INFRA SESSION – MODERATORS

Frédéric Perlant frederic.perlant@recherche.gouv.fr

Alberto Bianchi alberto.bianchi@leonardo.com

Salvatore D'Antonio salvatore.dantonio@uniparthenope.it

Marco Manso marco.manso@imgs-eu.org

01-INFRA-01 ● 01-INFRA-02

INFRA Review Team

Alberto Bianchi | Frédéric Perlant | Salvatore D'Antonio | Marco Manso

01-INFRA-01

HORIZON-CL3-2025-01-INFRA-01:

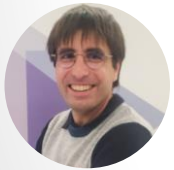
Open topic for improved preparedness for, response to and recovery from large-scale disruptions of critical infrastructures

INFRA-01 SESSION – PRESENTATIONS

01-INFRA-01	Aitor Corchero Rodriguez	Aitor.Corchero@eurecat.org
	Alexandre Hautcoeur	a.hautcoeur@isgroupe.com
	César Palmero	cpalmero@fcirce.es
	Rodoula Makri	rodia@iccs.gr
	Jose Munoz	JoseLuis.Munoz.Gamarra@uab.cat
	Ivo Häring	ivo.haering@emi.fraunhofer.de
	Miltiadis Kontogeorgos	miltiadis.kontogeorgos@rina.org
	Anna-Mari Heikkilä	Anna-Mari.Heikkila@vtt.fi
	Mariam Maréchal	Mariam.marechal@green-communications.fr
	Vojtech Jankuj	vojtech.jankuj@vsb.cz
	Marc Thielen	marc.thielen@emi.fraunhofer.de

Farm-to-Resilience Chain (F2RChain)

HORIZON-CL3-2025-01-INFRA-01: Open topic for improved preparedness for, response to and recovery from large-scale disruptions of critical infrastructures

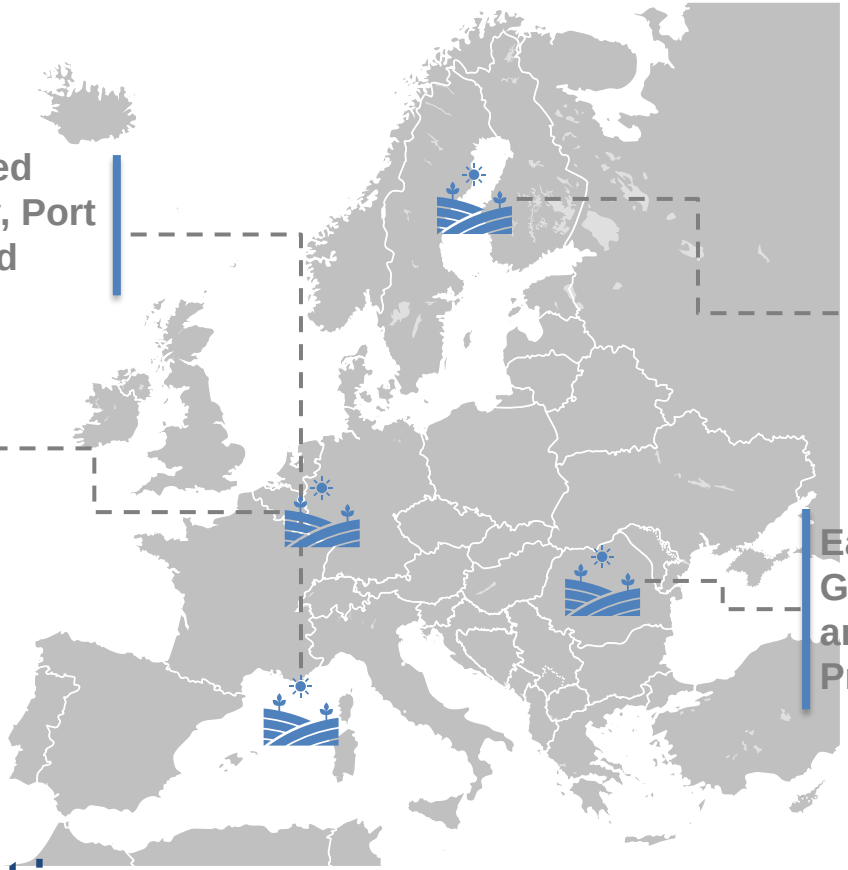


Aitor Corchero – Innovation Manager at IT&OT Security
[Proposal Coordinator]

F2RChain Idea

- **Anticipate, don't just react**: F2RChain delivers real-time predictive visualization of cascading risks across critical sectors including food, energy, water, and transport.
- **Turn critical scenarios into coordinated responses:** leveraging digital twins and advanced simulations, F2RChain enhances cross-sector collaboration to address complex threats effectively
- **Artificial intelligence empowering crisis management:** F2RChain provides precise strategic recommendations and optimized resource allocation
- **Train today to protect tomorrow:** F2RChain's advanced cyber-physical simulation environments strengthen your resilience against cyberattacks and operational disruptions.

F2Chain Potential Demonstration



Southern Europe – Integrated Response to Water Scarcity, Port Congestion, and Island Food Supply

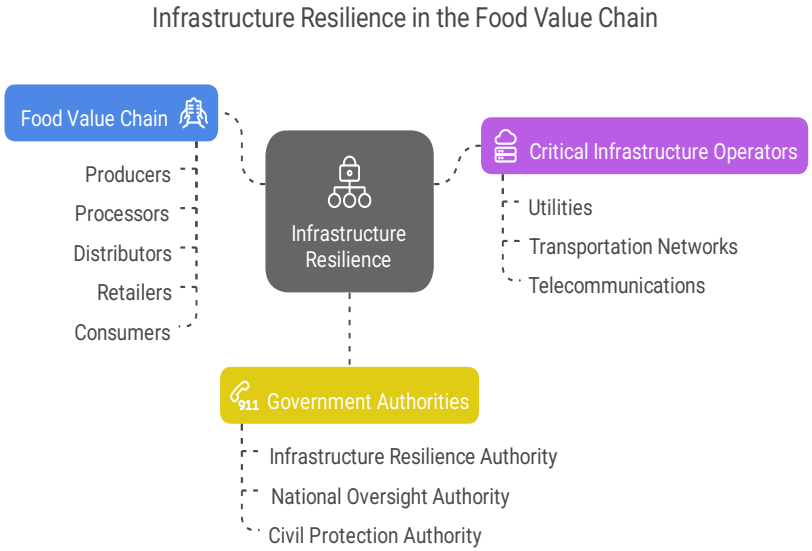
Continental Europe – Strengthening Logistics and Supply Chain Resilience

Northern Europe – Ensuring Operational Continuity Amid Cyber Threats

Eastern Europe – Geopolitical Instability and Infrastructure Protection

Proposal Expected partners

- **Food value Chain Stakeholders** aligned with the use cases interest
- **Critical Infrastructures** in water, energy, transport, satellite.
- **Experts in physical risks management & Stress Testing**
- **Cybersecurity companies** interested in IT & OT security in critical infrastructures.
- **Governamental Authorities** to support the accomplishment of the NIS2 for the specific regions.



Resilient Railway Infrastructure Monitoring

- *Alexandre HAUTCOEUR*
- *a.hautcoeur@isgroupe.com*
- *Institut de Soudure*
- Role: S/T provider

- Topic to be addressed: HORIZON-CL3-2025-01-INFRA-01: Open topic for improved preparedness for, response to and recovery from large-scale disruptions of critical infrastructures

Proposal idea/content

Challenge:

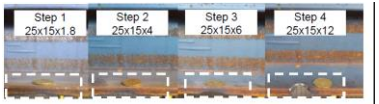
- *Railway infrastructure is vulnerable to degradation due to fatigue, cracks, corrosion, and external factors.*
- *Current monitoring methods are costly, require frequent manual inspections, and may not detect early-stage failures.*
- *There is a need for continuous, real-time, and predictive monitoring to enhance railway resilience and operational safety.*

Solution:

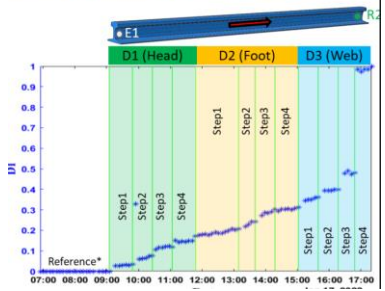
- *Guided Wave Technology: A proven Non-Destructive Testing (NDT) method for real-time monitoring of tracks, level crossings, and tunnels.*
- *Enables early defect detection and predictive maintenance to reduce costs and prevent disruptions.*
- *AI-enhanced multi-signal analysis: The system integrates advanced data processing to identify anomalies and predict failures before they occur.*
- *Highly scalable & adaptable: Can be deployed across different railway infrastructures without major modifications.*

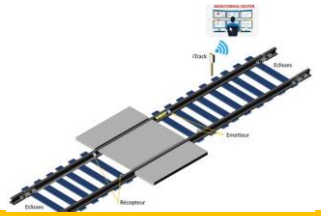
Innovation & Readiness:

- *TRL 7: Technology is already validated and ready for real-world deployment.*
- *The project will focus on pilots and real-scale validation in collaboration with railway operators and infrastructure managers. Beyond rail monitoring, we aim to leverage this initiative to extend our solution to the monitoring of civil engineering structures, including expansion joints and hard-to-inspect metallic structures*



Expected outcomes align with HORIZON-CL3-2025-01-INFRA-01 goals to improve critical infrastructure resilience through advanced monitoring and predictive risk assessment.





