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Advanced Tools for fighting Online illegal trafficking

D11.1 – ANITA Website

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The ANITA Consortium consists of the following partners:

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1	Engineering Ingegneria Informatica	ENG	IND	IT
2	Centre for Research and Technology Hellas CERTH - ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	CERTH	RTO	GR
3	Centro Ricerche e Studi su Sicurezza e Criminalità	RISSC	RTO	IT
4	Expert System S.p.A.	EXPSYS	SME	IT
5	AIT Austrian Institute of Technology GMBH	AIT	RTO	AT
6	Fundacio Institut de BioEnginyeria de Catalunya	IBEC	RTO	ES
7	Istituto Italiano per la Privacy	IIP	NPO	IT
8	SYSTRAN SA	SYSTRAN	SME	FR
9	Stichting Katholieke Universiteit Brabant	TIU-JADS	RTO	NL
10	Dutch Institute for Technology, Safety & Security	DITSS	NPO	NL
11	Belgian Road Safety Institute	ISBR	RTO	BE
Law Enforcement Agencies (LEAs)				
12	Provincial Police Headquarters in Gdansk	KWPG	USER	PL
13	Academy of Criminalistic and Police Studies – Kriminalisticko-Policijska Akademija	AoC	USER	RS
14	Home Office CAST	CAST	USER	UK
15	National Police of the Netherlands	NPN	USER	NL
16	General Directorate Combating Organized Crime, Ministry of Interior	GDCOC	USER	BG
17	Local Police Voorkepen	LPV	USER	BE



Document History

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Definitions, Acronyms and Abbreviations

ACRONYMS / ABBREVIATIONS	DESCRIPTION
ANITA	Advanced Tools for fighting Online illegal trafficking
LEA	Law Enforcement Authority
PMC	Project Management Committee
QCB	Quality Control Board
SAB	Security Advisory Board
URL	Uniform Resource Locator



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Executive Summary

This report describes the ANITA website (content and structure) designed by project partners and published, with the support of screenshots and images taken from the online site and from the dissemination means.

The website, available since M1 at the URL <http://www.anita-project.eu/>, is the main communication channel developed and used by the ANITA consortium to:

- ensure adequate presence of the ANITA project on the web;
- inform target groups and general public about aims and objectives of the project;
- disseminate project's activities and initiatives;
- support the creation of synergies with similar projects to attract and concretely involve the relevant actors within the framework of counter terrorism;
- be the main tool to communicate, transfer knowledge and exchange information facilitating the collaboration between the potential users and the further extensions and adoption of the project outcomes.

The dedicated server hosting the ANITA website ensures flexibility to choose the most appropriate tools and technologies to support the website's evolving requirements.

The dissemination pack prepared for the ANITA project includes: the official logo of the project, a brochure with the most relevant information about the project aims and benefits, and an official Poster of the Project.



1 Introduction

The official ANITA website timing release was foreseen at M3 but it was available since the beginning of the project (M1).

More in particular, the **project website**, available at the URL <http://www.anita-project.eu/> since early May 2018 (M1) has been designed in order to present:

- target of the project aims and the benefits expected from the research and innovation activities carried on during the project lifetime;
- description of the project and in particular Objectives and ANITA's Main Goals;
- general information about ANITA partners;
- updated news and events;
- info posted on Social Network (Twitter);
- section "Contact us".



2 Project Overview

ANITA intends to design and develop **an innovative knowledge-based user-centered cognitive investigation system** for analysing heterogeneous (text, audio, video and image) online (Surface Web, Deep Web, Dark Nets) and offline (LEAs' databases) resources for fighting illegal trafficking activities through an elegant combination of:

1. **avant-garde data source analysis and blockchain technologies** for the analysis of crypto-currency network and transactions (supporting the cases of Surface Web, Deep Web and Dark Nets);
2. **advanced Big Data analytics tools** for the automatic extraction and analysis of the vast amounts of multimodal multimedia content contained in the identified sources;
3. **sophisticated methodologies for capturing, modelling, inferring, processing and storing knowledge in human understandable forms** (e.g. expressive high-level semantic ontologies), including the case of connecting the connectionist learning paradigm with the symbolic learning one (i.e. extracting relevant and new knowledge from neural networks and formally storing it in the form of ontologies);
4. the development of a sophisticated, adaptive, cognitive user modelling framework that will capture, analyse, interpret, mimic and integrate key human cognitive and information processing functions for: i) incarnating the **incorporation of human perception/cognition principles in the system processing pipelines (i.e. integrating the investigators/officers/practitioners 'in-the-loop' of the overall analysis process)**, and ii) facilitate the **transfer of domain knowledge/expertise from the expert users to the novice ones**;
5. **domain-related and user-oriented intelligence applications**, able to provide users with interactive dashboards to explore, reconstruct and identify patterns for spatial, temporal and causal correlations among illegal trafficking events, entities and activities and to support decision-making processes for countermeasures to undertake.

