SENTINEL

Bridging the security, privacy and data protection gap
for smaller enterprises in Europe

This project has received funding from the European Union's Horizon 2020 Research and Innovation program under grant agreement No 101021659.

1. SENTINEL at a glance (Project's key facts, motivation, statement, workflow, key drivers)
2. SENTINEL Objectives
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SENTINEL at a Glance: Key Facts

Project Consortium

13 Partners

Project Type

Innovation Action

Max EU Contribution

€ 3,998,982.50

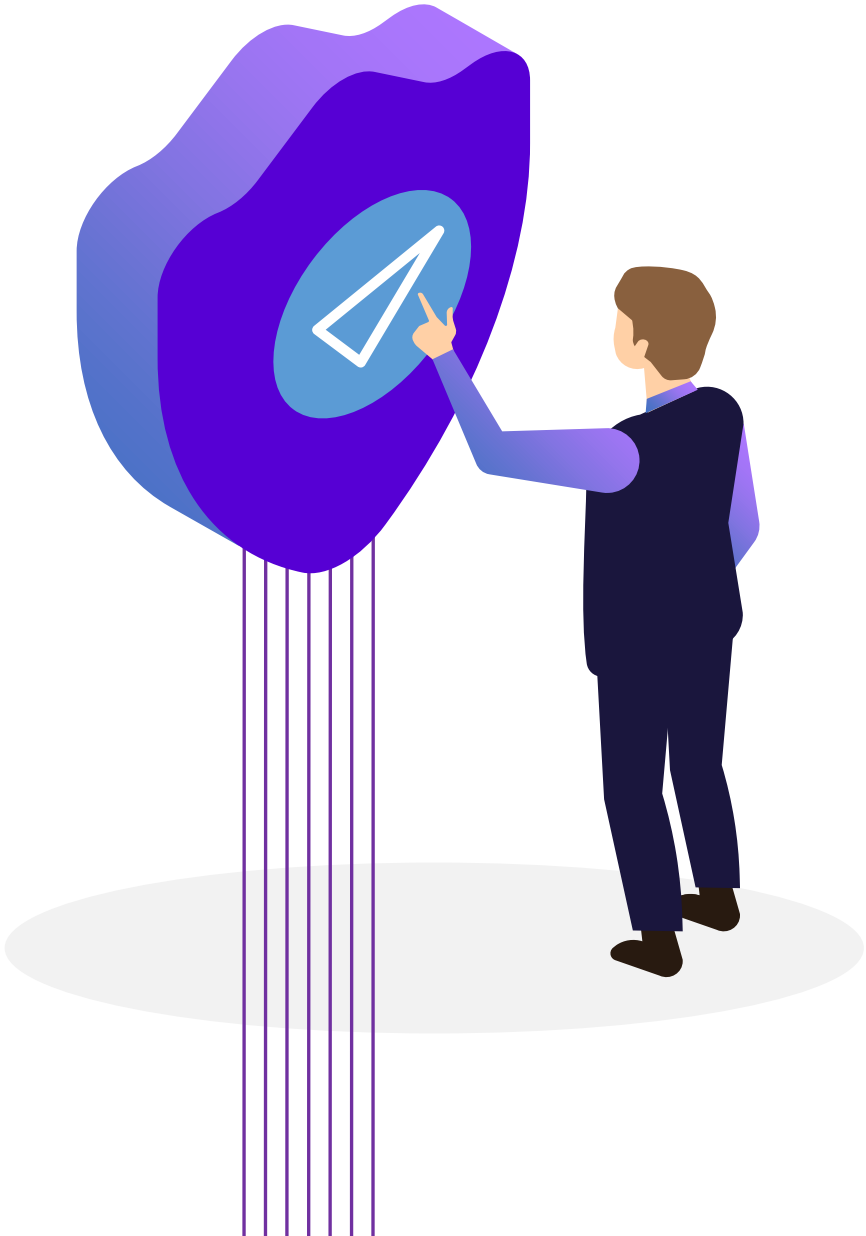
Calendar

Start: 1st June 2021

Duration: 36 months

SENTINEL Motivation

EU SMEs and MEs



Need Protection

- Violation on individuals' privacy and rights.
- Operational downtime and/or data loss.
- Reputation damage.
- GDPR fines.

Face Challenges

- Lack of awareness about personal data protection (PDP), cybersecurity (CS) and how they interconnect.
- Lack of PDP/CS and GDPR compliance due to price, commitment of resources, complexity, etc.
- Mitigating risks, monitoring and troubleshooting their IT assets.

