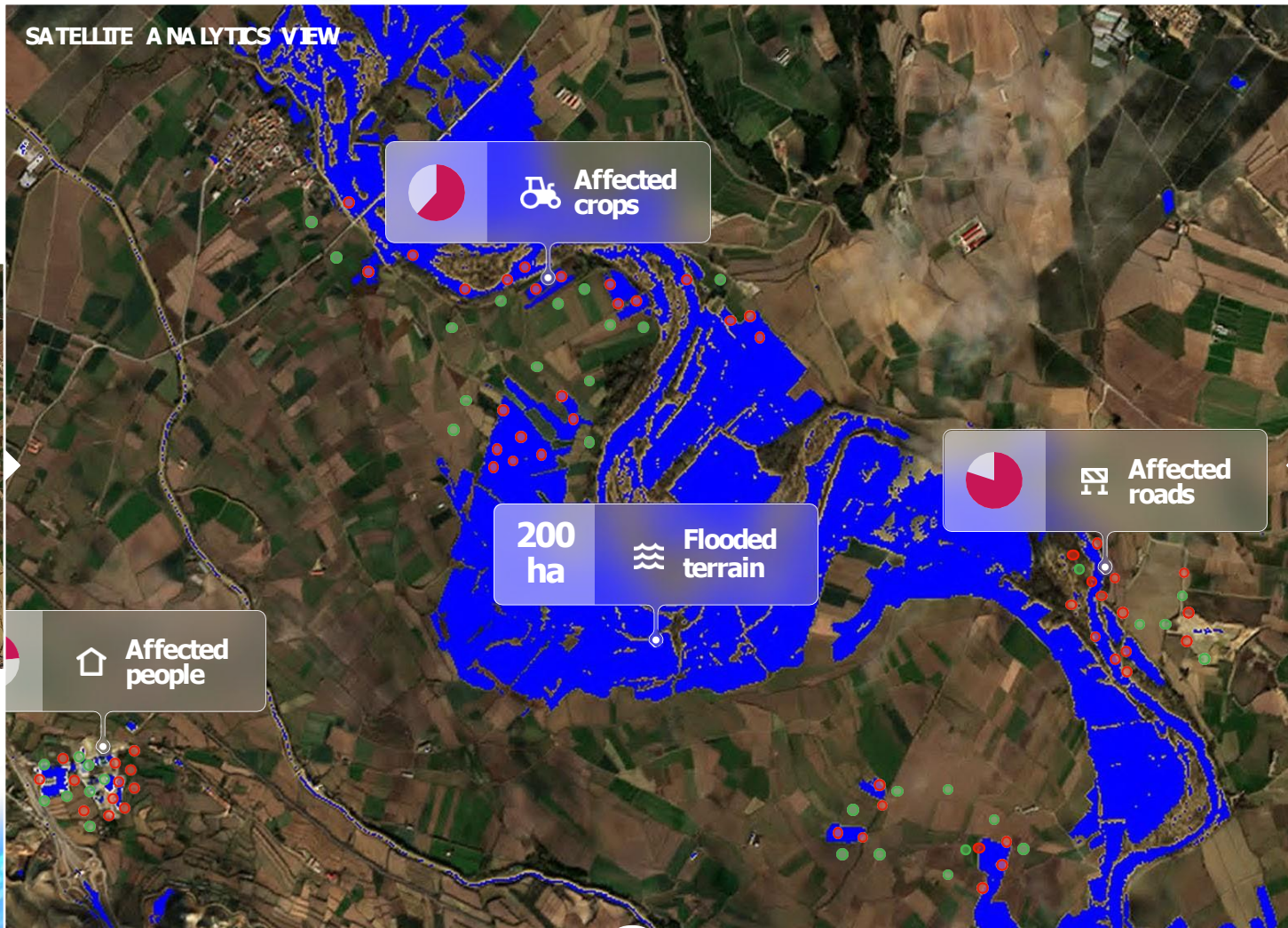
Every corner.
Every day.