All the above functionalities will be coupled and reinforced by an **in-depth interdisciplinary analysis of the online illegal trafficking phenomenon** (including the study of reaction strategies and countermeasures) and a **thorough analysis of the online resources with respect to social, ethical, legal and privacy issues** of concern. The proposed system capabilities will be demonstrated in **multiple relevant operational environments**.

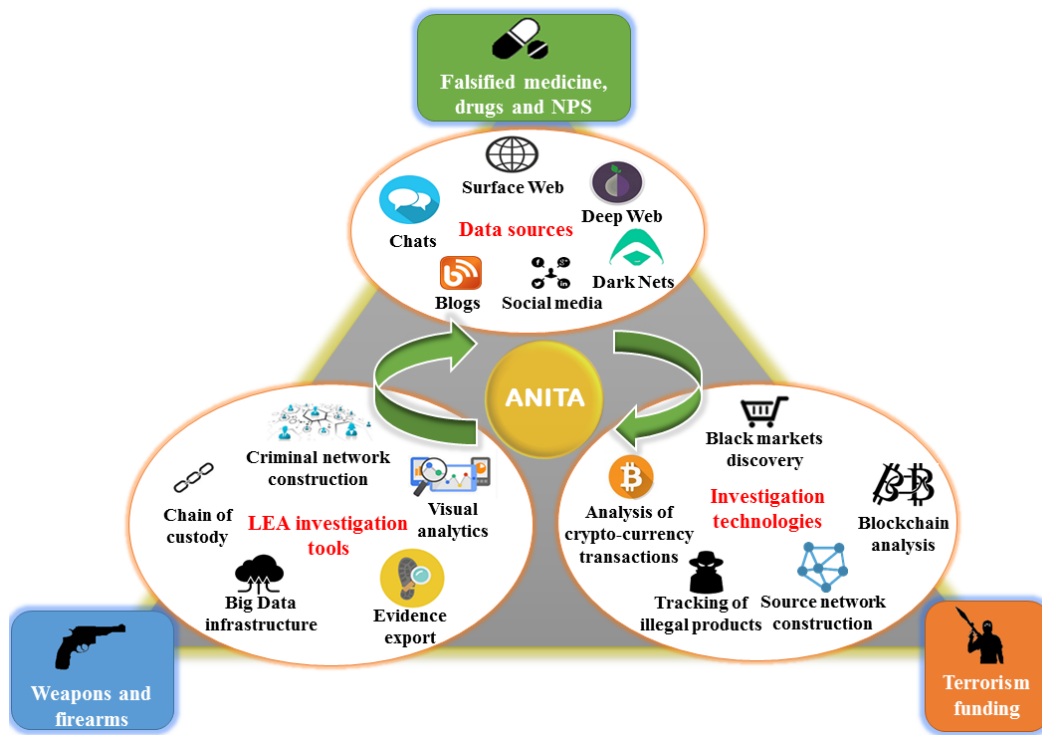


Figure 1: ANITA Concept

The primary goals of ANITA are:

1. **To boost the LEA’s investigation process and to significantly increase their operational capabilities**, by introducing a set of innovative tools for efficiently addressing online illegal trafficking challenges (namely online data source analysis, blockchain analysis, Big Data analytics, knowledge modelling, incorporation of human cognitive function in the analysis pipelines, user-oriented intelligence applications);
2. **To significantly facilitate the novice officers training process and to optimize the learning curve** (by collecting, integrating and re-using knowledge from multiple expert officers and through the development of a recommendation functionality to transfer the acquired ‘know-how’ to the new officers).



3 ANITA website structure

The ANITA website is available in English.

The public area of the website has been developed with a CMS (Content Management System) that allows easily managing and updating of existing content and creating of new pages of the front end area (the public one) through a back end area accessible only by technicians appointed of the project website maintenance and updating.

The ANITA project website is composed by five main sections:

1. Home;
2. Project;
3. Events;
4. Partners;
5. Private Area (Key).

The sections from 1 to 4 belong to the **“Public area”** of the website, thus all the content and the functionalities available in these sections are accessible to all visitors. These sections can be reached through the main horizontal menu.

Section 5, **“Private Area”**, links to a dedicated DMS (Document Management System) dedicated to project partners and advisory board members. Such a repository has the aim of providing the project consortium of a common space allowing them to share documents and relevant information of the project. This last section is available through e direct link at the top of any page of the website.



The website header includes highly evocative images of the subject of the project’s main purpose and content.

As stated at the beginning of this section, the ANITA website is composed by the home page and the other four main sections.