Hautcoeur Alexandre (a.hautcoeur@isgroupe.com)

Project participants

- Looking for partners with the following expertise/ technology/ application field:
  - *Railway Operators & Infrastructure Managers (e.g., SNCF, Deutsche Bahn, RFI, Infrabel)*
    - *To provide real-world testing environments for guided wave monitoring technology.*
    - *To validate data accuracy and operational feasibility in active railway conditions.*
  - *Industrial Partners for Scaling & Production*
    - *Companies specialized in sensor manufacturing, deployment, and integration in railway infrastructure.*
    - *Expertise in mass production and field deployment of monitoring systems.*
  - *Tech Companies for Multi-Signal Analysis & AI Integration*
    - *Specialists in big data processing.*
    - *Expertise in real-time data visualization and integration with existing railway monitoring platforms.*
  - *Public Authorities*
    - *Regulatory bodies or institutions overseeing railway safety and infrastructure resilience.*

CIRCE in CL3-01-NFRA-01

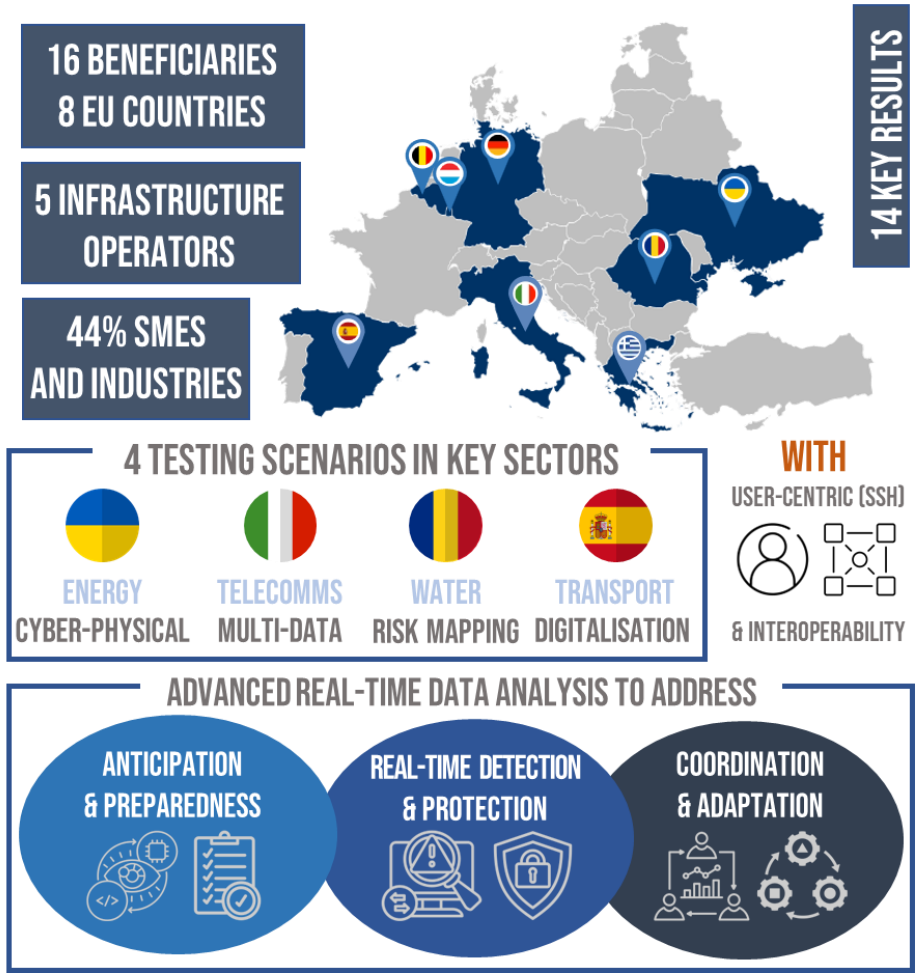
César Palmero & *María Aguirre*
cpalmero@fcirce.es *maguirre@fcirce.es*

CIRCE Technology Centre
Proposal coordinator

CL3-2025-01-NFRA-01
Open topic for improved preparedness for, response to and recovery from large-scale disruptions of critical infrastructures

Proposal overview

- *Based on a previously well-scored but non-funded proposal*
- *Focused on strengthening **resilience** of Critical Infrastructure*
- *Anticipate, detect, and respond to disruptions*
- *Scalable systems for continuous detection and secure **information exchange** across diverse data sources and sectors*
- *Adaptive threat response through a cross-layer detection framewo*
- ***Collaborative** crisis management via a Virtual Crisis Room*
- *Validation in real scenarios in up to **4** countries*
- *Covering multiple **sectors**: energy, telecomms, water transport*



Project participants

- Existing consortium coordinated by CIRCE collaborating with:
  - RTDs specialized in cybersecurity & AI
  - SMEs experts on cybersecurity and data management
  - Infrastructure operators
  - Pilots in Spain, Italy, Ukraine and Romania

- Looking for partners who may contribute:
  - Potential pilots in complementary sectors, involving the key infrastructure operators
  - Development of training curricula for infrastructure operators, authorities and first responders
    e.g., virtual and physical stress tests
  - Financial Support to Third Parties
  - Other complementary experts who may contribute

Technologies for Building Resilience in Critical Infrastructures – by ICCS

- ***Dr. Rodoula Makri***
  - Research Director ICCS (Senior Researcher Grade A') – Technical Manager
- **rodia@iccs.gr** , **rodia@esd.ece.ntua.gr**
- ***ICCS: Institute of Communication & Computer Systems***
  - ***Microwaves, RF & Wireless Group***
  - S/T provider, Athens, Greece

- Role in the proposal: ***Project / Scientific / Technical Coordinator or WP leader***
- Topic to be addressed: ***HORIZON-CL3-2025-01-INFRA-01:***
  - ***Open topic for improved preparedness for, response to and recovery from large-scale disruptions of critical infrastructures***

Proposal idea/content

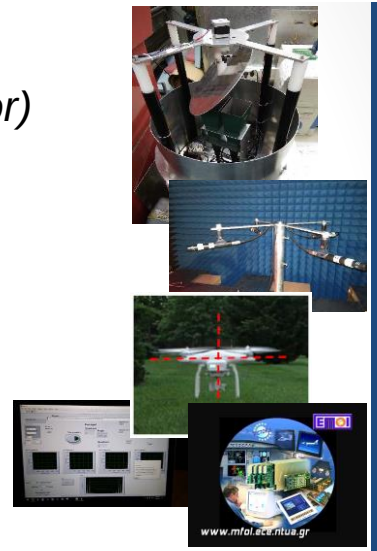
- Proposal Title (indicative): **Improved Resilience in CIs**
  - **Resilience steps to be covered:**
    - Prevention, preparedness, monitoring, management, response, mitigation, recovery
  - **Against large scale-disruptions involving all types of threats:**
    - natural hazards, man-made, physical / cyber and cyber-physical threats, active or dormant type
  - Including **interdependencies** and **cascading effects**
  - covering the **whole value chain,** investigating the **technological and societal impacts**
    - **In automated and semi-automated** (including human factors) manner

