

SUNRISE

Strategies and Technologies for United and Resilient Critical Infrastructures and Vital Services in Pandemic-Stricken Europe

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SUNRISE

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Post-Pandemic Critical Infrastructure Resilience

The Challenges



Challenges

- + As Europe continues to recover from the COVID-19 pandemic, its citizens and governments are looking ahead to **futureproof society's lifeline structures**.
- + Pandemic effects changed the way we view critical infrastructure resilience and shed light on the cascading effects caused by failures in critical systems.
- + It also underscored the need for “smarter” infrastructures.
- + The EU-funded SUNRISE project aims to ensure greater **availability, reliability, and continuity of critical infrastructures in Europe** including transport, energy, water, and healthcare.



SUNRISE Objectives

Expected Results:



- Develop effective strategies and technologies to ensure availability, reliability, and continuity of 'lifeline' services such as electricity, drinking water, and health care in Europe.
- Improve procedures to reduce workforce exposure to infectious diseases and disruptions to healthcare services.
- Enhance public-private, cross-border and cross-sector cooperation of critical infrastructure stakeholders to improve pandemic response

Objectives:



- Facilitate active collaboration among CIs within and across European borders, sectors and public and private stakeholders
- Identify pandemic-specific vital services and CIs in Europe, their interactions and dependencies, common risks, and effective countermeasures at a European level
- Develop a comprehensive strategy and technologies for CI resilience and business continuity in a pandemic
- Pilot the new strategy and technologies in real-world conditions across Europe.
- Enhance knowledge, awareness, and capacities for unity and resilience in Europe.

Project Factsheet

- + From October 2022 to September 2025, **41 partner organisations** will work together to develop a suite of novel technologies and solutions that will improve the resilience of these critical infrastructures against the impact of pandemics and other major risks.
- + Coordinated by Eviden(Spain), the SUNRISE project has been awarded €10m in funding by the EU's Horizon Europe research and innovation programme.
- + **Netcompany-Intrasoft** serves as the project's Technical Coordinator.
- + The SUNRISE consortium includes 18 public and private CI operators and authorities.



Our Approach

Objectives, Tools and Demos



Our Approach: the SUNRISE toolkit



SUNRISE

COLLABORATION

SUNRISE hosts a series of national workshops with critical infrastructure operators and authorities in Spain, Italy and Slovenia to review resilience at local, regional, national and EU levels and are helping to create a new stable working group on resilience to pandemics.



STRATEGY

The SUNRISE strategy strengthens CI awareness and resilience as well as business continuity by building a precise model of pandemics and their multifarious (or: multi-dimensional) influences on CIs. Thus, it also fosters risk assessment and mitigation activities with a strong focus on pandemics and climate change.



RISK-BASED ACCESS CONTROL (RiBAC)

The RiBAC tool will help ensure reduced risk for access to critical infrastructure in a scalable and privacy-preserving way.



RESOURCE DEMAND PREDICTION

A flexible CI-agnostic tool that will ensure that changes in the demand of CI resources (human and infrastructure) can be managed efficiently during emergencies



CYBER-PHYSICAL RESILIENCE

Creation of a tool to detect anomalies, raise alarms when incident occur and automate notification to authorities while performing near real-time risk assessment of critical infrastructure.



REMOTE PHYSICAL INFRASTRUCTURE INSPECTION

A tool that will deliver a solution for continuous, data-driven physical infrastructure inspection by means of satellite images, UAVs and machine learning methods for anomaly detection



SUNRISE preliminary results in Y1 (TRL5)



List Events
Add Event
Import from...
REST client

List Attributes
Search Attributes

View Proposals
Events with proposals
View delegation requests
View periodic summary

Export
Automation

Events

« previous 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 next »