From the Home Page, visitors can use the menu, placed horizontally on the top of the page, just below the header, to access the different sections and subsections.

In the following paragraphs the contents of each section are described.

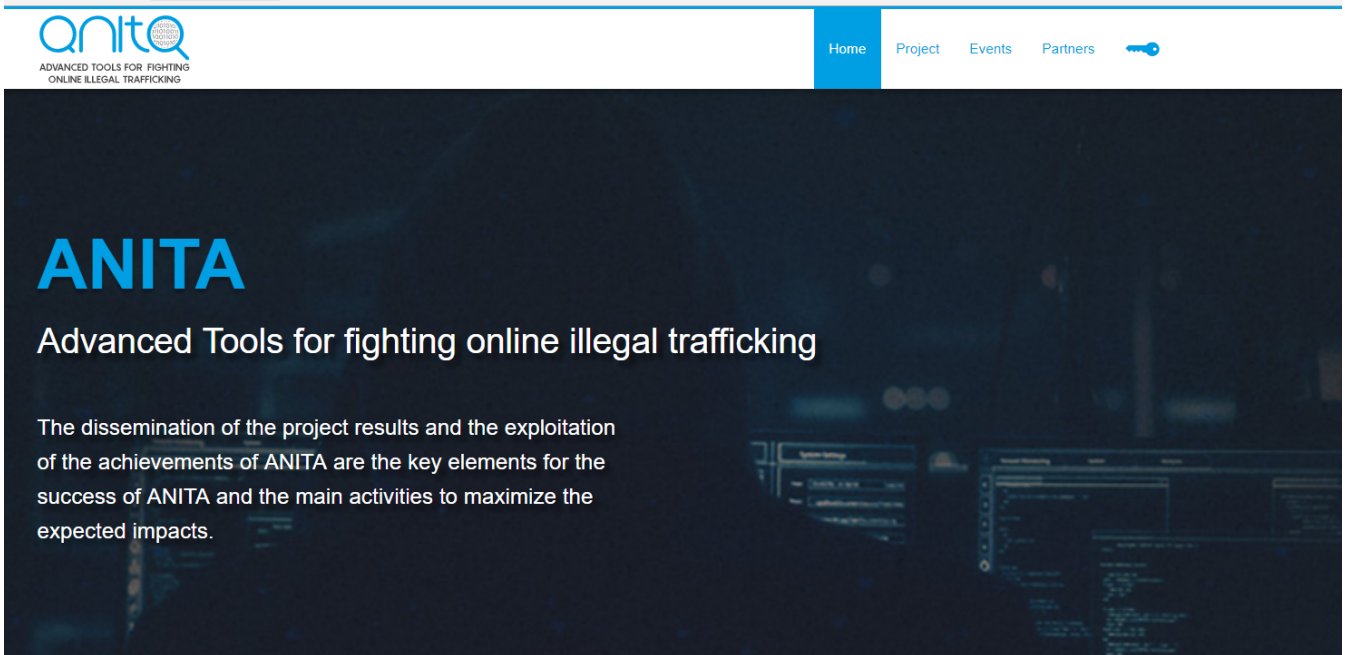


Figure 2: ANITA Menu

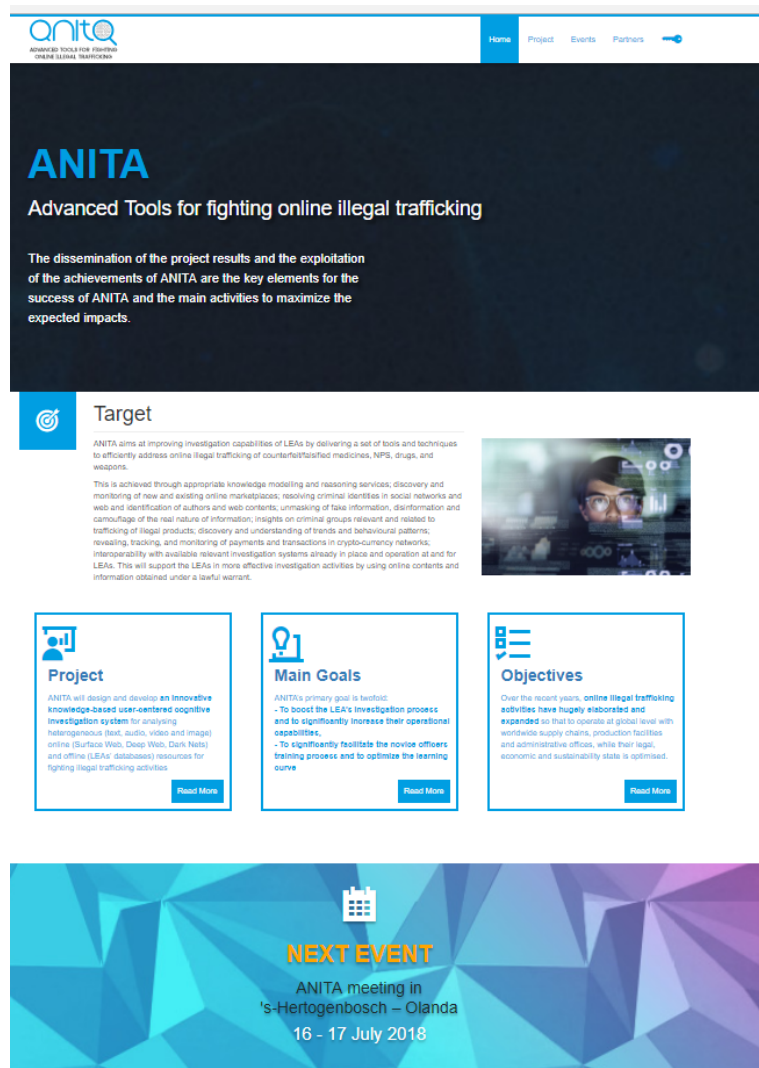


Figure 3: ANITA Public website - Home

3.1 Home page

The Home Page clearly communicates the project’s target and the website's purpose and shows all major contents available on the website to the visitors. The home-page is the main landing page, thus its main purposes in the realization of this page are:

- to provide ANITA aims with a clear statement to visitors about the contents and results expected from the project itself;
- to provide a direct access to all other sections (Project – Main Goals – Objectives).
- social media access (twitter)

The Figure 3 shows the home page of ANITA Web Portal with the header, the main menu and the information areas of the body of the page.

At the end of this section is embedded the form with the Tweets generated with the Project Account: @AnitaProject.



The figure illustrates the integration of the ANITA website with the Twitter platform. It shows a vertical sequence of content:

- Twitter Profile:** The top screenshot shows the ANITA Project's Twitter profile, including a bio, a recent tweet, and a list of followers.
- Website Home Page:** The middle section shows the ANITA website's home page, featuring a navigation menu (Home, Project, Events, Partners) and three main content blocks: Project, Goals, and Objectives. The Project block describes the development of a knowledge-based user-centered investigation system. The Goals block lists objectives like increasing operational efficiency and facilitating novice officers. The Objectives block highlights the expansion of online illegal trafficking activities.
- Event Banner:** A banner for the 'NEXT EVENT' is shown, announcing an ANITA meeting in 's-Hertogenbosch – Olanda' on '17 July 2018'.
- Tweet and Contact:** The bottom section features a tweet from ANITA Project thanking partners for a meeting, and a 'REQUEST INFORMATION' button with a 'Send Email' link.

Figure 4: ANITA Home – Tweets integrated with Twitter Platform



3.1.1 Section “Contact us”

The “Contact us” section includes a simple form where basic information is required. The data inserted in the form will be received by the consortium as an email to info@anita-project.eu account.

3.2 Section “Project”

The section “Project” has the aim of providing information about the project’s purpose and its most relevant benefits towards the target groups. It includes:

- a description of the project;
- Main Goals;
- Objectives;
- Download Brochure (PDF);

