

# Consortium



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MIRANDA EU project



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**Monitoring, Investigation  
and Response to cyber-  
attacks with an Adaptive  
digital twin model for  
Agile services over the  
computing continuum**

## Project factsheet

**Start date:** 01/09/2024

**Duration:** 36 Months

**Budget:** 7 308 925.00 €

**Programme:** HORIZON-CL3-2023-CS-01-01

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A framework for collaborative  
cyber-security operations over  
service supply chains



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# Concept

## An adaptive digital twin for agile services over the computing continuum

MIRANDA develops a Cybersecurity Digital Twin (CDT) to model and capture the security posture of interconnected multi-ownership systems, which is used to detect, hunt, and remediate threats and attacks. On top of the CDT abstraction, MIRANDA builds adaptive and automated processes for threat hunting, detection of lateral movements, and eradication of the root causes of attacks.

## Multi-ownership digital service chains

While modern digital services often build upon third party's components, many providers are often not aware of what is behind their upstream suppliers' resources. Dynamic service composition paradigms makes the service mesh unpredictable and ever changing at run-time.



## A new breed of Digital Twins

MIRANDA's Cybersecurity Digital Twin is not a plain model of digital assets. It is a combined model of the current execution environment and attacks, which provides pervasive visibility, proactive identification of vulnerabilities and attacks, and adaptivity to ever-evolving environments. These three features will improve existing monitoring, detection, response, and hunting processes.

# Use Cases

## #WolfsburgDigital

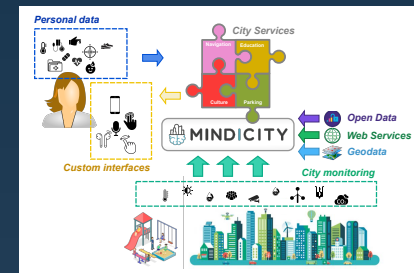


The core of #WolfsburgDigital is a service-oriented ecosystem for collection, processing, and sharing of large

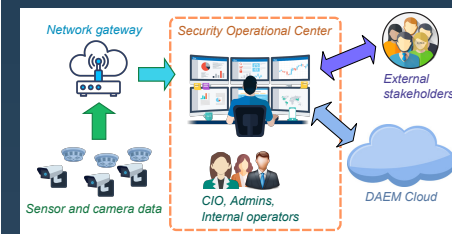
bulks of data around the City. The set of digital services includes intelligent traffic lights, urban planning and mobility, smart parking, electrical charging, open data for businesses and citizens.

## Inclusive Genoa

The core of Inclusive Genoa is a Urban Intelligence platform that mixes Big Data, Artificial Intelligence, and City Science. On top of it, adaptive services are built, that tailor input interfaces, content and its representation to different generations and abilities of citizens.



## Safe Athens



The strategic plan for Safe Athens envisions the development of innovative services for both the

administration and the citizens, such as e-Services, public safety, and access to municipal assets, including in-house developments and external providers.