SENTINEL Statement

SENTINEL provides a **complete privacy, cybersecurity and data protection suite** that enables small and medium enterprises to achieve business security and safeguard their and customers' assets in an efficient and affordable manner.

It integrates security and privacy technologies into a unified architecture and then applies intelligence for compliance.

It automates GDPR compliance and provision of recommendations for personal data protection and cybersecurity.

It educates SMEs on GDPR requirements and how to achieve compliance.

It provides a plethora of tools for real time monitoring and threat mitigation.

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SENTINEL WORKFLOW

PROFILING

User onboarding;

Company data, contacts, assets profile;

Recording personal data processing activities.

SENTINEL WORKFLOW

ASSESSMENT

GDPR compliance self-assessment (GDPRCSA);

Data protection impact assessment (DPIA);

Cybersecurity assessment (MITIGATE simulation environment);

Cybersecurity simulations (CyberRange).

SENTINEL WORKFLOW

Recommendations & Policy

Creating and updating CS & PDP policy, recommending:

- Measures (OTMs);
- Educational and training material;
- Software tools and plugins;

SENTINEL WORKFLOW

Awareness, monitoring & compliance

Policy enforcement monitoring;

Consulting the Observatory;

Security notifications;

Incident & data breach handling ;

Compliance centre.

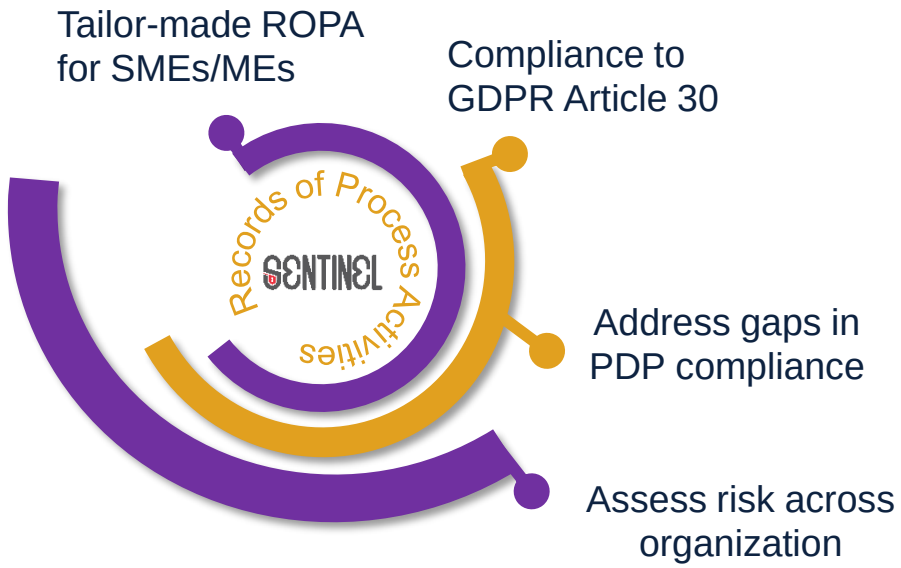
SENTINEL KEY DRIVERS

> GDPR Article 30 the so-called
> “Record of Processing Activities (ROPA)”.

A Processing Activity is a description of how an organization handles personal data

It is an obligation for many companies (depending on size and data types they handle)

SENTINEL aims to help such entities keep a record of processing activities in an understandable manner



SENTINEL

SENTINEL OBJECTIVES

1. Develop and support an end-to-end digital Privacy and Personal Data Protection (PDP) compliance framework and Identity Management System (IdMS)
2. Provide scientific and technological advances in SMEs/MEs' data protection compliance assessment, orchestrated towards the comprehensive digital Privacy and PDP compliance framework for SMEs/MEs
3. Provide novel tools and services for enabling highly-automated PDP compliance in SMEs/MEs
4. Validate SENTINEL framework in real-world settings via use cases driven by complementary industries
5. Consolidate international and European links, raise awareness and ensure the technology transfer of project's results
6. Boost the effectiveness of the EU data economy by offering high TRL solutions (6-7)

SENTINEL CONCEPTUAL ARCHITECTURE

Contexts:

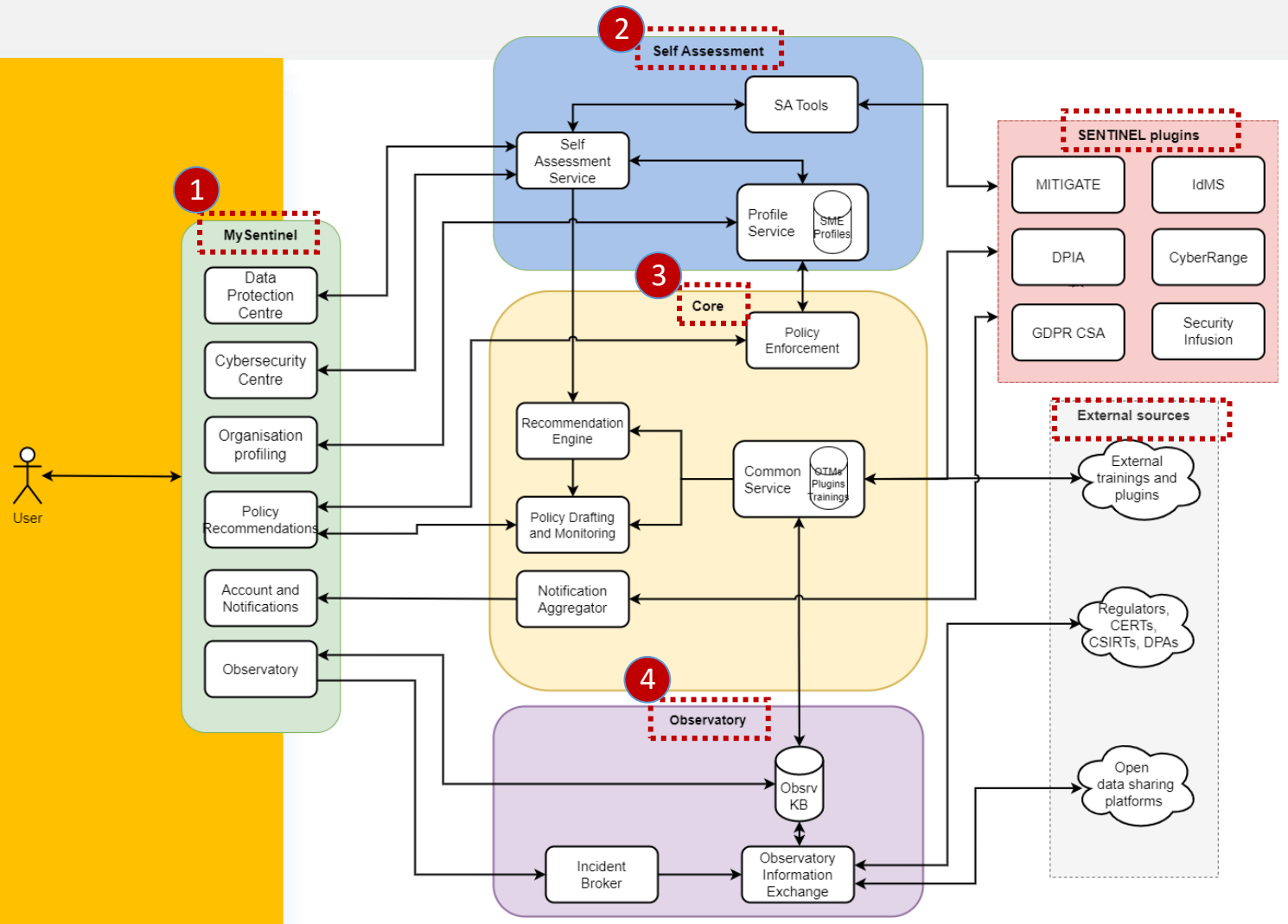
1. MySentinel
2. Self-assessment
3. Core
4. Observatory

SENTINEL Plugins:

- GDPR CSA
- DPIA
- MITIGATE
- CyberRange
- IdMS
- Security Infusion

External Plugins

- Open-source solutions (trainings, courses)

