

# MAGNETO NEWS

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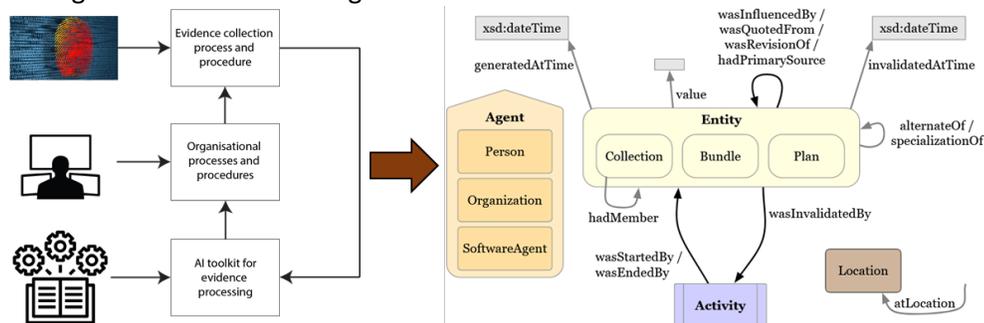


CBRNE is an SME that has grown organically expanding activities beyond the traditional security sector to address civil orientated projects. CBRNE is looking forward to working with its European friends as an Associate Country following BREXIT.

The organisation focuses on defence and security related issues addressing Human Behaviour, Ethical Research Protocols, Cultural Guidelines, Training, Aide Mémoire, Best Practice Brochures, Resilience & Vulnerability Assessments, the organising of validation and demonstration exercises and War Gaming/Serious Gaming/Cyber Range. In addition to Project MAGNETO, CBRNE was involved in two Roadmap projects: Firstly, FP7 Project IMCOSEC regarding the security of ISO containers along supply chains. Secondly FP7 CAMINO relating to cyber security. Other projects include: Project D-BOX (Humanitarian De-Mining), Project SUBCOP (Person Born Improvised Explosive Devices [PBIED]), Projects PRACTICE and EDEN (both ref CBRNE activities linked with civilians). CBRNE has just finished (Oct 2020) Project ENTRAP (Enhanced Neutralisation of explosive Threats Reaching Across the Plot). CBRNE is at present half the way through H2020 Project PROACTIVE in which it is coordinating three field exercises in Italy, Germany and Belgium, where the focus is to improve the interaction of Practitioners and members of the public (with a guaranteed participation of 15% of vulnerable people in a CBRNe event). CBRNE is pleased to advise that it is part of Project ALIGNER (SU-AI01-2020: Developing a research roadmap regarding Artificial Intelligence in support of Law Enforcement) and at the time of going to press is in the Grant Agreement negotiation process led by Fraunhofer IAIS.

## Achieving Solid and Court-proof Forensic Evidence

The objective of MAGNETO platform is to equip law enforcement agencies (LEAs) with cutting edge-scientific tools and complex algorithms that enable efficient and effective collection, aggregation, and processing of forensic evidence for the crimes under investigation. Upon a crime being reported, police officers carry out investigative activities to collect information and (physical or digital) items that would eventually become the evidence supporting a conviction in court. Part of the evidence that police officers may need to rely on may consist of information generated, distributed, or stored on electronic devices. Under the European legal framework, certain rules and procedures must be followed during the criminal investigation such that the probative value of the evidence collected is not affected. The organisation procedure and process adopted among LEAs in handling digital evidence is formalised with the extension of PROV-V ontology integrated within the MAGNETO common representation model. The concept categorisation among prov:agent, prov:entity and prov:activity is continually monitored and tracked based on the SSO authentication and authorisation. The lifecycle of evidence management is outlined in Figure below.



The validity of the evidence analysed and processed within the MAGNETO platform; the project has adopted the use of immutable file systems namely Interplanetary File System (IPFS). In contrast to the traditional file system, IPFS offers immutability as an inbuilt feature. The ability to share the content in a distributed, decentralised manner has further enabled LEAs not only keep a local copy of the digital evidence but store the information extracted from the processing in a distributed decentralised repository. However, as opposed to a centrally located server, IPFS is built around a decentralized system of user-operators who hold a portion of the overall data, creating a resilient system of file storage and sharing.