Ebro river, Dec 2021



Solution

AI Satellite Analytics



GEOSPATIAL INFORMATION

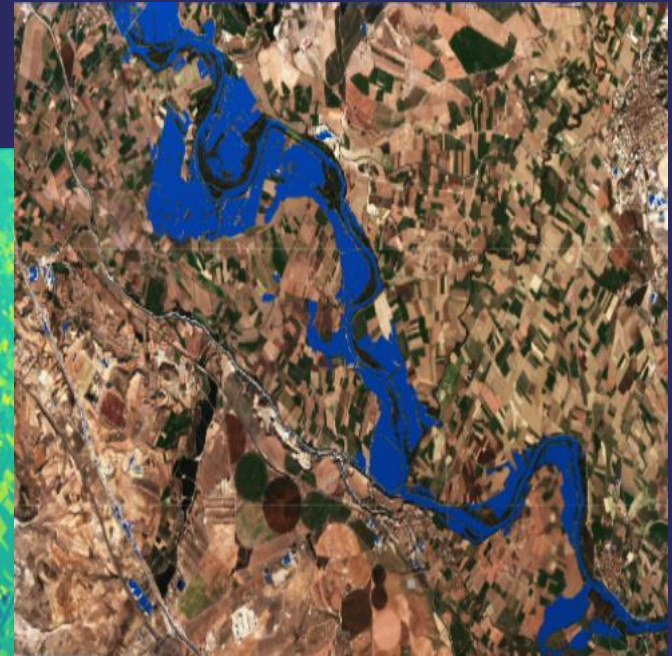
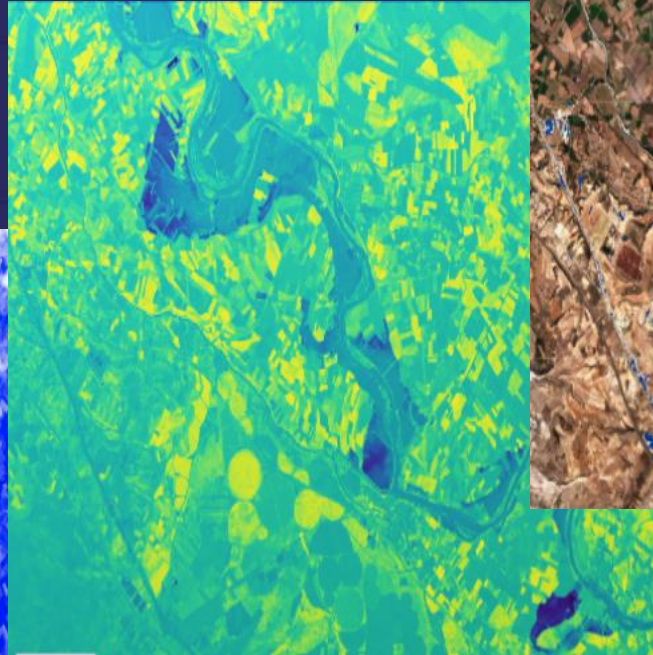
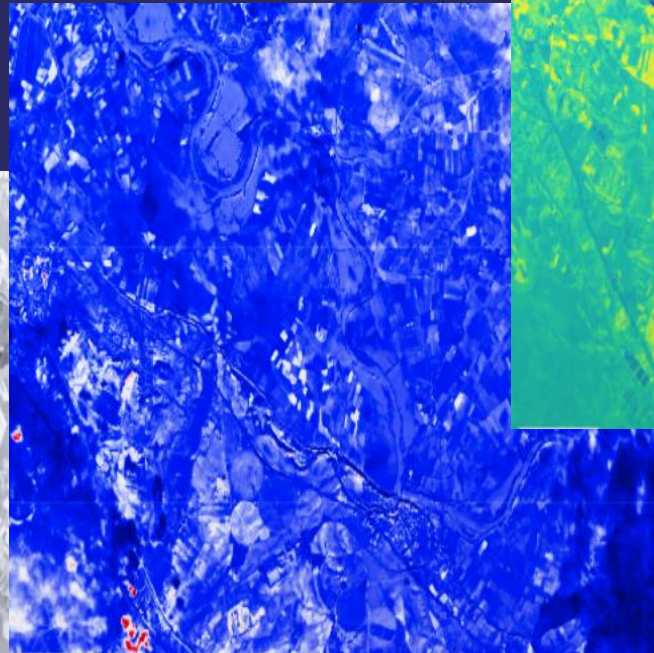
CUSTOM NEURAL NETWORKS