- *We have formulated a holistic methodology to address the overall resilience:*
  - Encompassing risk indicators for “near real time” and “post events” assessments
  - For short and long term, also enabling projections and forecasts
  - With AI-enabled tools considering historical, technological and human intervention data

- *We envision to include virtual and physical stress tests **in at least 3 Use Cases***

Project participants

- **Existing consortium:**
- **Proposed Coordinator:** ***ICCS*** *(also Scientific / Technical Coordinator)*
  - We plan to exploit our experience in past INFRA projects, e.g. RESISTO
  - cyber-physical threats identification and assessment,
  - detection and surveillance of various threats e.g. drones, cyber threats etc.
- **Partners / Other participants:**
  - ***Confirmed:*** 3 from Greece (RTOs and SME), Belgium (large enterprise),
    - Italy (RTO and SME), Cyprus (SME)
  - ***In discussions:*** with 2 more, Academic and SME
- **Looking for partners with the following expertise/ technology/ application field:**
  - Data analysis / integrator
  - Practitioners and end users
    - ***(owning / moderating) various CIs*** *to test the methodology and developments,*
    - *ideally with existing* ***testing platforms*** *even in a small scale*



Drones as Flying sensor

- *Jose Munoz*
- *JoseLuis.Munoz.Gamarra@uab.cat*
- *Univesity Autonomous of Barcelona*
- Role: *WP Leader, Demo leader, Technology provider*

- Topic to be addressed: *HORIZON-CL3-2025-01-INFRA-01: Open topic for improved preparedness for, response to and recovery from large-scale disruption of critical infrastructures*

Drones as Flying sensor

- We provide a fleet of drones equipped with onboard sensors and advanced planning capabilities to effectively characterize complex environments.

- Key for improved monitoring, risk and threat assessment.

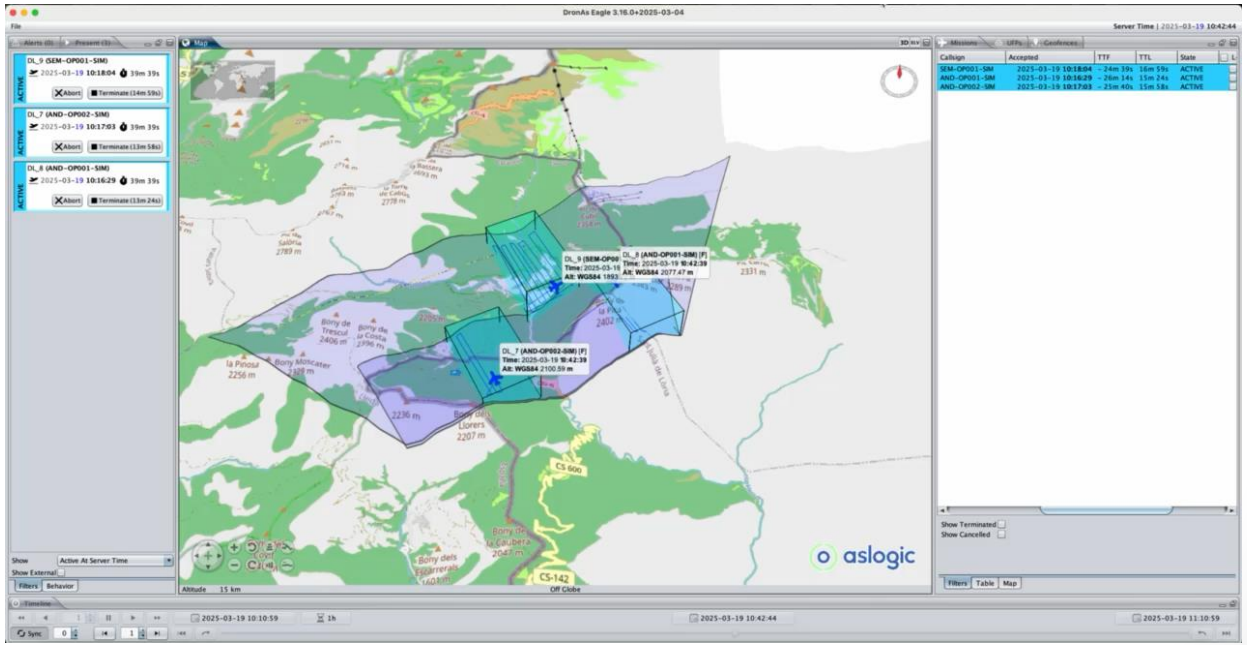
- This is made possible by*:*

Step 01

Integration of complex sensors onboard

Step 02

Advanced flight planning platform that integrates GIS information and M.L for trajectory design.



Step 01

Integration of complex sensors onboard

Step 02

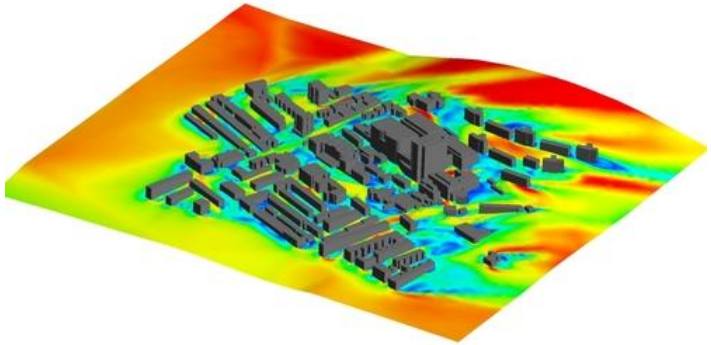
Advanced flight planning platform that integrates GIS information and M.L for trajectory design.

Step 03

Advanced data analysis capabilities

Step 04

Demo Extensive experience in HORIZON EUROPE



Big Data, Machine Learning and HPC

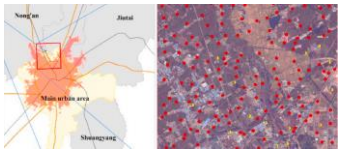
3 Horizon Europe (SESAR projects)
1 CEF Transport

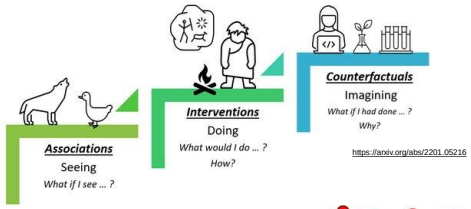
Project participants

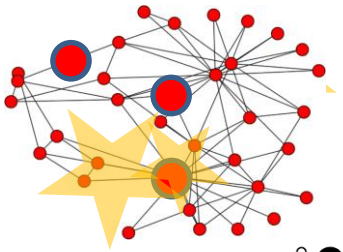
- Looking for a competitive consortium with previous experience in the program and complementary capabilities.
  - Critical Infrastructure operators.
  - National security body.

- We are part of a thriving drones technology ecosystem with extensive experience in carrying out demo activities.

ResilienceInsight: Causality-driven resilience assessment, improvement, management and narratives for CI operators