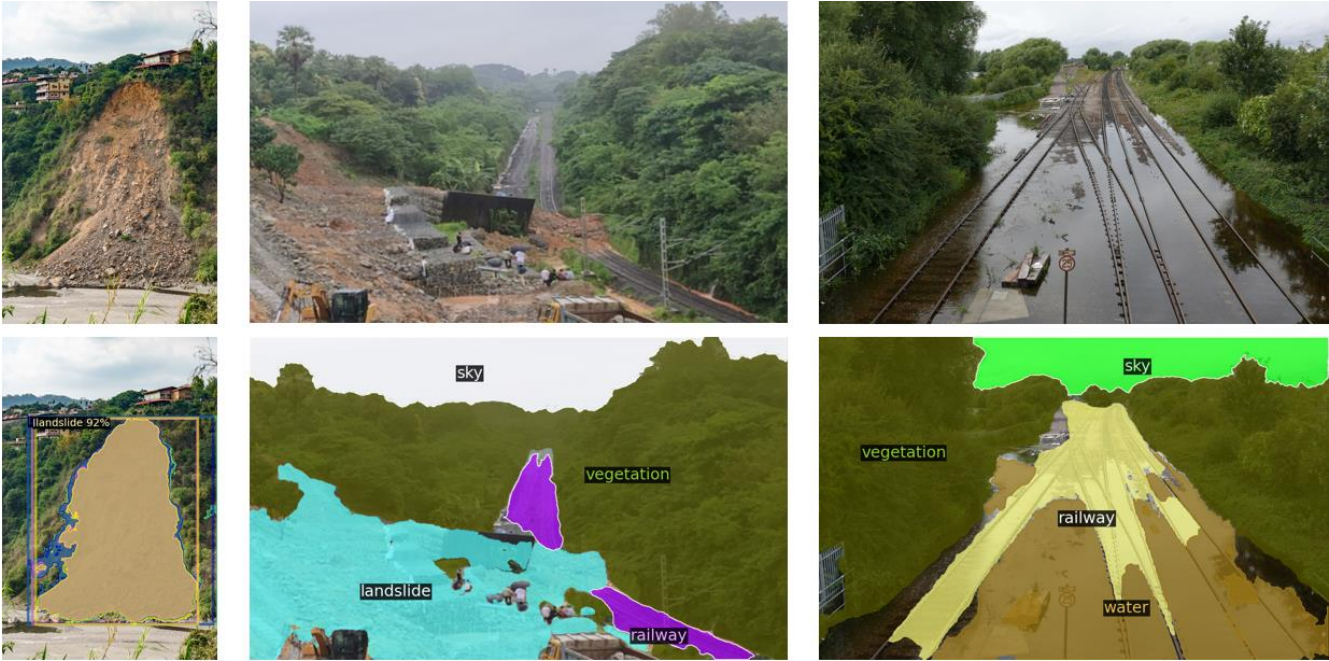
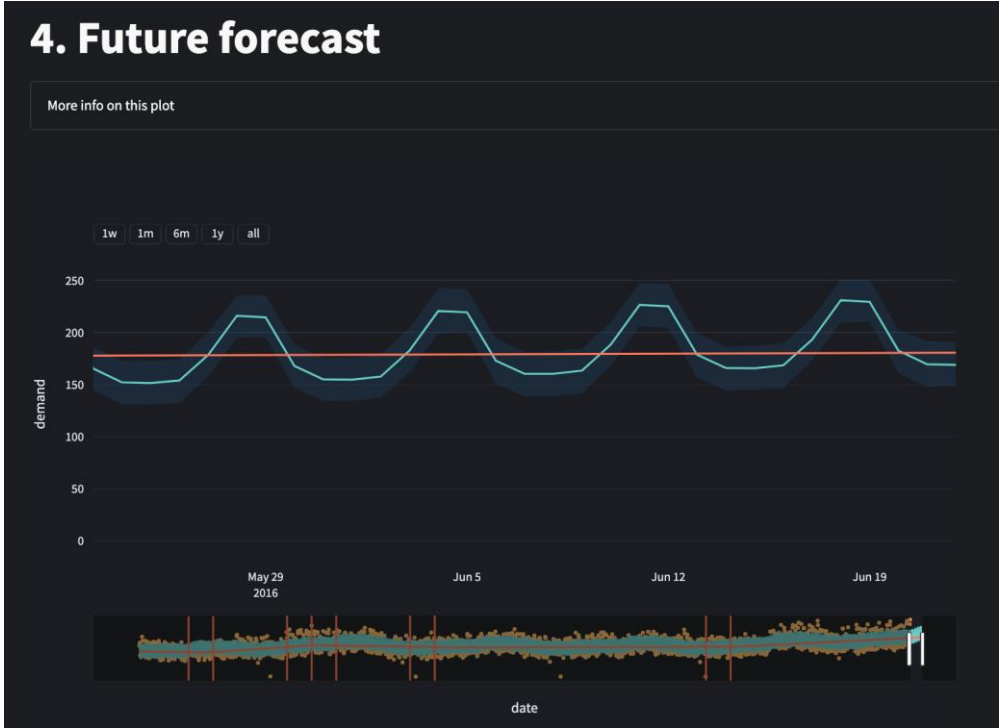
My Events Org Events

<input type="checkbox"/>	Creator org	Owner org	ID	Clusters	Tags	#Attr.	#Corr.	Creator user	Date	Info	Distribution	Actions
<input type="checkbox"/>	X ATOS	ATOS	1828		Ransomware TIE:Score-Analysis="2.42"	3		admin@admin.test	2023-02-15	Bitcoin address reported due to illicit activity	Organisation	📄 🗑️ 🔍
<input type="checkbox"/>	X ATOS	ATOS	1827		Payload Malware TIE:Score-Analysis="0.1"	3		admin@admin.test	2023-02-15	File linked to Agent Tesla malware family	Organisation	📄 🗑️ 🔍
<input type="checkbox"/>	X ATOS	ATOS	1826		Malware Payload malware_classification:malware-category="Botnet" TIE:Score-Analysis="2.18"	3		admin@admin.test	2023-02-15	IP address linked to Agent Tesla malware family	Organisation	📄 🗑️ 🔍
<input type="checkbox"/>	X ATOS	ATOS	1825		circl:incident-classification="vulnerability" cyber-threat-framework:Engagement="exploit-vulnerabilities" TIE:Score-Analysis="2.01"	10		admin@admin.test	2023-02-15	An issue has been discovered in GitLab CE/EE affecting all versions starting from 13.7.9 before 13.8.7, all versions starting from 13.9 before 13.9.5, and all versions starting from 13.10 before 13.10.1. A specially crafted Wiki page allowed attackers to read arbitrary files on the server.	Organisation	📄 🗑️ 🔍

RiBAC tool tests mask fit and temperature prior to granting access. It ensures access without compromising safety and applying a high level of privacy-preserving measures

Cyberthreat anomaly detection results, used to enrich the threat analytics of a MISP instance.