In this section, a vertical and local menu allowing the visitors to browse within this section is also provided in the left side of the web pages. The breadcrumbs below the header provide to the visitors information about the current page.

The next figures show the pages available in this section of ANITA Web Portal.

anita
ADVANCED TOOLS FOR FIGHTING
ONLINE ILLEGAL TRAFFICKING

Home Project Events Partners

Project

ANITA will design and develop an **innovative knowledge-based user-centered cognitive investigation system** for analysing heterogeneous (text, audio, video and image) online (Surface Web, Deep Web, Dark Nets) and offline (LEAs' databases) resources for fighting illegal trafficking activities through an elegant combination of:

1. **avant-garde data source analysis and blockchain technologies** for the analysis of crypto-currency network and transactions (supporting the cases of Surface Web, Deep Web and Dark Nets);
2. **advanced Big Data analytics tools** for the automatic extraction and analysis of the vast amounts of multimodal multimedia content contained in the identified sources;
3. **sophisticated methodologies for capturing, modelling, inferring, processing and storing knowledge in human understandable forms** (e.g. expressive high-level semantic ontologies), including the case of connecting the connectionist learning paradigm with the symbolic learning one (i.e. extracting relevant and new knowledge from neural networks and formally storing it in the form of ontologies);
4. the development of a sophisticated, adaptive, cognitive user modelling framework that will capture, analyse, interpret, mimic and integrate key human cognitive and information processing functions for:
 - 4.1 incarnating the **incorporation of human perception/cognition principles in the system processing pipelines** (i.e. integrating the investigators/officers/practitioners 'in-the-loop' of the overall analysis process)
 - 4.2 facilitate the **transfer of domain knowledge/expertise from the expert users to the novice ones**;
5. **domain-related and user-oriented intelligence applications**, able to provide users with interactive dashboards to explore, reconstruct and identify patterns for spatial, temporal and causal correlations among illegal trafficking events, entities and activities and to support decision-making processes for countermeasures to undertake. All the above functionalities will be coupled and reinforced by an **in-depth interdisciplinary analysis of the online illegal trafficking phenomenon** (including the study of reaction strategies and countermeasures) and a **thorough analysis of the online resources with respect to social, ethical, legal and privacy issues** of concern. The proposed system capabilities will be demonstrated in **multiple relevant operational environments**.