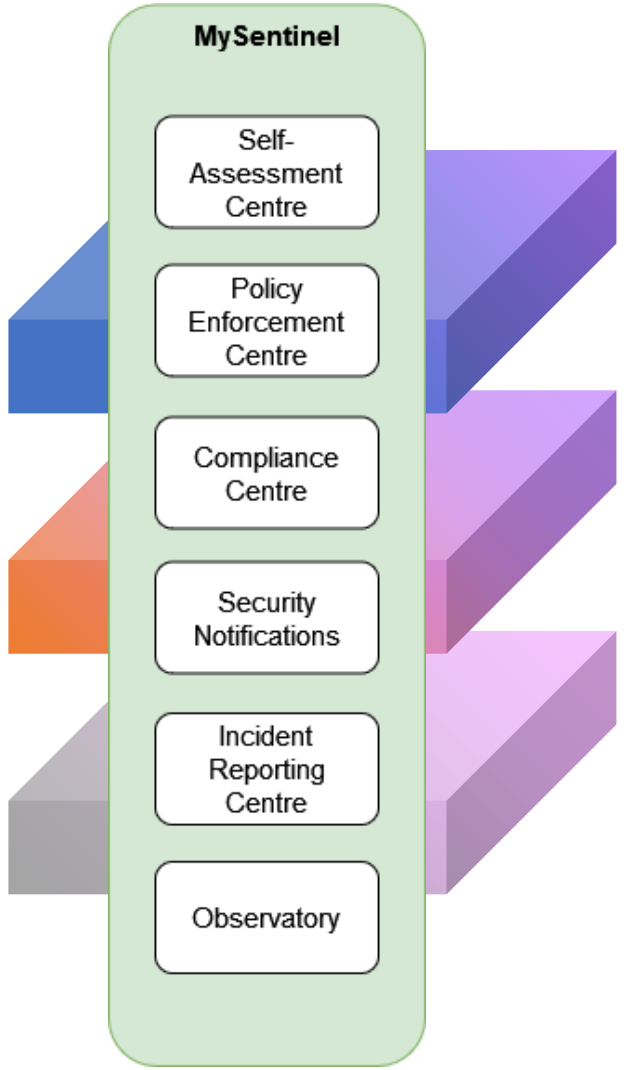


MY SENTINEL

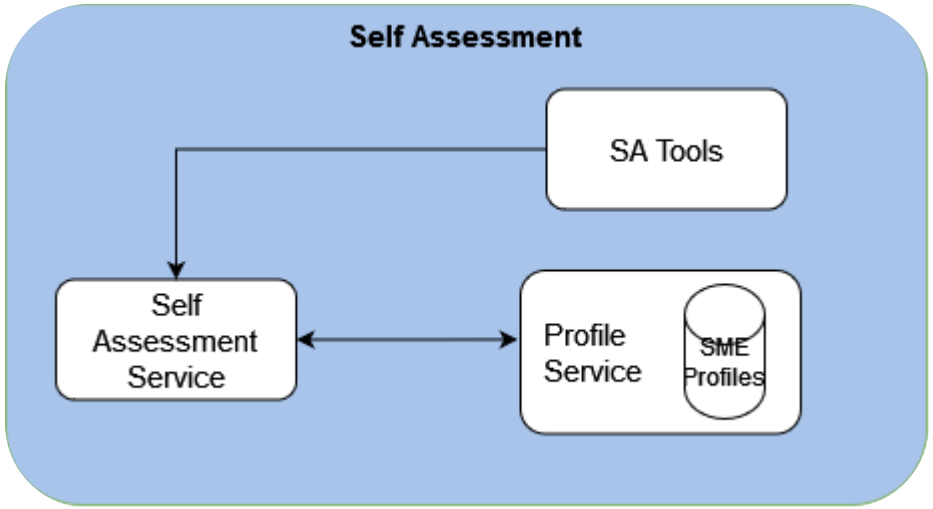
SENTINEL's visualization/UI component and primary dashboard

Aggregates data from all front-end components and user-facing web applications

Provides visual insight into SMEs' progress towards achieving their CS and PDP goals



SELF ASSESSMENT



Profile Service

Provides centralised storage and retrieval services for all SME data (Core organisation data, Personal data Processing activities (PAs), Self-assessment results, Recommendations Policy drafts).

SA Service

Performs eligibility checks and enables related workflows.

Calculates PA risk level

SA Tools

Plugins which provide **self-assessment** capabilities and share the common SENTINEL data model.