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Product

SPAI

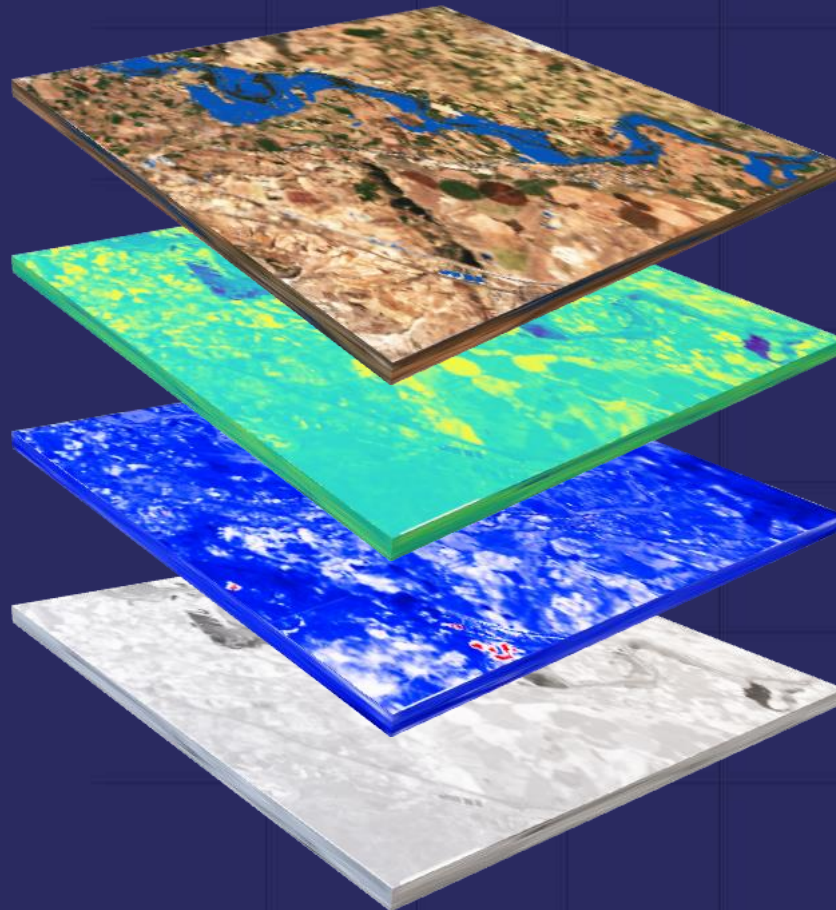
Our Satellite Processing by AI



Product

SPAI

Our Satellite Processing by AI



Custom architecture



Data fusion



Continuous learning



Fast processing



What are you interested in?