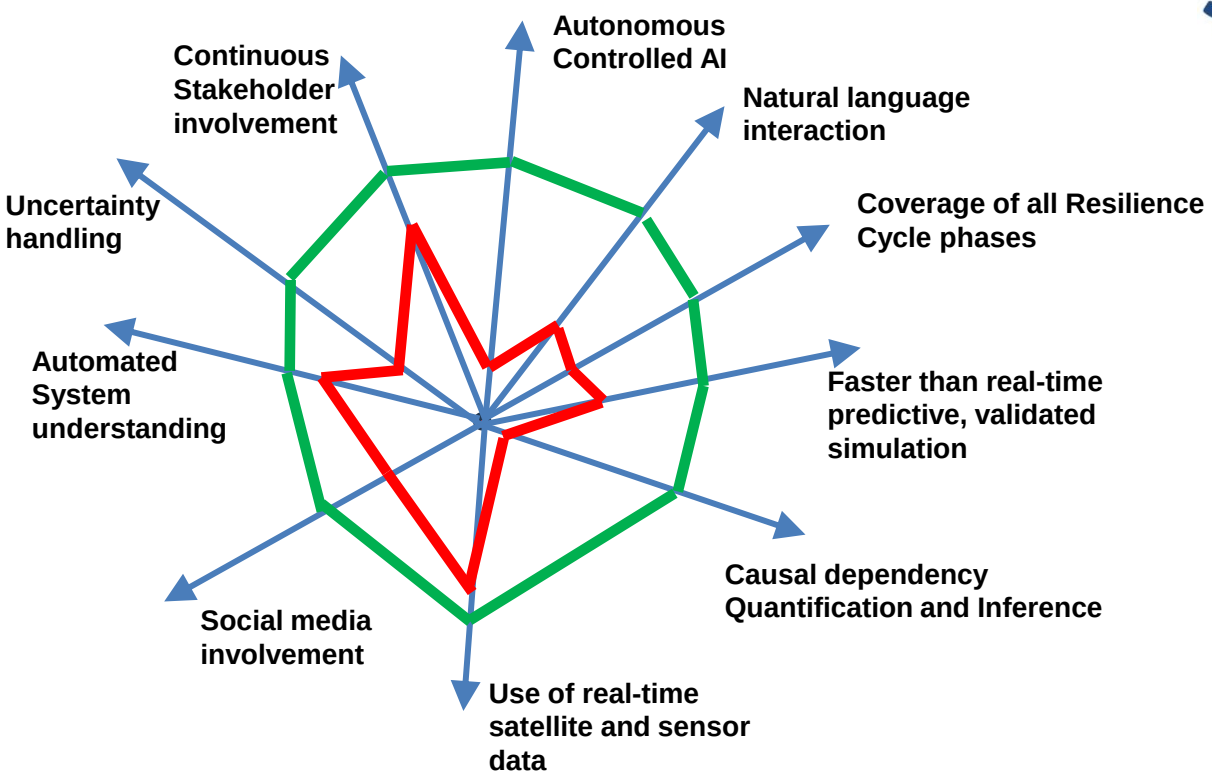




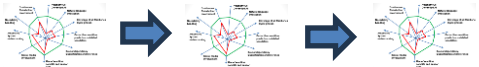
- *Ivo Häring*
- *ivo.haering@emi.fraunhofer.de*
- *Fraunhofer EMI*
- Role: *Scientific/Technical coordinator under **AYESA** project coordination*
- Topic to be addressed: *HORIZON-CL3-2025-*

SMI2G 2025, 6&7 May 2025, Paris

Dimensions of CI risk control/resilience Radar plot and Gaps

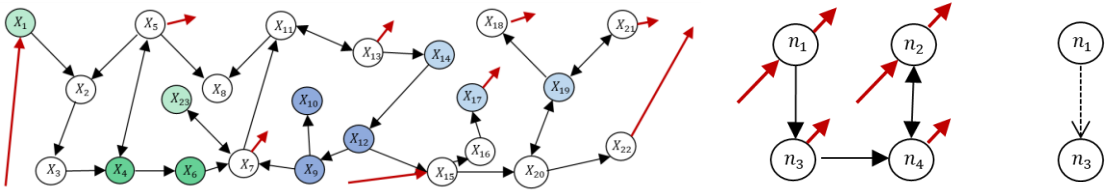


Example as is and wanted resilience tool capabilities



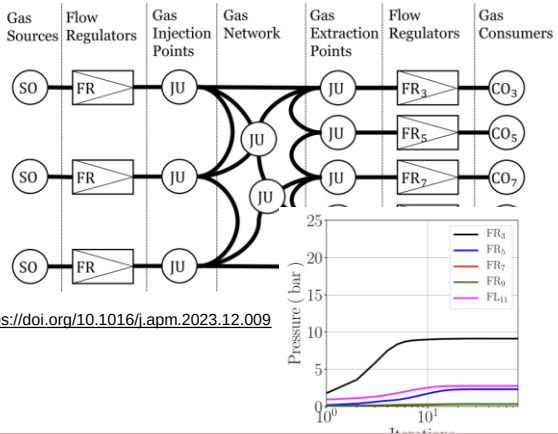
Ca. 6 Business cases/CI

Example: Predictive simulation of (coupled) grids extensions regarding causal analysis and narratives generation

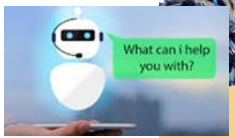


Towards Causality Graph Expansions For Local And Global Causal Assessment of Flow Network Models For Analytical System Resilience Explainability, ESREL & ERA Conference Paper, 2025, Accepted
Ivo Häring, Sebastian Ganter, Jörg Finger, Till Martini, Mirjam Fehling-Kaschek, Corinna Köpke, Alexander Stolz, Stefan Hiermaier

- *Control/Reduction of complexity through Causal Analysis*
- *Generation of Narratives/Storytelling*
- *Natural Language Interfacing/Chatbot*



https://doi.org/10.1016/j.apm.2023.12.009



https://www.seo-magazin.de/chatbot-was-ist-das /

Ivo Häring, ivo.haering@emi.fraunhofer.de

Advance and interface already successful resilience tools to TRL 7

- ***Commercial tool providers for CI operators*** *and their customer basis know gaps*
- ***Open-source tool organizations*** *know customers‘ needs*

- *Co-use of resilience tools for infrastructure health management, organizational management and optimization of infrastructure and organizations*
- *Technologies to cover efficiently multiple threats, domino-effect assessment, allow for co-use of resources, exchange of data, open-source online visualization*
- *Demonstration of new best practices to strengthen business cases*

- *Starting tools available at Fraunhofer EMI including from EU projects covering Terrorism threats at urban and territorial scale (e.g. VITRUV, ENCOUNTER, EDEN), (coupled) infrastructure at urban and territorial scale (e.g. SnowBall, RESISTO, SecureGas, Critical-Chains, Safety4Rail, SATIE, eFORT, FOURIER), dissocial event management at community scale (e.g. BESECURE, RESILIENS), CI System state modelling (FOURIER)*

Project participants

- **Existing consortium:**
  - Proposed coordinator: *AYESA (General), Fraunhofer EMI (scientific/technical)*
  - Partners / Other participants:
  - SMEs with Infrastructure resilience assessment tools/approaches and platforms, e.g., MSIG, FactorSocial
  - Organizations that provide open-source resilience tools (tbc/examples), e.g., City Resilience Index, City Resilience Proofing Tool, Resilience Rising
  - RTOs, e.g. AIT (tbc)

- **Looking for partners with the following expertise/ technology/ application field (Large scale operators of CI):**
  - ***Infrastructure resilience commercial tool provider for operators and communities together with pilot CI operator/customer to provide an operational Use Case***
  - ***Industrial Critical Infrastructure operator organization or authority*** *at EU Member state scale, e.g. transmission operators*

INTRA-CARE

INTerscalable Resilience Assessment for a secured healthCARE infrastructure system in the service of the European citizens

- *Miltiadis Kontogeorgos*
- *miltiadis.kontogeorgos@rina.org*
- *RINA Consulting S.p.A.*
- *Proposal coordinator*
- Topic to be addressed: *HORIZON-CL3-2025-INFRA-01-01*

INTRA-CARE

INTerscalable Resilience Assessment for a secured healthCARE infrastructure system in the service of the European citizens

Resilience design, assessment and capacity-building of healthcare infrastructure system

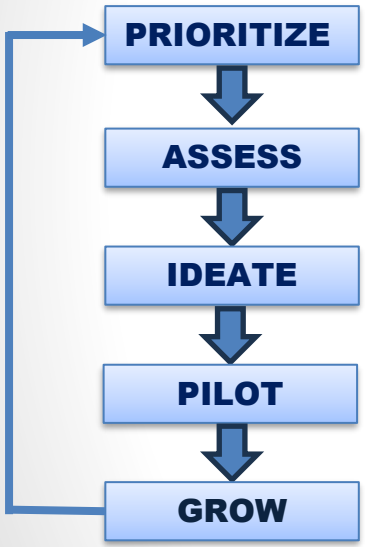
Aim to proactively foresee, absorb, recover from, and adapt to shocks such as climate change, geopolitical conflicts and cyberthreats.