CORE

Common Service

Acts as a centralized source for:

The SENTINEL OTM classification

Software / tools / plugins, education and training material;

Recommendation Engine

Generates a list of recommended OTMs, plugins and pieces of training based on the risk level assessment;

Policy Drafting

Generates bespoke human-readable policy drafts based on the recommendations provided by the RE;

Implements and enforces the SENTINEL reusable policy template;

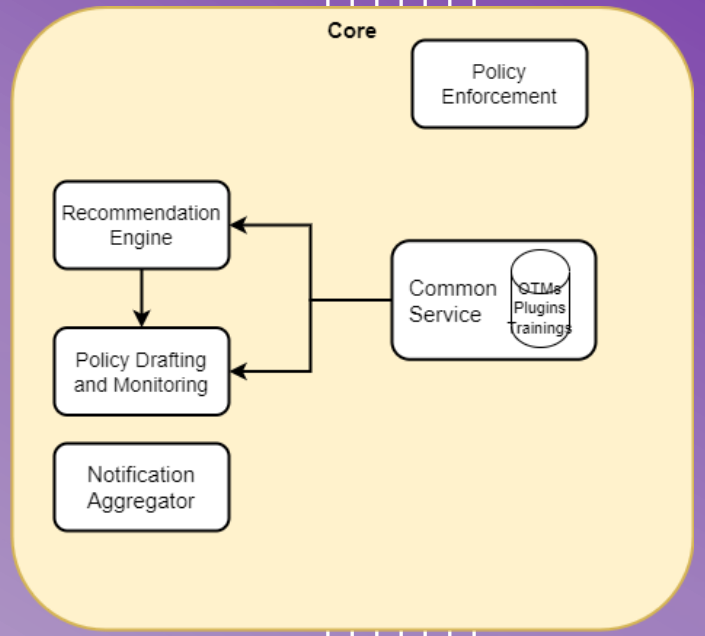
Policy Enforcement

Tracks the implementation status of policy recommendations ;

Notification Aggregator

Receives notifications from registered plugin adapters:

- Provides basic filters and aggregation mechanisms
- Provides endpoint for the front end



OBSERVATORY

Knowledge Base

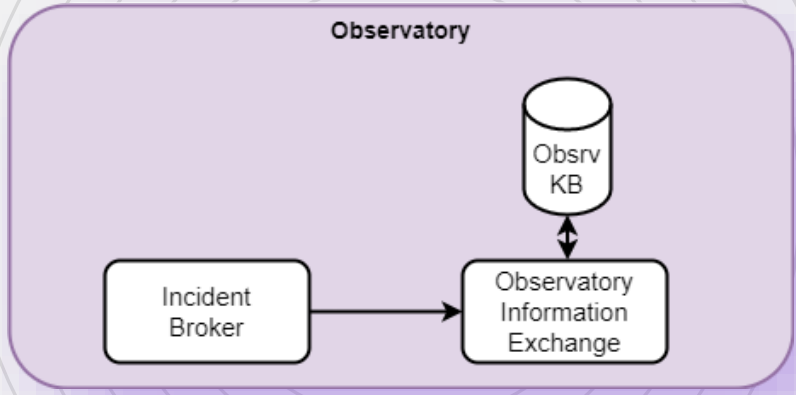
Provides storage and access to the information collected from external open data sharing platforms.

Information Exchange

Continuously monitors and collects information from open security data sharing platforms.
Populates and updates the Observatory Knowledge Base.

Incident Broker

Validates incidents and reports them to the Information Exchange and external bodies



SENTINEL PLUGINS

Not part of the “core” architecture

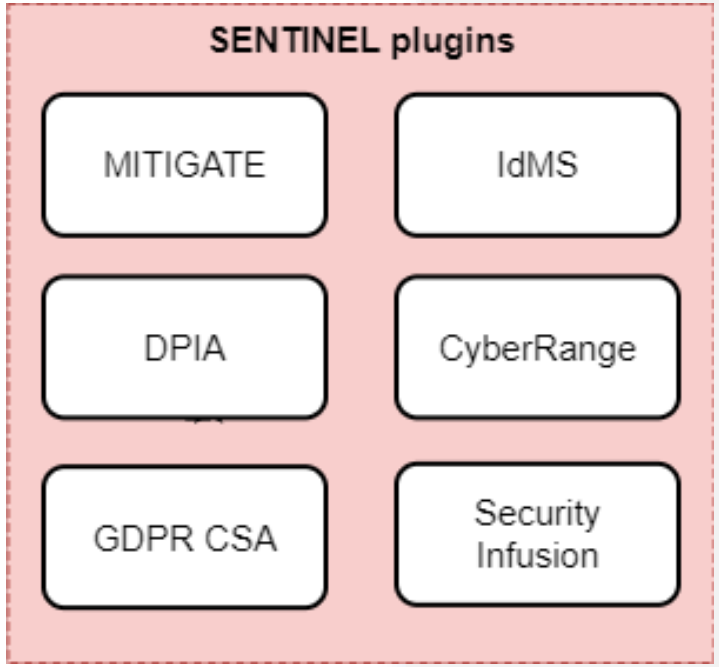
But providing real added value to SENTINEL through *Capabilities*