## MAGNETO Tool Demo at LEAs premises

Several demonstrations have been led at several LEAs premises on different topics of MAGNETO project. Here are some feedbacks from the LEAs. Here we present the favorite features for each LEAs partner among the presented features: Geolocalization map, Automatic transcription audio- text, Sentiment analysis, Keywords extraction, Data analysis, Semantic reasoning, Video and image processing, People comparison tool, Event Fusion, Trajectory fusion:



## Munich Police Department

The Munich Police Department (PPM) is responsible for the security of more than 1.7 million people living in area of around 1,000 km<sup>2</sup>. Bavaria's



capital is Germany's third biggest city and boasts a rich cultural heritage, world-class companies and a high standard of living. Considered one of the safest cities in Europe, around 6,600 police officers help to keep crime rates low (5,331 crimes per 100,000 inhabitants in 2019) and clearance rates high (62,3% in 2019).

Beyond the regular tasks of daily policing and crime investigations, the Munich Police Department has decades of experience dealing with high-profile as well as mass events such as the Munich Security Conference (MSC), the Oktoberfest or regular football games of its local teams FC Bayern and 1860 Munich.



Due to the extraordinary tasks of a police force in a constantly growing metropolitan area with its own specific challenges, MPD has always been engaged in research projects to boost its operational as well as organizational capabilities. Apart from Magneto, the MPD is currently participating in three other Horizon 2020 projects: Connexions, Prevision and Prophets. These projects serve to explore new ways to cope with the rising tide of heterogeneous data.

In sum, the Munich Police Department wants to use its operational capabilities and expertise to bring specific LEA-related challenges into the focus of international projects and strive to develop solutions in partnership with technical partners and other LEAs to remain one of the safest cities in Europe for decades to come. Within Magneto, we have done this by providing use cases and continue to do so by testing the tools and providing feedback.

**Demonstration at Sabadell:** All the presented features seemed at least useful to very useful. Nevertheless, SAB highlighted that the possibility of working with various types of data at the same time, because the data is fragmented in different documents, would be very useful and that the tool itself merges or joins the different files and the specific tool selects the correspondent data.

**Demonstration at PPM:** PPM has had several demonstrations with regular police officers, system administrators and data analysts. The outcomes have been two reports focusing on the strengths and the usability of the platform. The criticism included in the reports was taken up by developers as could be seen in the first training webinar. A sign for us that cooperation with the technical partners works and that our feedback can help to make the platform more beneficial for our daily work. More testing opportunities for our officers are soon to come.

**Demonstration at WSPol:** WSPol seemed to appreciate the Video and image processing component. They proposed to add a possibility, apart from its recognition, to locate the object on the map automatically (based on imported text, GPS data, CCTV data) at any time later on.

**Demonstration at PSNI:** The PSNI highlighted that the platform was easy to use and followed a logical and clear pathway from data upload, through the analysis process to the final fusion and visualization of results. We successfully tested the text mining tool within our demonstration which identified a significant saving on time and resources. This would have a measurable impact on our ability to improve our response to large or complicated investigations. The PSNI have shown a great interest in a number of new tools that we believe will assist Investigators provide robust Court proof evidence and ultimately enhance our ability to safeguard the public.

Next demonstration is planned in March to our External Advisory Board!

## Planning Final Event.

We are organizing the MAGNETO Final Event! You can find here the temporary schedule as we are currently inviting sister projects and LEA for testimonials.

AGENDA	
9:00 am	Welcome and introduction
9:15 am	Dr. Kostas Demestichas, Dr. David Faure
9:15 am	Demonstrations
10:15 am	Dr. Christian Rabini, Dr. Francisco Pérez
10:15 am	Short Break
10:25 am	
10:25 am	Short testimonials
10:45 am	
10:45 am	Presentation from sister projects
12:00 am	
12:00 pm	Dedicated Session on Legal/Ethics Tools
12:30 am	Mr. Thomas Marquenie, Dr. Irina Marsh
12:30 am	Farewell

## Final Virtual Event – 30<sup>th</sup> of March 2021

The MAGNETO Final Event is to be Virtual because of the COVID pandemic. The MAGNETO FINAL VIRTUAL Event will be held on the 30<sup>th</sup> of March, 2021, online!

Join us!

You can register here: [MAGNETO | Home \(magneto-h2020.eu\)](http://MAGNETO | Home (magneto-h2020.eu))

We hope to virtually see you there!

**Dr. David Faure**

Scientific & Technical Coordinator of MAGNETO project