PDF

Share

Figure 5: ANITA project section – Project description



In the same page “Project” below the description of the ANITA project there are the subsections Main Goals and Objectives as is possible to see in the Figure 6.

In order to diversify the communication tools according to different contexts / events, people can download a brochure in A4 format, foldable in 3 parts,

ANITA

ANITA will design and develop a novel knowledge-based user-centred investigation system for analysing heterogeneous (text, audio, video, image) online (Surface Web, Deep Web, DarkNet) and offline content for fighting illegal trafficking of drugs, counterfeit medicines, NPS and firearms.

A

Innovative data source analysis of **crypto-currency network** and transactions and **blockchain technologies**.

B

Advanced **Big Data analytics** tools for automatic analysis of the vast amounts of multimodal content of the identified sources.

C

Sophisticated **methodologies** for capturing, modelling and inferring knowledge in human understandable forms, extracting relevant and new knowledge from neural networks.

D

Development of an adaptive, cognitive user modelling framework that will capture, analyse, interpret, mimic and integrate **key human cognitive** and information processing functions.

E

Incorporation of **human perception/cognition principles** in the system processing pipelines.

F

Domain-related and user-oriented intelligence applications to **identify patterns** for spatial, temporal and causal correlations among illegal trafficking events, entities and activities.

G

Support **decision-making processes** for countermeasures. In-depth interdisciplinary analysis of the online illegal trafficking phenomenon.

MAIN GOALS

ANITA's primary goal is twofold:

1

To boost the **LEA's investigation process** and to significantly increase their operational capabilities, by introducing a set of innovative tools for efficiently addressing online illegal trafficking challenges

2

To significantly facilitate the **novice officers training process** and to optimize the learning curve.

PILOT

DRUGS

The key purpose is to detect and further monitor medicine trafficking activities from online transactions that are realized through the **Public Web**, as well as **Deep** and **Dark Nets**.

WEAPONS

ANITA aims at providing automated services for detecting weapon trafficking activities.

TERRORISM FUNDING

ANITA will provide means for retrieving relevant online information through the Web crawling services and those tools that are needed for the analysis of heterogeneous collected multimedia information.

The proposed system capabilities will be demonstrated in multiple relevant operational environments.

PROJECT ID

DURATION:
36 months (May 2018 – Apr 2021)

PARTNERS:
17 partners from 11 countries (France, Greece, Italy, Spain, Austria, Nederland, Belgium, Poland, Serbia, United Kingdom, Bulgaria)

6 law enforcement agency (LEA)

FUNDING:
ANITA receives funding from the European Union's **Horizon 2020** research and innovation programme.

CALL IDENTIFIER:
Call: SEC-12-FCT-2016-2017
Activity: H2020-SEC-2016-2017-2

PROJECT COORDINATOR:
Engineering – Ingegneria Informatica spa
www.anita-project.eu
info@anita-project.eu

PARTNERS

ENGINEERING, SYSTRAN, RISE SC, POLITIE, POLITIE, EXPERT SYSTEM, AIT, BRSI, JADS, HOME OFFICE, DTSS, IBEC 9

ANITA

ANITA is a project funded by the European Commission. This project has received funding from the European Union's Horizon 2020 Research and Innovation program under Grant Agreement n°787961


anita


ADVANCED TOOLS FOR FIGHTING ONLINE ILLEGAL TRAFFICKING

www.anita-project.eu

Figure 5: ANITA Brochure (pdf download)





[Home](#)
[Project](#)
[Events](#)
[Partners](#)


Main goals

ANITA's primary goal is twofold:

- **To boost the LEA's investigation process and to significantly increase their operational capabilities**, by introducing a set of innovative tools for efficiently addressing online illegal trafficking challenges (namely online data source analysis, blockchain analysis, Big Data analytics, knowledge modelling, incorporation of human cognitive function in the analysis pipelines, user-oriented intelligence applications)
- **To significantly facilitate the novice officers training process and to optimize the learning curve** (by collecting, integrating and re-using knowledge from multiple expert officers and through the development of a recommendation functionality to transfer the acquired 'know-how' to the new officers).