PRODUCT



EASE OF USE

Easy-to-interact dashboard that
No expert knowledge required



100% FLEXIBLE

Built on a modular foundation to be
easily adaptable and agile



RELIABLE

Evidence-based information,
Objective and unbiased



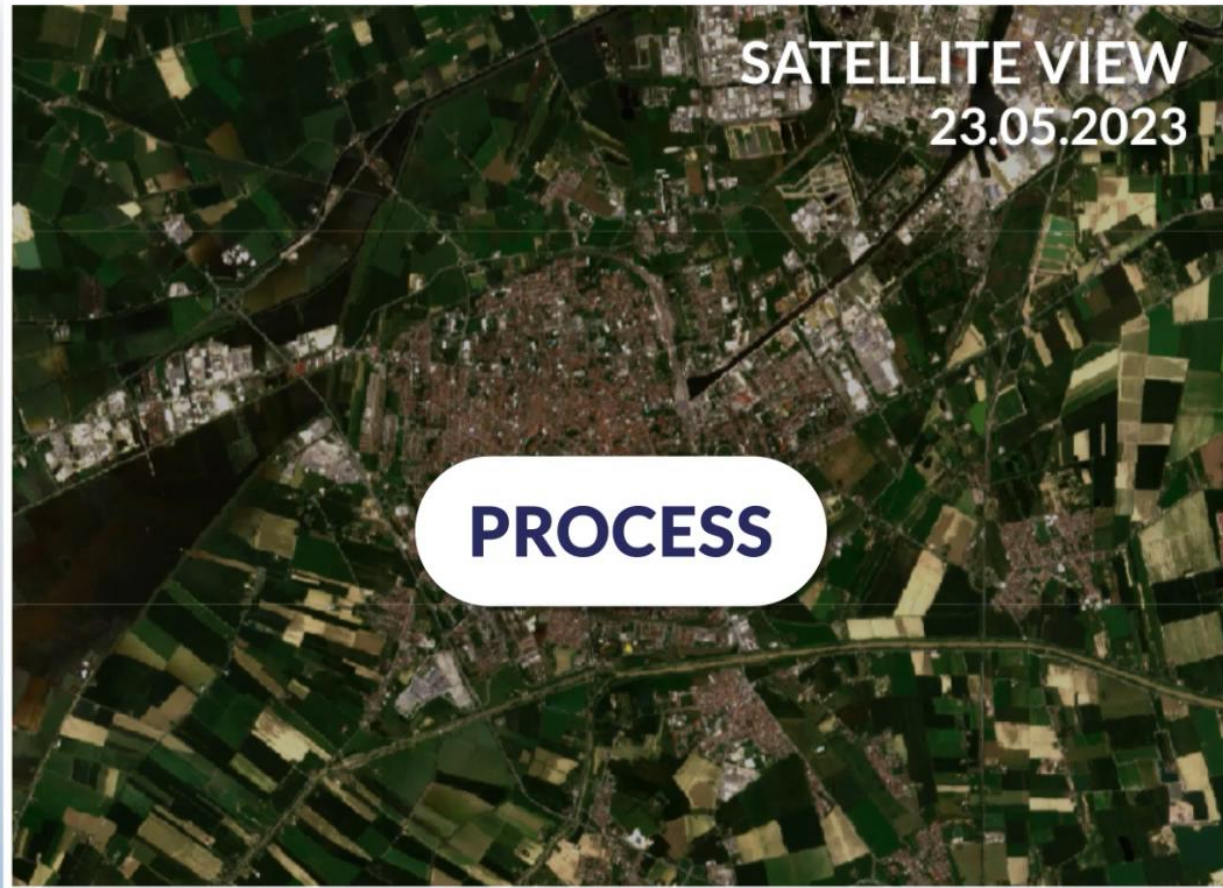
COST EFFICIENT

Rapid and remote monitoring of
vulnerabilities and impacts, optimizing
resources and costs



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PULSES for risk managers



IMPACT PULSE

Quantify impacts and analyze them in real time.
To react fast and prioritize the actions.



VULNERABILITY PULSE

Score asset vulnerabilities to identify weak points.
Improve preparedness and reduce future impacts.

**Risk prevention saves
70% of losses**

**Youseff Nassef, UNFCC*

Ravenna | Emilia Romagna | Italy

FLOOD IMPACT PULSE

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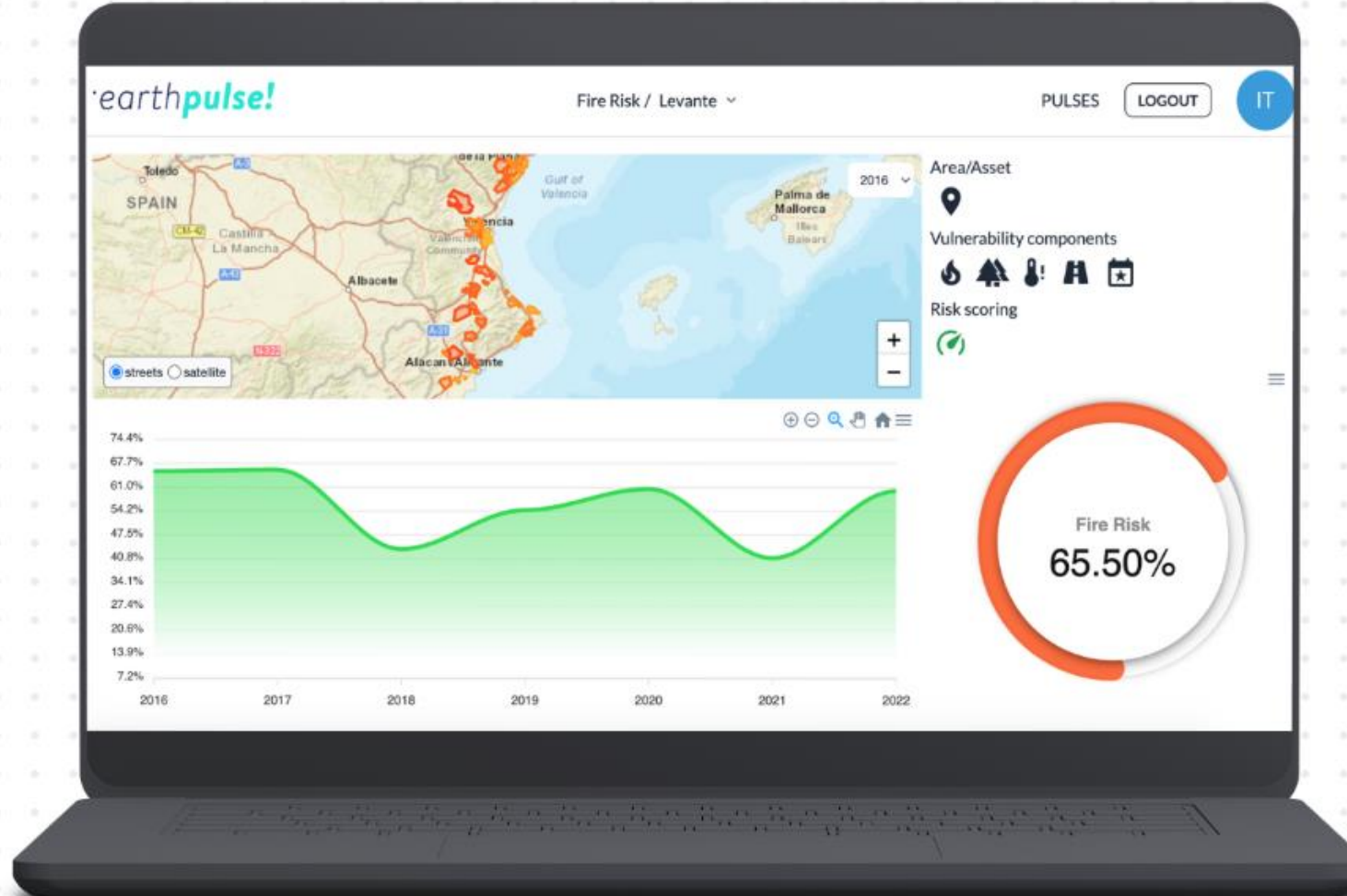
- Crops, roads, hospitals, schools or any Open
- Geospatial data or assets for client
- Useful for validating claim management and underwriting