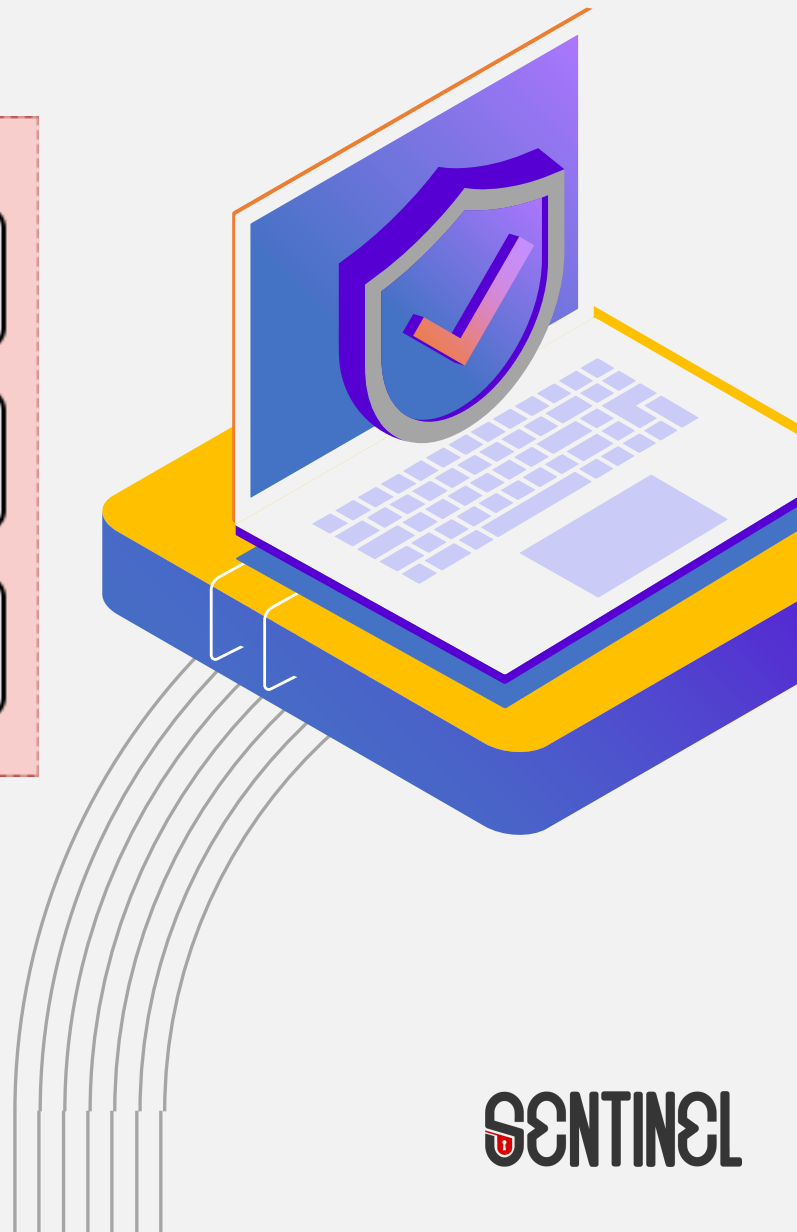
Developed and contributed by Partners

GDPR CSA
DPIA
MITIGATE
CyberRange
IdMS
Security Infusion

Open-source solutions

Also referred to as ‘external’ plugins.





SENTINEL VALIDATION

The SENTINEL framework validation in real-world settings is facilitated by two distinct enterprises in the fields of genomics and social care.

