

AIMS & OBJECTIVES

CONNEXIONS aims to equip Law Enforcement Agencies (LEAs) with an interconnected suite of advanced next-generation technologies for significantly improving their capabilities to gather intelligence, analyse evidence, and investigate crime and terrorism effectively and efficiently.

The main **CONNEXIONS** results will be:

- Multimodal information extraction, understanding, integration, correlation, retrieval, and delivery services.
- Immersive environments for improving situational awareness, investigation and training capabilities.
- Operation Command Centre for real-time management of LEA operations.
- **CONNEXIONS** integrated platform based on ethics and privacy by-design principles, implementing EU legal requirements, whilst being highly customisable to local legislations.

BENEFITS

- Provision of better tools tailored to the needs of LEA officers to support them on their daily work.
- Prevention of more terrorist endeavours.
- Better identification and understanding of criminal and terrorist activities.
- Improved investigation and training capabilities.
- Rapid crime solving to reduce: societal distress, investigative costs, impact on victims / relatives.

CONSORTIUM



CONTACT US



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InterCONnected NEXt-Generation
Immersive IoT Platform of Crime and Terrorism
DetectiON, PredictiON, InvestigatiON, and
PreventiON Services

FIGHTING CRIME AND TERRORISM



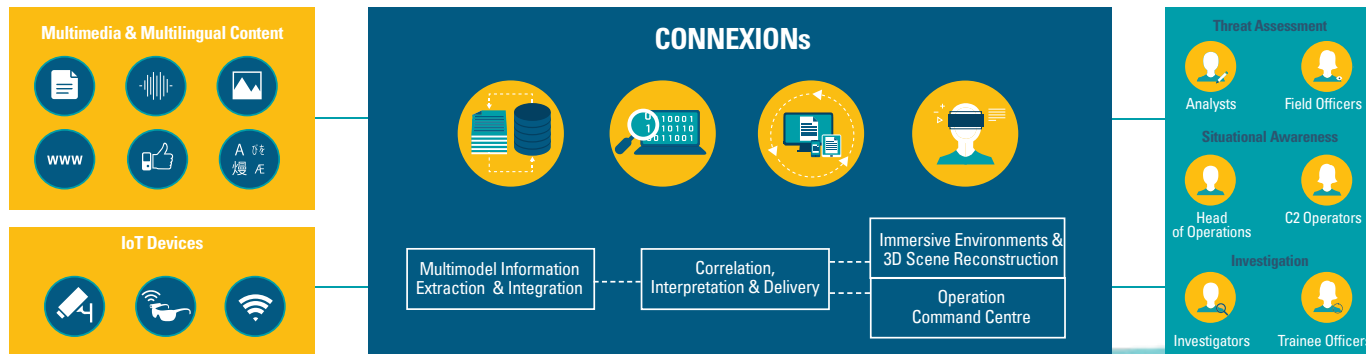
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CONNEXIONS CONCEPT

CONNEXIONS aims to develop and demonstrate a next-generation detection, prediction, prevention, and investigation platform by building upon the concepts of:

- Multidimensional integration and correlation of heterogeneous multimodal data, including (Surface/Deep/Dark) Web and social media multilingual and multimedia content, data acquired by Internet of Things (IoT) devices, police reports, and digital evidence obtained from seized devices and communication channels.
- Delivery of pertinent information to various stakeholders in an interactive manner tailored to their needs, including through immersive (augmented reality - AR and virtual reality - VR) environments.

CONNEXIONS aims to improve the capabilities of officers across the board by encompassing the entire lifecycle of law enforcement operations.



LEA OPERATIONS

Pre-occurrence Prediction and Prevention

- Intelligence gathering based on the discovery, collection, and analysis of online content.
- Threat assessment and early warnings provision.
- 3D site reconstruction for unit deployment planning.

During-occurrence LEA Operations

- Continuous Web and social media monitoring.
- Video footage processing for object detection, face identification, and abnormal activity detection.
- Multimodal analytics for threat assessment.
- AR-based (near) real-time alerts to field officers.
- Enhanced situational awareness and unit management in the Operation Command Centre.

Post-occurrence Investigation

- 3D crime scene reconstruction.
- VR-based scene exploration & investigative hypotheses simulation.
- Summarisation and reporting services.
- Analytics services to seized evidence and devices.

USE CASES

TERRORIST THREAT TO A PUBLIC EVENT

Large-scale public events, such as concerts, football matches, and festivals, always pose major challenges for LEAs in their effort to ensure public safety.



HUMAN TRAFFICKING

Trafficking in human beings is a highly lucrative form of organised crime that requires advanced next-generation technologies as it is often enabled by Web platforms, e.g., targeted recruitment forums and websites.



IMPROVED CRIME INVESTIGATION & TRAINING THROUGH 3D SCENE RECONSTRUCTION

Being able to return to the crime scene virtually would help investigators detect further evidence. Moreover, trainee officers could work in parallel on a case alongside a leading investigator to improve and develop their skills.