Objectives


Over the recent years, **online illegal trafficking activities have hugely elaborated and expanded** so that to operate at global level with worldwide supply chains, production facilities and administrative offices, while their legal, economic and sustainability state is optimised. For tackling these emerging challenges, a significant part of LEAs' efforts has been invested on training activities to equip officers and practitioners with the necessary knowledge and skills related to this emerging and continuously/rapidly evolving scenery. However, in order to efficiently understand the organisational structure, the exhibited behaviours/dynamics and their interconnections/interactions, it is of **vital importance to collect and analyse all relevant open-source information** in near real-time and to combine it with closed-source information provided by the LEAs. Another aspect that significantly adds to the complexity of the problem concerns the fact that often large political, religious and economic support networks support these online illegal trafficking activities, in order to receive funding for fulfilling their purposes or to gain political power. For this reason, the analysis of the underlying economic routes and networks can help LEAs to identify hidden relationships, recurrent strategies and emerging patterns in support of illegal activities. Building on the aforementioned analysis, some crucial radical changes in the criminal/illegal online activities landscape need also to be taken into account:

- **Criminal actors are proliferating** (e.g. individuals, unstructured and informal organised criminal groups, structured and hierarchical organised crime, ethnic-based criminal groups, etc.), possessing a greater capacity to exploit a wide range of opportunities and resources, while maximising benefits and minimizing risks;
- **Organised criminal groups** are continuously exploiting the interdependencies among the criminal activities they are already involved in, but they are also specialising in specific typologies of emerging crimes or even in specific segments of the criminal supply chain (Europol IDCTA 2016, SDCTA 2017);
- **Online trafficking activities** are going "entrepreneurial"; in other words, they are organised in a managerial manner aiming to expand business activities by infiltrating into key legal and illegal new economic sectors/activities, on a global scale;
- **Surface Web, Deep Web and Dark Nets** can be regarded as key crime-facilitators. They offer new opportunities to the organised criminal groups, assisting them: a) to cooperate in a more effective, efficient, anonymous (e.g. anonymising software such as P2P or Tor) and secure way, although dislocated in diverse countries; b) to manage criminal business-to-business (B2B) and business-to-consumer (B2C) activities, with anonymous online payments, through crypto-currencies (e.g. Bitcoin); c) to spread properly manipulated information to camouflage/conceal criminal activities, while deceiving online consumers; and d) to enlarge the crime-as-a-service activities and the related black market (e.g. Silk Road) in the Deep Web.

Among the most emblematic, emerging, large-scale and continuously evolving aspects of online illegal trafficking are the cases of:

- **counterfeit/falsified medicines (OTFM), drugs, Novel Psychoactive Substances (NPS),**
- **Weapons and firearms,**
- **terrorism funding.**

The respective support networks are using different techniques to prevent them from being unveiled. **The first strategy is to present them as legal as possible.** As an example, novel psychoactive substances (NPS), the so called "legal highs", are generated faster than the update rate of the blacklist for illegal drugs. Thus, trading and transporting of NPS is legal, even though, the psychoactive effect is often stronger, than existing illegal drugs. This "appear as legal" strategy is also followed by some specific charity organisations, which offer community services, but in fact they are organising worldwide fund raising activities for terrorism organisations. **The second strategy is to build up an environment within which identification and censorship are impossible, instead of caring about legal compliance.** The next generation of black markets will provide an infrastructure to set up anonymous companies, with invisible owners, anonymous management, employees and customer, like the Ethereum platform. The synergies between the trafficking activities concerning a) counterfeit/falsified medicine, drugs and NPS, b) weapons and firearms, and c) terrorism funding are considered as an emerging trend that, in the short term, could lead to new organized criminal arrangements as well as in an increasingly complex illegal market. Additionally, the aforementioned illegal trafficking activities will be further boosted by the next generation crypto currencies that will serve as a standard payment method for legal and illegal services, provided in the deep and dark web. They are expected to prove as a more reliable and less expensive alternative (EMCDDA) to anonymous payment systems.



ANITA is a project funded by the European Commission. This project has received funding from the European Union's Horizon 2020 Research and Innovation program under Grant Agreement




Figure 6: ANITA Project section – Main Goals and Objectives



3.3 Section “Events”

The section “Events” has the aim of providing information about the project’s dissemination activities carried out during the project (conferences, exhibits, industrial fairs, workshop etc.) interesting for project partners for disseminating ANITA results.

The next figures show the pages available in this section of ANITA Web Portal.