Genomics

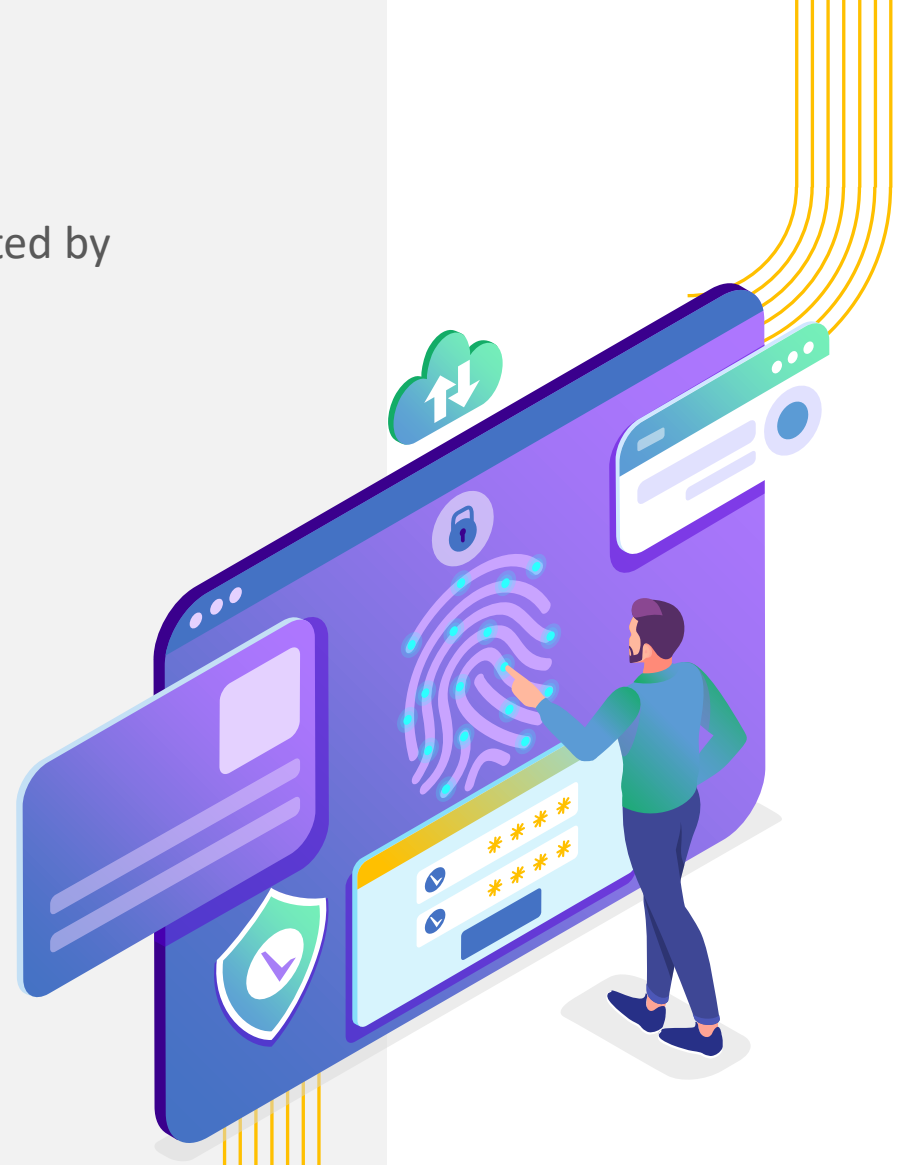
#1: Microenterprise test case

The focus of this test case is to implement extra security measures for accessing genomic sequence and personal data from a bioinformatics platform software pipeline.