SUNRISE preliminary results in Y1 (TRL5)

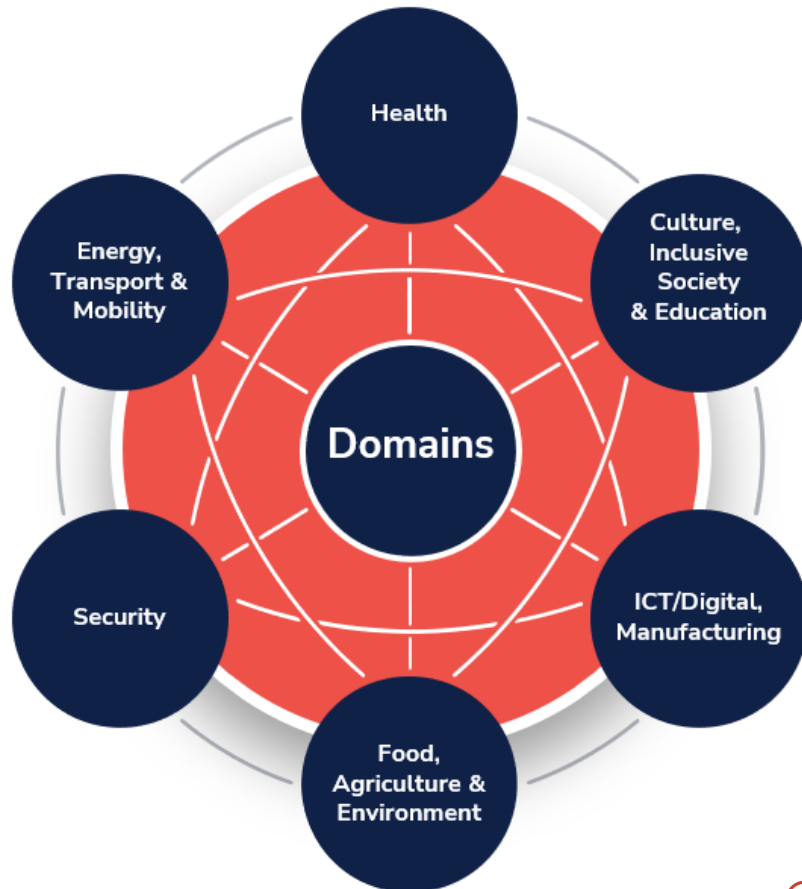


SUNRISE utilises historical data to provide AI-based resource demand forecasts (water, energy, healthcare etc.)

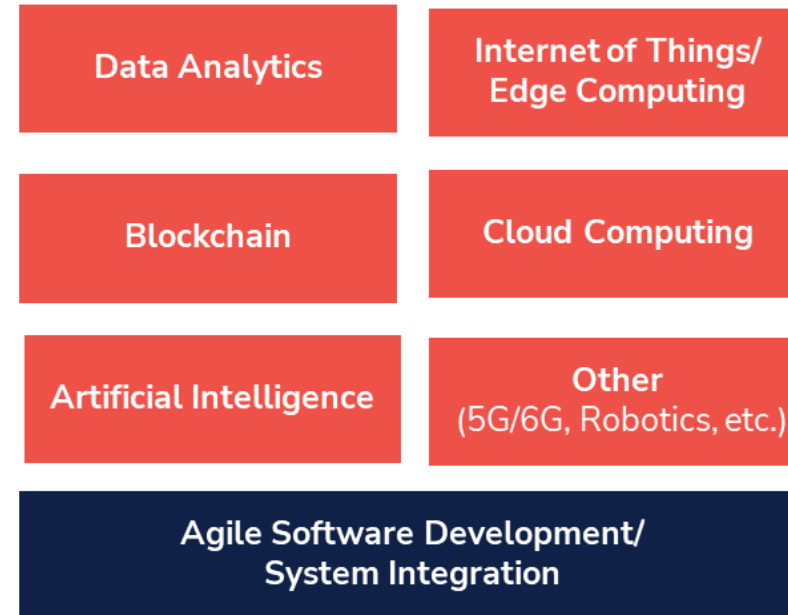
Remote Infrastructure Inspection leverages technologies such as UAVs, Satellite Imagery, AI models for semantic segmentation to detect landslides, infrastructure faults etc.

Netcompany-Intrasoft role & capabilities

- + NCIS, as a leading IT Solutions & Services company, participates through the **Research and Innovation Development Department** and undertakes the role of **Technical Coordinator**. NCIS is active in key markets around the world, with cutting-edge technical offerings spanning multiple domains.



Key Emerging Technologies





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Thank you for your time

Any Questions?



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