Key aspects:

- Resilience at **asset** (hospital) **level** towards natural hazards and resilience-based measures for additional capacity to cover the increased demand
- Resilience at **territorial level**, with facilities and assets related to healthcare system (e.g., supply chain, information data systems) facing manmade threats
- High replicability, testing at least in **three different member states**, common action plan for countries with different healthcare systems, alignment with safety&security relevant frameworks.
- **Interscalability**: interdisciplinarity and scalability as the solutions initiate from the scale of the asset, reach regional/territorial level and aim to **unite** common **action** at **national/international level** (EU)

INTRA-CARE

INTerscalable Resilience Assessment for a secured healthCARE infrastructure system in the service of the European citizens



PRIORITIZE	**Evaluate and prioritize hazards and challenges based on strategic alignment with safety frameworks, potential impact and feasibility.**
ASSESS	**Clearly articulate the resilience condition as-is, by resilience assessment from asset to regional/territorial level.**
IDEATE	**Generate a wide range of solutions and measures to address the defined hazards and challenges.**
PILOT	**Execute at various scales pilots to test the proposed solutions in scalable environment.**
GROW	**Scale up to a broader context, integrating this approach at national and European level, aiming to expand applicability.**

Project participants

Existing consortium:

Coordinator: *RINA Consulting (General), Fraunhofer EMI (scientific/technical)*

Partners / Other participants:

- Luxembourgish industry partner, leader in the European IT solutions and services provider
- Finnish university with expertise on the civil security and resilience of critical infrastructure
- Swedish research institute with expertise on the defence and (cyber)security domains
- Gemelli Hospital, located in Italy
- (tbc) British top university, leader in the structural mechanics and resilience planning
- (tbc) German research institute, with expertise on risk and resilience of critical infrastructures

Looking for partners with the following expertise/ technology/ application field (Large scale operators):

- ***Infrastructure resilience tool provider(s) which can bring together pilot CI operator and provide one operational Use Cases for the regional/territorial healthcare system, including the broader and relevant supply chain sector of the healthcare domain***

- ***Partner with expertise on Social Sciences and Humanities (SSH) research, related to the domain of the healthcare system***

E-INFRESI - Enhancing Situational Awareness and Resilience of Critical Infrastructure Against Large-Scale Disruptions

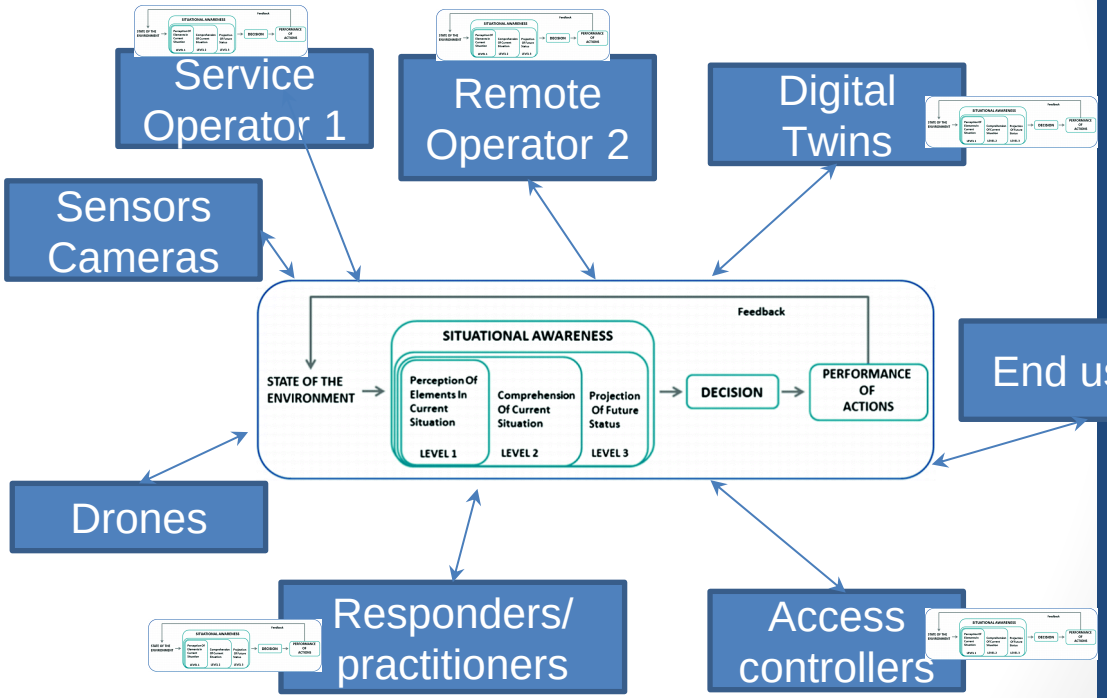
- *Sirra Toivonen (Sirra.Toivonen@vtt.fi) and Anna-Mari Heikkilä (Anna-Mari.Heikkila@vtt.fi)*
- *VTT Technical Research Centre of Finland Ltd.*

- Role: Proposal Coordinator, WP leader

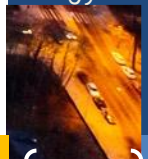
- Topic to be addressed: HORIZON-CL3-2025-01-INFRA-01

Proposal idea/content

- Integrated Sensor Fusion for Real-Time Situational Awareness
- Innovative Gate and area Control for novel critical infrastructure resilience
- Cross-Sector Interdependency Mapping and Crisis Management
- Advanced Monitoring and Threat Assessment Platform
- Digital Twins for Simulations and Training
- Emphasis on resilience in Arctic conditions



- Existing consortium:
  - Coordinator: *VTT, or some other partner*
  - Partners: Port of Oulu, + companies
  - *We are also open for discussions about combining with relevant other project idea*
- Looking for partners with the following expertise:
  - *Critical infrastructure operators, authorities responsible for critical infra, civil protection authorities*
  - *Research organisations and Technology providers for e.g., AI enhanced IoT sensors/cameras, digital twins, remote operations, drones, Monitoring and Threat Assessment Platform, cybersecurity*



Anna-Mari Heikkilä (Anna-Mari.Heikkila@vtt.fi)

GOSCIProject

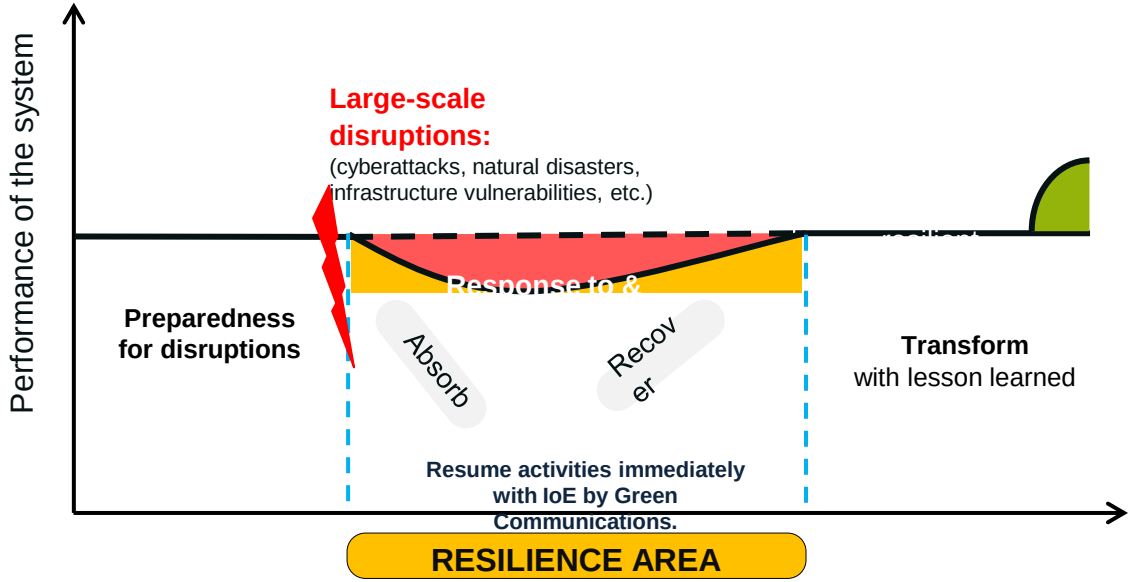
- *Mariam Maréchal*
- *Mariam.marechal@green-communications.fr*
- *Green Communications*
- Role: *Proposal coordinator, WP leader, S/T provider*
- *Previous projects won: H2020 as coordinator and WP Leader*

- Topic to be addressed:

HORIZON-CL3-2025-01-INFRA-01

Open topic for improved preparedness for, response to and recovery from large-scale disruptions of critical infrastructures.