FIRE RISK PULSE

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- Vulnerability components:
 - Copernicus Fire risk index
 - Crop data/humidity
 - Extreme temperature condition and
 - Other assets selected by client / user
- Area: specific locations, areas such as district city or country level
- Needed aggregation (week, month, year)
- Risk: fire/ flood /drought or multi risk



PRODUCT DELIVERY

DASHBOARD



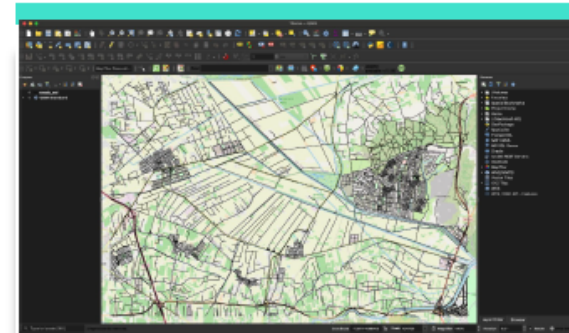
Dashboard that provides a clear and real-time visualization of indices, such as the projection of work or the climate impact on an infrastructure. It facilitates informed decision-making, project management, and continuous monitoring.

REPORT



Monthly, quarterly, or as-needed progress report. It can be exported in office, Excel or PDF.

DATA INTEGRATION



We integrate our data into your internal systems and processes according to your needs. They can be downloaded in geospatial format, or integrated via API or XYZ tile service into a viewer, a GIS, and a multitude of other platforms.

EU assets use

- Copernicus Data: S1, S2, S5P
- Copernicus Services: Climate Change, CMEMS, CEMS
- Copernicus Space Component Data Access (CSCDA)

User needs

- More on forecasting & scenarios
- Closer to NRT
- Usability, usability, usability
- Understanding how this data adds value to their businesses

Future evolution

- More resolution / more frequency
- Quicker access to data
- APIs in Copernicus Services to ease
- Statistics and info in monetization value

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CLIENTS



Agència Catalana de l'Aigua



Generalitat de Catalunya



epi energy



ASIAN DEVELOPMENT BANK



intelligent control solutions 360°

hispasat



Telefónica



abertis

ECOSYSTEM



Catalonia Trade & Investment



European Union Agency for the Space Programme

GoHub
by Global Omnium



InsuResilience Global Partnership



by Réseau Entreprendre
CATALUNYA

laSalle
Technova Barcelona



Tech Barcelona



CATALAN WATER PARTNERSHIP

Join the movement!

EARTHPULSE.AI


Laura Moreno

laura@earthpulse.com

CEO



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