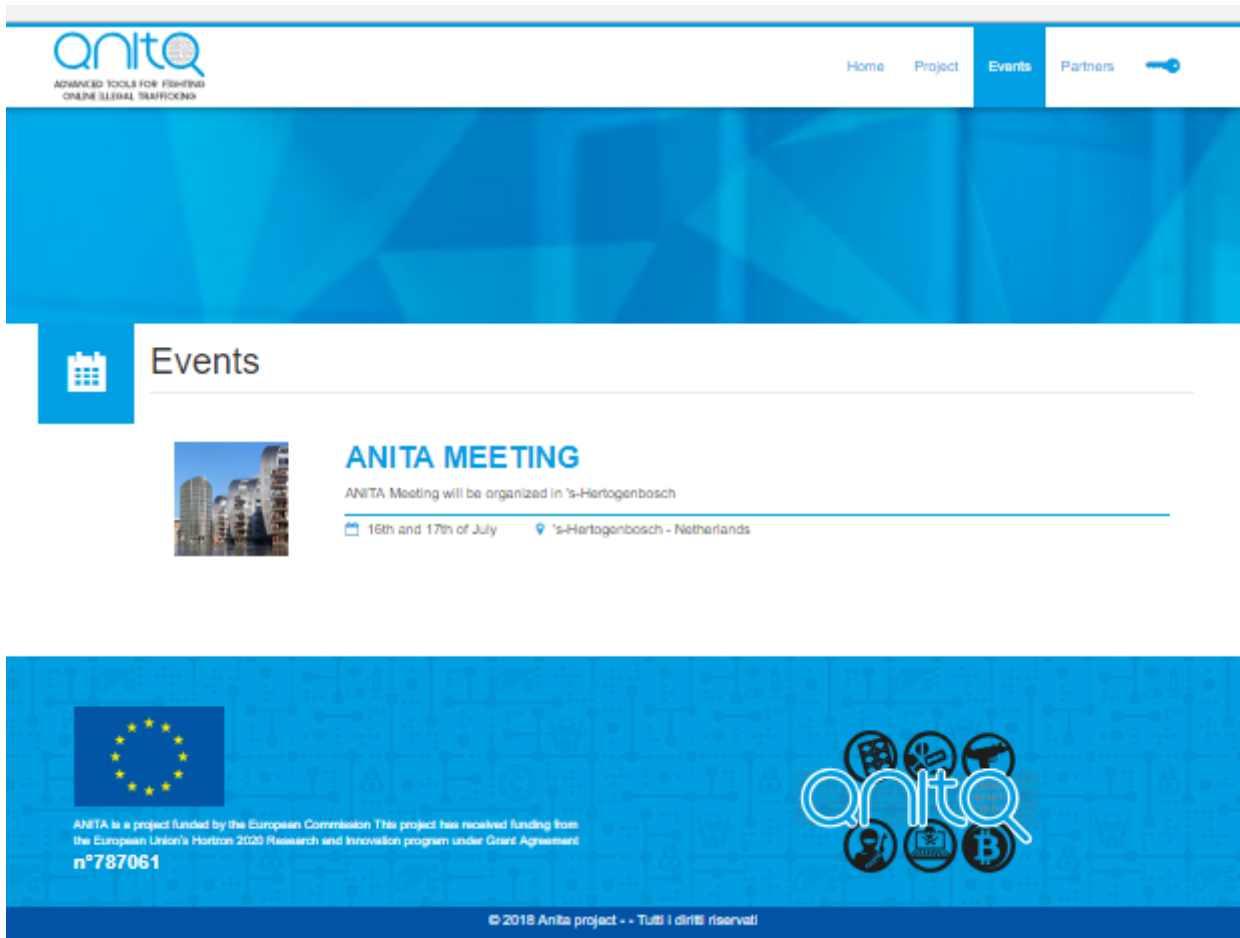


Figure 7: ANITA Event section

3.4 Section “Partners”

In the section “Partners” the information of the partners of the ANITA project is reported. In the first level of the page, logos and names of the organizations partners are reported (Figure 8). Clicking on their logos or on their names for exploring details of all partners.



For each organization the following information is included:

- the name and the country of the organization;
- the logo of the organization;
- a link to the website homepage of the partner. Clicking on the link, a new window is opened with the target website;

The next figure shows the ANITA Partners page.