Resilience of critical infrastructures



Being resilient means taking into account the inevitability of large-scale disruptions, then preparing, recovering and transforming in such a situation while being able to continue operating regardless

GOing beyond cyber**S**ecurity to achieve **C**yber resilience **P**rojet

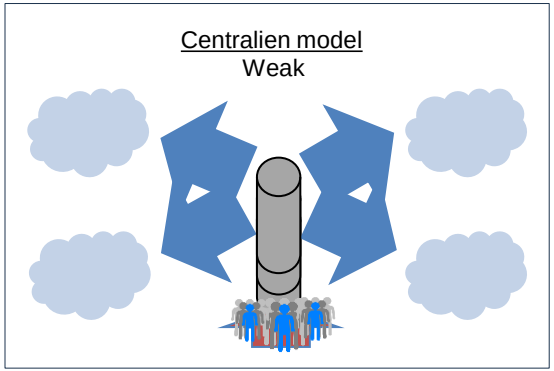
GOSCIP

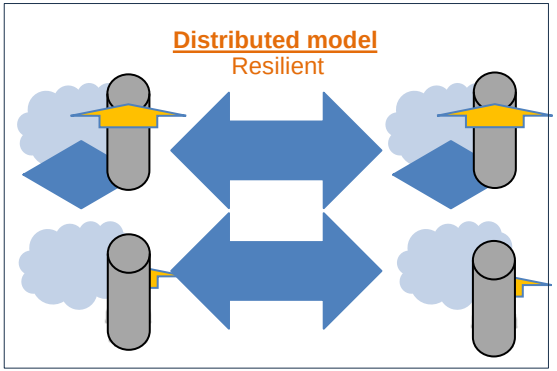
Proposal idea/content

GOing beyond
cyber**S**ecurity to achieve
Cyber resilience **P**rojet

GOSCIP

An avant-garde, edge-based, decentralized, and distributed digital infrastructure with no single point of failure to achieve local autonomy, global consistency, and total resilience of CI's the information systems.

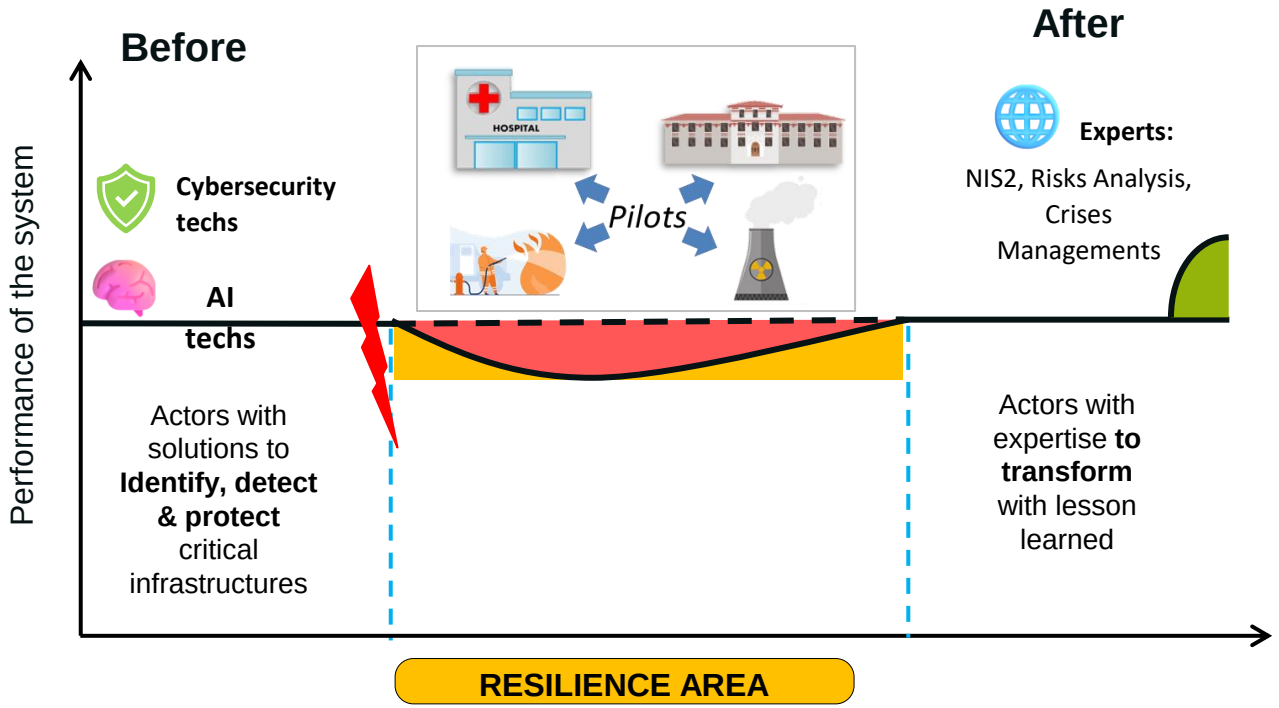




Goals

> Deep prediction, efficient detection, quickly bouncing back <

Who are we looking for?



Enhancing Resilience of Hydrogen Energy Infrastructure to Critical Incidents

Vojtech Jankuj

vojtech.jankuj@vsb.cz

VSB-Technical university of Ostrava

The Czech Republic

Destination of interest: *HORIZON-CL3-2025-01-INFRA-01*

Proposed role: ***PARTNER***

Needs and interests

Enhancing safety in the production, storage, and distribution of hydrogen.

Strengthening resilience of critical energy infrastructure against major incidents (hydrogen leaks, BLEVE, explosions, fires).

Increasing awareness and preparedness for emergencies related to hydrogen technologies.

Need for development, validation, and implementation of new safety measures and technologies at regional and European levels.

Our proposed role

Safety and explosion protection (experimental testing, simulations, modelling, risk assessment and safety analysis).

Emergency Management and Crisis Response

Design and Testing critical accident/emergency scenarios, development of methodologies and response strategies

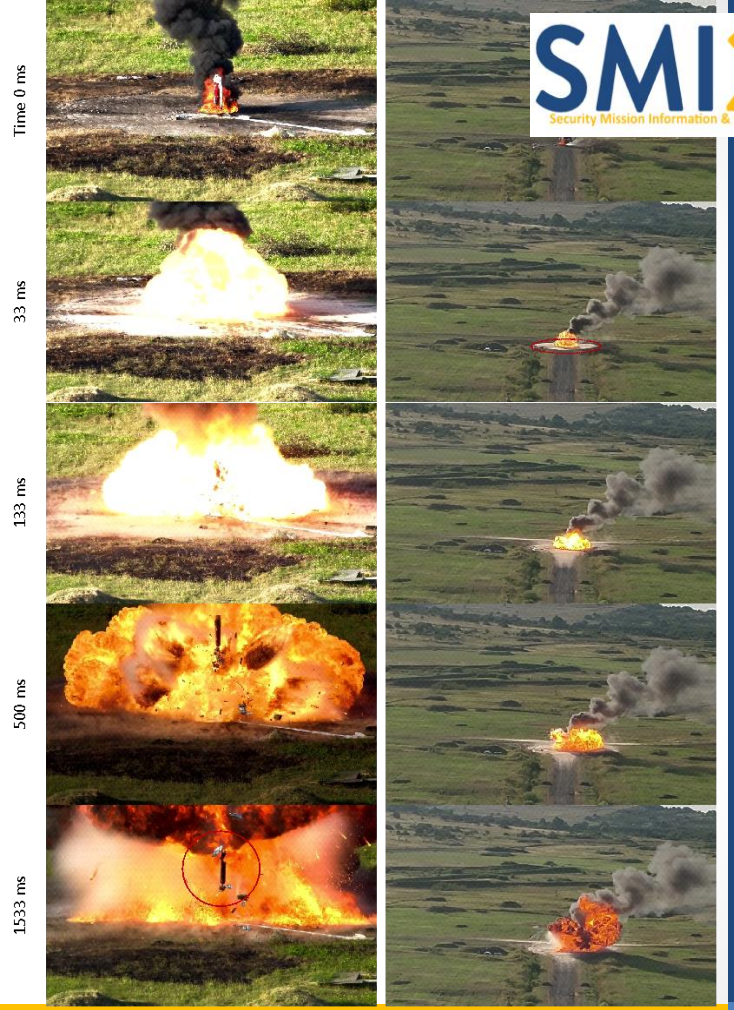
Close collaboration with industrial partners and fire responders.

Well-equipped laboratories and infrastructure for hydrogen accident scenario testing.

