



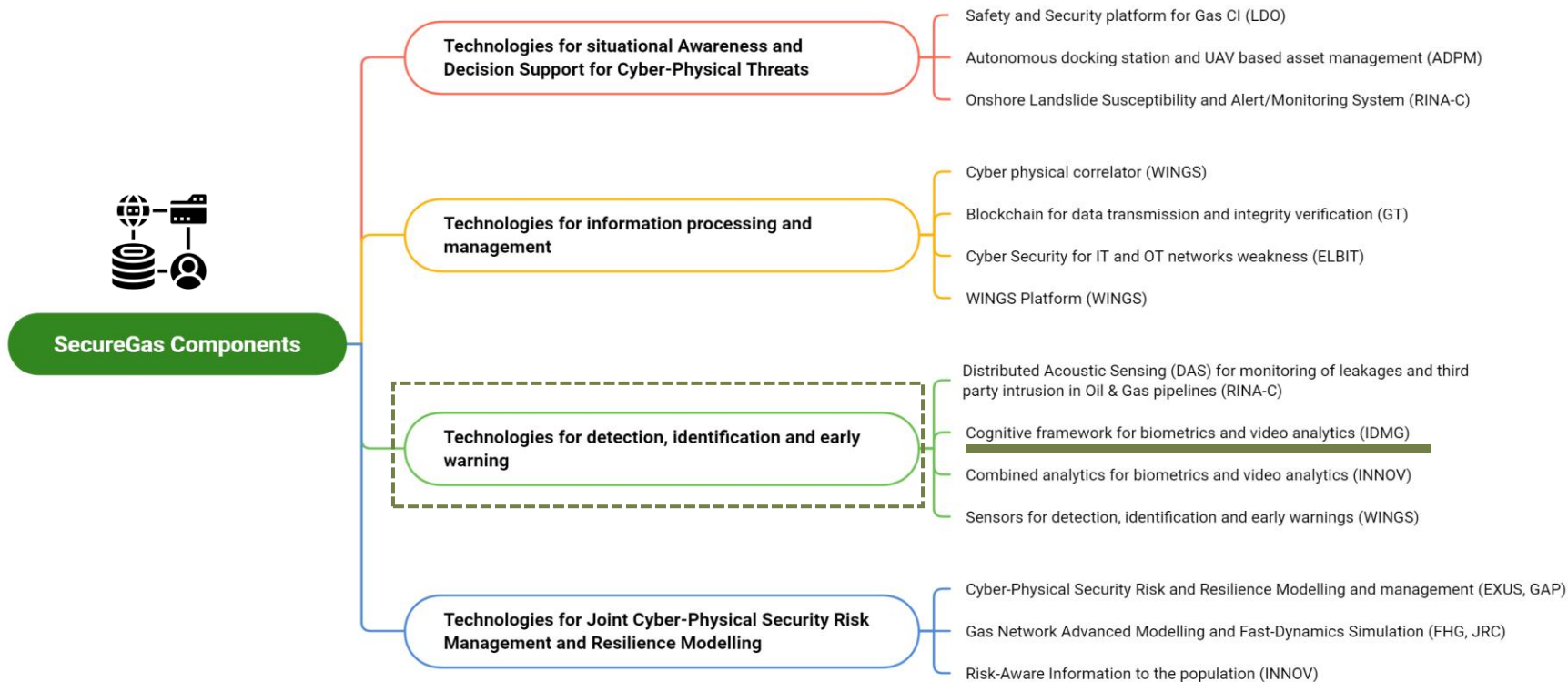
SecureGas

Securing the European Gas Network



SecureGas project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No 833017

SecureGas extended components



Cognitive framework for biometrics and video analytics

DESCRIPTION

Operating 24/7, an automated video analytics system shall raise an alarm, if a person or vehicle is spotted outside permissible paths, or certain type of suspicious behaviour is observed.

SecureGas proposes a novel automated person, vehicle and object detection and tracking from video under low-light conditions and automated analysis of tracks to find anomalies.

ML-based classification algorithms going beyond will be used on near infrared (NIR) imagery to automatically classify types of targets and analyse suspicious activity near features of the facility, e.g. positively identifying a person climbing a refinery tower, checking the perimeter, riding a fence at night.

This component will be installed by EEDA and DEPA; EEDA will install the tool for the face recognition based on infrared sensors that are able to work also in bad conditions. The aim is to detect people's intrusion to protect secured areas.

The tool is based on video biometrics cameras to detect suspicious event and potential threats dangerous for the gas network integrity. The component is also characterized by an analytics part based on video recorded. The tool in fact is able to combine data coming from people's presence to check intrusion in different sites/facilities, comparing in this way different scenarios.

Cognitive framework for biometrics and video analytics

BENEFITS



- a) **Improved quality of alarms from automated video analytics:** person, vehicle detection and tracking under low-light conditions using improved white list detection and deep learning networks; path prediction with area control based on improved track concatenation; and detection of persons, who intentionally hide their face at critical spots, as an anomaly.
- b) Main advantages coming from the use of video analytics are presence analytics and patterns of movement detection. The video analytics allows monitoring and checking any presence and intrusion in a periodic and repetitive way.

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APPLICATION CASE

- **Business Case 1**



TARGETS

- **Target End Users:**
 - 1) O&G companies
 - 2) security departments
- **Target Assets:** All types of onshore O&G facilities: intrusion detection, classification



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