PRECINCT: Preparedness and Resilience Enforcement for Critical INfrastructure Cascading Cyberphysical

Description

EU Critical Infrastructures (CIs) are increasingly at risk from cyber-physical attacks and natural hazards. Research and emerging solutions focus on the protection of individual CIs, however, the interrelationships between Cis has become more complex for example in smart cities and managing the impacts of cascading effects and enabling rapid recovery is becoming more pertinent and highly challenging. PRECINCT aims to connect private and public CI stakeholders in a geographical area to a common cyber-physical security management approach which will yield a protected territory for citizens and infrastructures, a PRECINCT that can be replicated efficiently for a safer Europe and will deliver:

- A PRECINCT Framework Specification for systematic CIs security and resilience management fulfilling industry requirements;
- A Cross-Facility collaborative cyber-physical Security and Resilience management Infrastructure enabling CI stakeholder communities to create AI-enabled PRECINCT Ecosystems and enhanced resilience support services;
- A vulnerability assessment tool that uses Serious Games to identify potential vulnerabilities to cascading effects and to quantify resilience enhancement measures;
- PRECINCTs Digital Twins to represent the CIs network topology and metadata profiles, applying closed-loop Machine Learning techniques to detect violations and provide optimised response and mitigation measures and automated forensics;
- Smart PRECINCT Ecosystems, deployed in four large-scale Living Labs and Transferability Validation Demonstrators, will provide measurement-based evidence of the targeted advantages and will realize Digital Twins corresponding to the CIs located therein, include active participation of emergency services and city administrations with results feeding back to the Digital Twins developments;
- Sustainability related outputs including Capacity Building, Dissemination, Exploitation, Resilience Strategy, Policy/ Standardisation recommendations.

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