CESAR Centre of Excellence for Safety Research | CENTRE OF SIMULATION TECHNOLOGIES

Research Partner / Work Package Leader

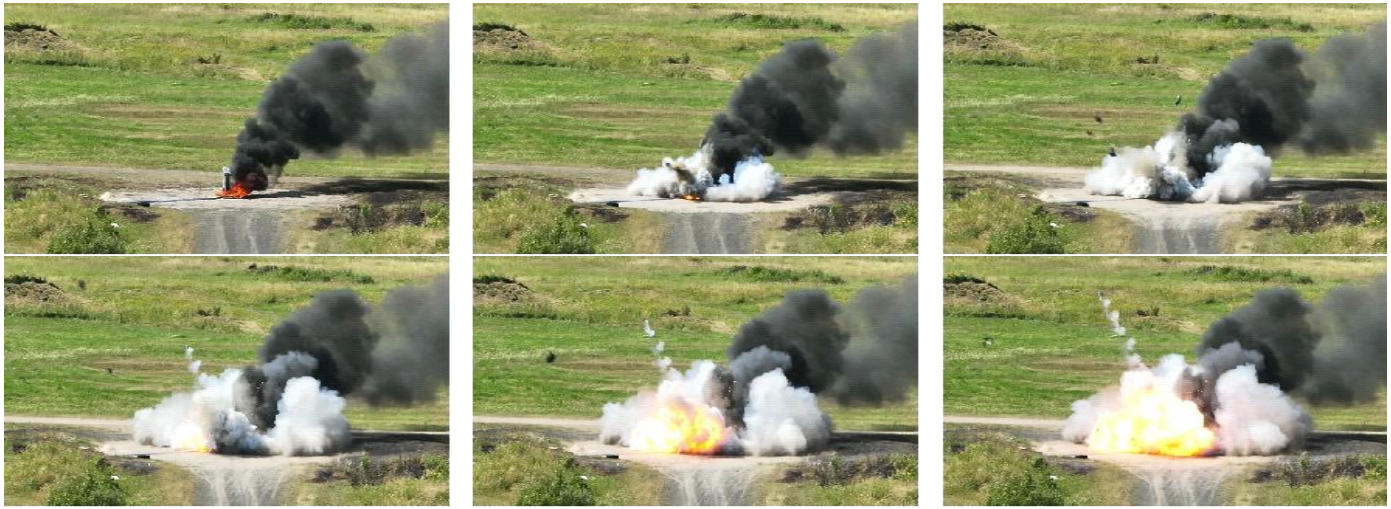
focused on experimental testing, safety analysis, and risk management, critical infrastructure, crisis management for responders.



SMI2G
Security Mission Information & Innovation Group

SMI2G 2025 • 6&7 May 2025, Paris

Thank you for your attention



Vojtech Jankuj | vojtech.jankuj@vsb.cz | +420732540563 (WhatsApp available)

Early-Warning and Damage Protection for Extended Life of Critical Infrastructure

- *Dr. Marc Thielen*
- *marc.thielen@emi.fraunhofer.de*
- *Fraunhofer EMI*

- Role: *Scientific/Technical coordinator, WP leader, t.b.d.*

- Topic to be addressed: *CL3-INFRA-01-01 Open topic for improved preparedness for, response to and recovery from large-scale disruptions of critical infrastructures*

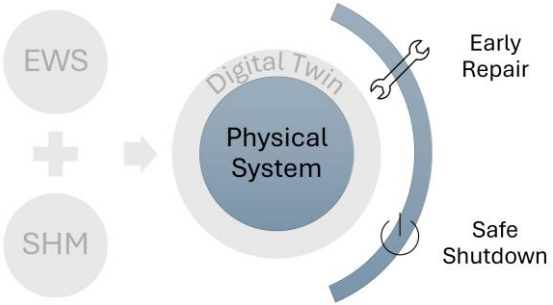
Proposal idea/content

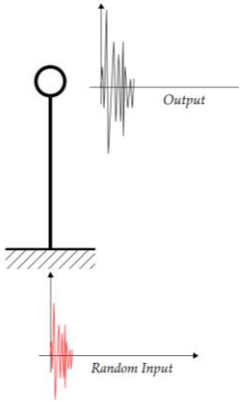
- *Scope: Extension of life of critical transport infrastructure*
- *Motivation:*
  - *Structural health monitoring technologies are useful, but the information they provide is belated as they show information of damage that has already occurred.*
- *Objective:*
  - *Develop a tool that allows to **infer** the **location** and **severity of future damage** in critical infrastructure (CI) before it occurs.*
  - *Combine **early warning systems** and **structural health monitoring** into **a real-time digital twin** of the CI.*

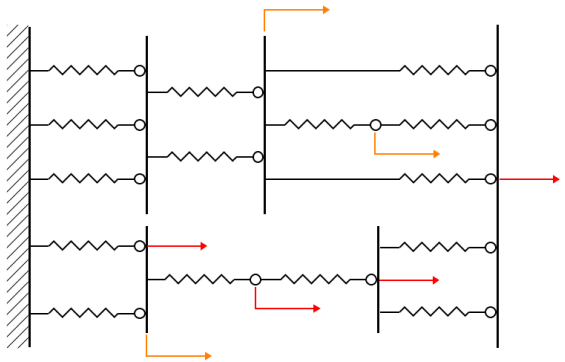
*→ predict the behavior of the physical system to allow **early repair** or **safe shutdown** of the critical infrastructure before damage gets excessive.*

Proposal idea/content

- *Derive insights on the post-linear-elastic response from the linear-elastic operational mode, from small-displacements, and from ambient vibrations of the critical infrastructure by:*
  - *Quantum and statistical descriptions of nonlinear dynamics of large-scale interacting lattice systems*
  - *Using machine learning solutions to correlate early warning data with structural response prognosis*







Project participants

- Existing consortium:
  - Proposed coordinator: Fraunhofer EMI (scientific/technical)
  - Partners / Other participants: NIRAS A/S

- Looking for partners with the following expertise/ technology/ application field:
  - Critical infrastructure operators and/or authorities contributing a use case
  - Developers of digital tools for early warning systems for critical infrastructure
  - Sensor technologies for structural health monitoring
  - Machine learning experts for small dataset solutions

01-INFRA-02

HORIZON-CL3-2025-01-INFRA-02:

Open topic for role of the human factor for the resilience of critical infrastructures

INFRA-02 SESSION – PRESENTATIONS

01-INFRA-02	Gian Paolo Cimellaro	GianPaolo.Cimellaro@polito.it
	François Briat	françois.briat@interieur.gouv.fr
	Raúl Orduna Urrutia	rorduna@vicomtech.org
	Madrid Police Representative	dri.pm@madrid.es

STRONG: Societal and technological sustainable and efficient risk-control and resilience for hydrogen supply chain networks

- *Gian Paolo Cimellaro; Ivo Häring*
- *gianpaolo.cimellaro@polito.it; ivo.haering@emi.fraunhofer.de*
- *POLITO; Fraunhofer EMI*

- Role: *Coordinator; Technical coordinator under POLITO coordination*
- Topic to be addressed: *HORIZON-CL3-2025-INFRA-01-02*

https://insideclimatenews.org/news/06122024/philadelphia-mach2-hydrogen-hub-challenges/

https://www.bbc.com/news/uk-england-tees-67467708

SMI2G 2025, 6&7 May 2025, Paris

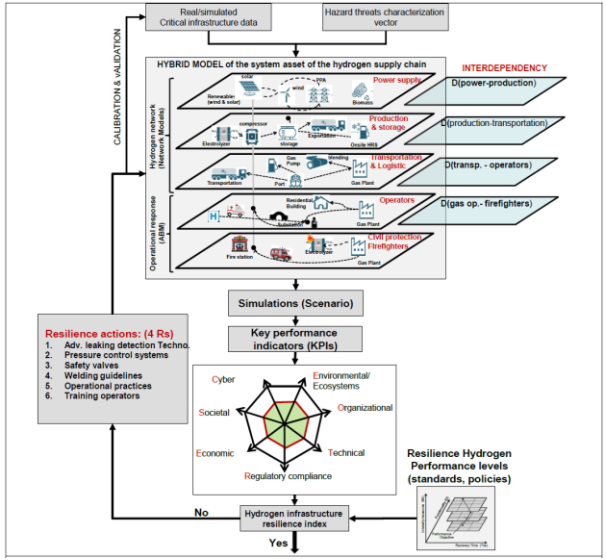
Addressing H2 Infrastructure customers', third parties', operators', planners', and regulators' needs