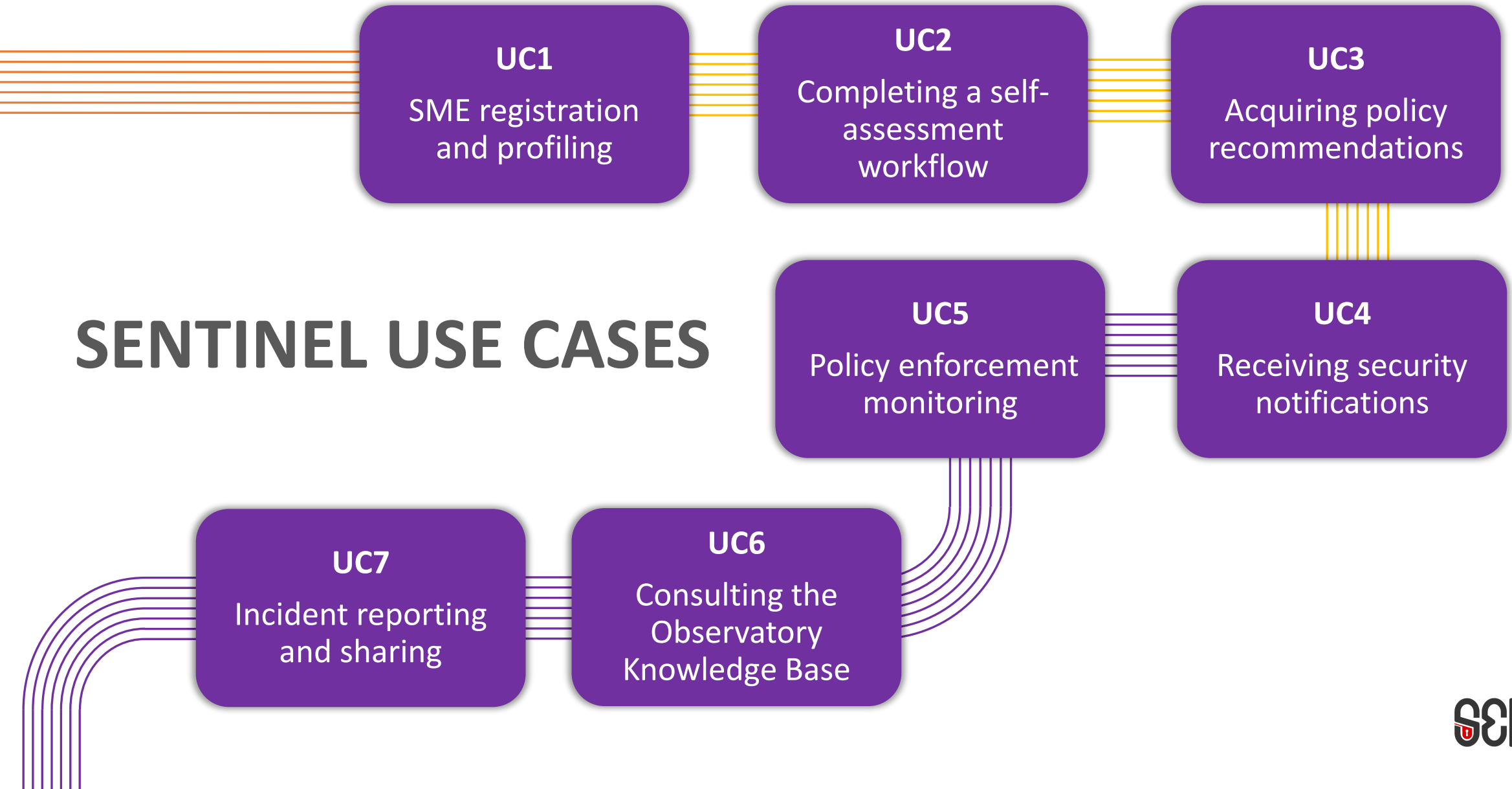
Social Care

#2: Small-Medium Enterprise

The focus of this test case is to homogenize the approach to data protection and compliance across multiple portfolio business through a single platform.



SENTINEL USE CASES



SENTINEL USE CASES

UC1

SME registration and profiling

The SME representative (user) registers the company and fills in the related information. Based on this information, the system provides a profile of the company.

UC2

Completing a self-assessment workflow

The user completes a self-assessment workflow.

UC3

Acquiring policy recommendations

Based on the assessment of the company profile the user gets a tailor-made set of security policy recommendations.

SENTINEL USE CASES

UC4

Receiving security notifications

The system detects a CS or PDP incident that affects an SME and alerts the SME representative to attend to it.

UC5

Policy enforcement monitoring

The user can monitor the status of implementation of policies they have received as recommendations from the SENTINEL platform.

UC6

Consulting the Observatory Knowledge Base

The user browses the SENTINEL Observatory Knowledge Base and accesses information about recently identified data and privacy breaches.

UC7

Incident reporting and sharing

The User reports a security incident and shares it with appropriate response teams and/or open security data platforms.

SENTINEL OFFERINGS & VALUE PROPOSITION

SME Training and Education

Raise awareness and train SMEs/MEs about GDPR compliance, obligations and measures to be taken through its set of services.

Evidence-based GDPR compliance

Providing one-to-one link between privacy requirements, measures & controls, cyber assets, configurations and real time monitoring.

Cutting costs through automation

Provision of GDPR compliance check, data protection impact assessment, tailor-made recommendations for GDPR compliance and policies, as well as real-time monitoring for cybersecurity and privacy compliance

Thank you for your attention!

Sentinel - EU Project

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