anita
ANITA: ANIMALS FOR THE INVESTIGATION OF CYBERSECURITY

Home Project Events Partners

Partners

 ENGINEERING ENGINEERING Ingegneria Informatica S.p.A. Country: Italy Website	 CIRKIM Centre for Research and Technology Hellas Country: Greece Website	 RISSC RISSC Centro Ricerche e Studi su Sicurezza e Criminalità Country: Italy Website
 EXPERT SYSTEM Expert System S.p.A. Country: Italy Website	 AIT Australian Institute of Technology Country: Australia Website	 IBEC Institute for Bioengineering of Catalonia FUNDACIÓ INSTITUT DE BIOCINGENYERIA DE CATALUNYA (IBEC) Country: Spain Website
 Istituto Italiano per la Privacy e la Valorizzazione dei Dati Italian Institute for Privacy and Data Valorization (Istituto Italiano per la privacy e la valorizzazione dei dati) Country: Italy Website	 SYSTRAN beyond language SYSTRAN SAS Country: France Website	 JADS STICHTING KATHOLIEKE UNIVERSITEIT BRABANT, department: Zhenonemus Academy of Data Science (HU- JADS) Country: Netherlands Website
 DITSS Dutch Institute for Technology, Safety & Security Country: Netherlands Website	 Vias institute Belgian Road Safety Institute Country: Belgium Website	 KOMENDA WOJEWODZKA POLICJI W OLSZANIE Provincial Police Headquarters in Olszanek Country: Poland Website
 AKADEMIJA POLICJI I SZEREFOWANIA Academy of Criminalistics and Police Studies Country: The Republic of Serbia Website	 Home Office Home Office Centre for Applied Science and Technology Country: UK Website	 POLITIE The National Police of the Netherlands Country: Netherlands Website
 General Directorate "Combating Organized Crime" Country: Republic of Bulgaria Website	 Politie Voorkepen Local Police Voorkepen Country: Belgium Website	

Figure 8: ANITA Partners list



3.5 Section “Private Area”

The Private Area (Key) is accessible only to ANITA partners and advisory board to share documents and information.



Figure 9: ANITA Private area link

It consists in a web repository based on the Openness platform made available by the ANITA project coordinator in the set of tool available for the management and linked directly by a button at the top of all pages.

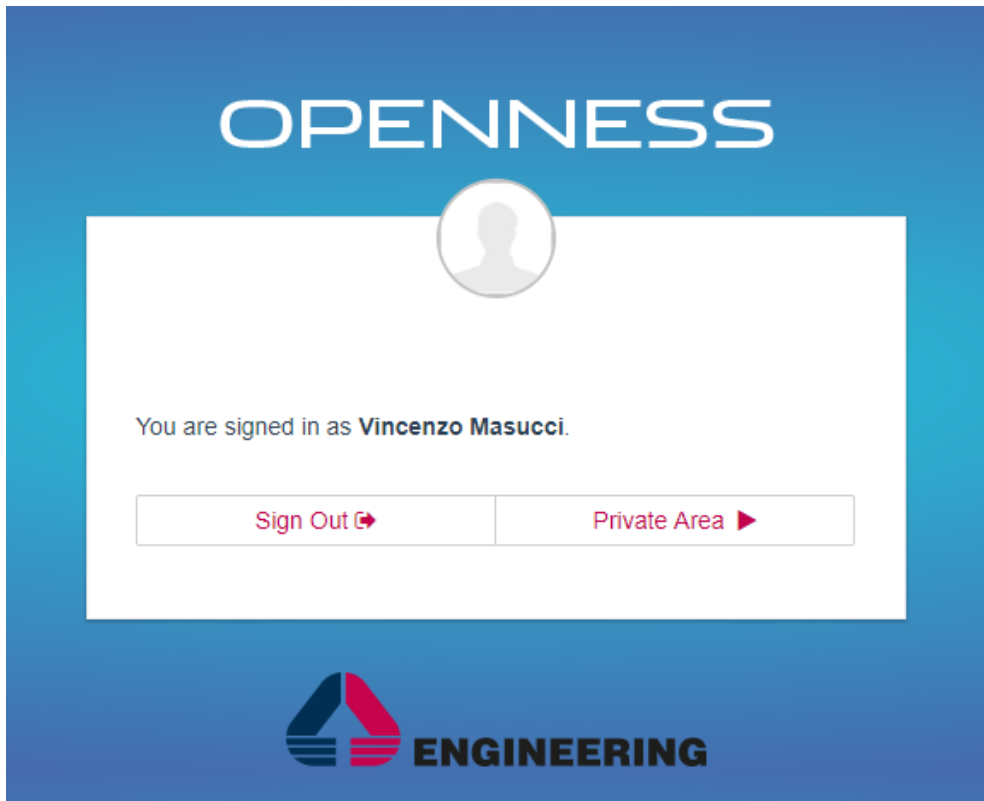


Figure 10: ANITA Private - OPENNESS



4 Conclusions

The public website has been developed and published at the address <http://www.anita-project.eu> within month 3 (as planned in the DOA). The website contains updated information about the project description, Main Goals and Objectives.

From the website it is possible to download the brochure of ANITA Project.

The website is the backbone communication channel for the project and it will be used as reference to address people to get more information about the project, making also available to download the ANITA dissemination material that will be produced in the project lifetime.

The ANITA Web Site will be constantly updated with information and news, to keep people interested and updated about the project progress, and other information such as the list of the other projects collaborating with ANITA.