(Remaining) Issues, e.g.:

- Societal, Individual, economic, acceptance/acceptability
- Certifiability, Insurability, Auditability
- Oxyhydrogen reaction
- Leak avoidance, localization
- Anomaly interpretation in context
- H2 and na., tech., terroristic threats

Neutral assessment within framework

- Societal Science and Humanities (SSH) Layers
- Technology and Science Layers
- Joint KPI metrics



- Reevaluation of issues

Efficient SSH- and technology- based risk control and resilience tools, e.g.:

- Interactive citizen/stake-holder participation
- Periodic drone surveillance countering H2 theft
- Risk/Resilience quantification, pre-certification
- Standard development support
- Resilient grid design and sensor, valve, etc., position optimization

GianPaolo.Cimellaro@polito.it, Ivo.Haering@emi.fraunhofer.de

Project participants

- **Existing consortium:**
  - Coordinator, 2 Infrastructure operators, 2 mayor industry partners, Several technology SMEs, 1 SSH SME, 2 RTOs
- **Looking for partners with the following expertise/ technology/ application field:**
  - ***H2 infrastructure planners, constructors***
  - ***H2 Infrastructure operators, e.g. grid (also blended), storage, distribution, also mobile***
  - ***H2 Technology developer, e.g. robust material, pumps, H2-sensors***
  - ***H2 Infrastructure surveillance service provider***
  - ***H2 Related Authorities, Certification bodies, Commercial Certification organizations, Standardization organizations***
  - ***SSH SMEs working in domain H2 technology foresight, introduction, acceptance, organizational factors, etc.***
  - ***Technology SMEs for safety, security, risk control and resilience of H2 supply chain***

GianPaolo.Cimellaro@polito.it, Ivo.Haering@emi.fraunhofer.de

FRENCH POLICE & FIRE-FIGHTERS

- *François Briat*
- *françois.briat@interieur.gouv.fr*
- *Ecole Nationale Supérieure de la Police (ENSP) / Service Départemental Métropolitain d'Incendie et de Secours (SDMIS)*

- **Destination of interest**: *CL3-2025-01-INFRA*

  - ***INFRA-02**: Open topic for role of the human factor for the resilience of critical infrastructures*

Needs and intere

- ***Strong stakes*** *for civil protection authority and law enforcement agency to foster critical infrastructures resilience*
- *Human factor is a very strong dimension of ENSP axis of research and studies*
- *Allow users to be part of the* ***early stage of research and innovation*** *to:*
  - *Ensure solutions are developed according to users' needs and requirements*
  - *Spread the culture of innovation among first responders*

Contribution

- **Critical pool of different type of responders** for:
  - Collection of users' needs and users' technical requirements
  - Tests, evaluation and validation of technologies / procedures
  - Dissemination of results amongst community of users'
- **Infrastructures to organise all types of exercises**, from Table top to Full scale exercises
- **Strong experience** in EU and nationa research and innovation projects
- **Preferred role in a consortium**:
  - Users' coordination
  - WP leader for WPs on:
    - Users' needs
    - Training
    - Tests, Evaluation and Validation

François Briat - *françois.briat@interieur.gouv.fr*

Farstrider Radio Surveillance

- *Raúl Orduna-Urrutia*
- *rorduna@vicomtech.org*
- *VICOMTECH*
- *WP leader*

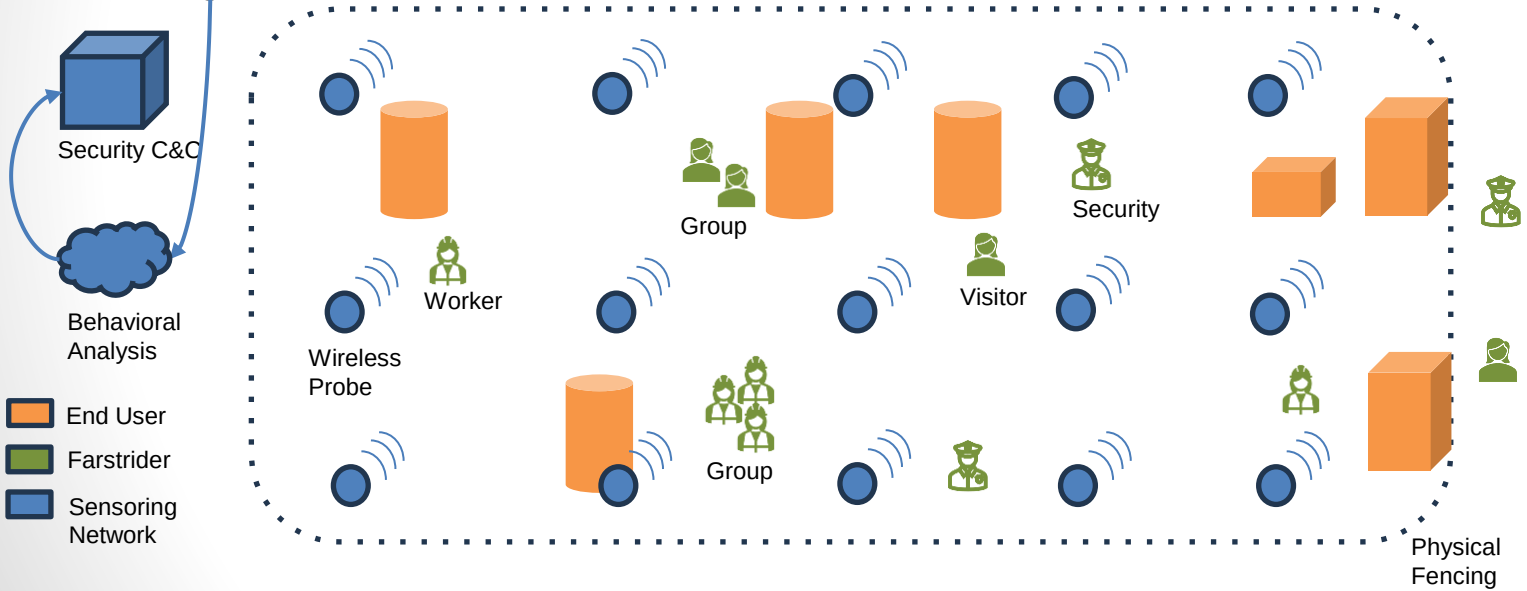
- Topic to be addressed: *CL3-2025-01-INFRA-02*

"Open topic for role of the human factor for the resilience of critical infrastructures"

Proposal related to hybrid threats and physical impact modelling on blind spots

Proposal idea/content

- Using people RF footprint to better describe security incidents and response actions, improving cyber-physical risk



Project participants

- Existing consortium:
  - Proposed coordinator: Not yet
  - Partners / Other participants:
    - Cyber security analysis of Cellular Communication
    - UEBA analysis for farstriders
    - Advance pattern extraction and identity management
    - Spanish End User, transport sector
- Looking for partners with the following expertise/ technology/ application field:
  - Large Security Manager (Lead)
  - CCTV operator
  - Drone/AMR surveillance
  - End user, open critical infrastructures

POLICÍA MUNICIPAL MADRID

MADRID POLICE

dri.pm@madrid.es
(End user)

Interests 2025 Call:

- **FCT 01-02-03**
- **INFRA 01-02**
- **DRS 01-02-04**

Needs and interests

- √ Proximity & community policing
- √ Document analysis & judicial support
- √ CBRN-E environment protection
- √ Urban & road analysis
- √ Urban heritage protection
- √ UAV technologies
- √ Artificial intelligence (AI)
- √ CCTV technologies
- √ Public order
- √ Traffic & workplace accidents investigation
- √ Hate crimes & diversity management
- √ Domestic and gender-based violence

Contribution

- √ System requirements identification
- √ Pilot organization
- √ Evaluation & validation of results
- √ Dissemination

SPECIALICED EU PROJECTS UNIT

12 years working in EU projects

28 EU granted projects

INFRA SESSION – THE END

Frédéric Perlant frederic.perlant@recherche.gouv.fr

Alberto Bianchi alberto.bianchi@leonardo.com

Salvatore D'Antonio salvatore.dantonio@uniparthenope.it

Marco Manso marco.manso@imgs-eu.org

01-INFRA-01 ● 01-INFRA-02

INFRA Review Team

Alberto Bianchi | Frédéric Perlant | Salvatore D'Antonio | Marco Manso