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Welcome to the second issue of the APPRAISE newsletter.

It is a joy to share with you all of the great progress and results we have achieved since our last newsletter in January 2023. We are a 27-partners' strong consortium, now motivated to test all of our tools throughout 4 extremely ambitious pilots!

Progress summary...

Dear colleagues, it is a pleasure to share with you the second issue of the APPRAISE newsletter! We have a lot to share with you in terms of progress, achievements, as well as exciting news on our upcoming pilots!

The last five months have been quite intense and exciting for the APPRAISE Partners, as we were able to demonstrate some tangible results. In my role as APPRAISE project Coordinator I am thrilled to update you on all the amazing work we have done and introduce you to the outcomes of our very first pilot held in Ljubljana on 11th of May. You will also learn more about the events we've visited over the last few months (may be we even had the pleasure to meet there), and last but not least the progress made with the technologies we are developing.

In this newsletter you will also learn more about our upcoming pilots, it is still possible to join them in person and see a live demonstration of how our tools can help to facilitate the collaboration among public and private security actors. Do you have a question? Let's have a discussion using our community!

Your sincerely,
Yana

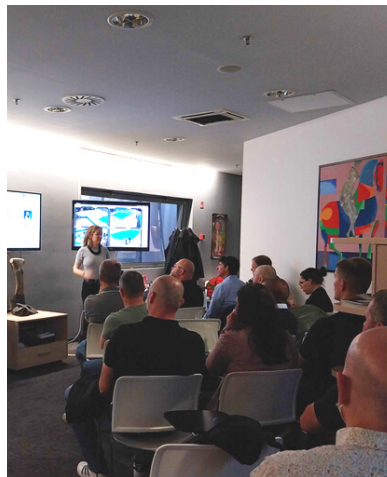




First Pilot: BTC City - Ljubljana

The APPRAISE Consortium successfully held its first of four pilots (pilot no. 3) within the project on the 11th May, 2023. Taking place at the BTC Water Complex, ATLANTIS in Ljubljana the event organisation was led by:

- ICSS (Institute for Corporate Security Studies) – Pilot leader
- MNZ-RS – Slovenian Ministry of Interior
- BTC City – The private security of the BTC city



The ambitious pilot scenario comprised of social media analysis, detection of a cyber-attack, localisation of an outdoor gunshot, indoor gunshot detection, and crowdsensing app, amongst many other tools demonstrated.

The pilot involved public and private security forces, and also volunteers, enabling us to demonstrate the APPRAISE tools to more than 20 Slovenian stakeholders.



Outcomes...

The pilot exercise was used to test new procedural and technological approaches in a real environment and in real time, which aims to enable the introduction of state-of-the-art technologies and skills and better cooperation between public and private security operators in the field of protection of public spaces in the event of terrorist and other related attacks.

The exercise demonstrated the applicability of the process and technology approaches developed so far within APPRAISE and provided a quality basis for further development and testing of these approaches in the other forthcoming three pilots within the project.



EU forum for the Protection for Public Spaces

On June 6th APPRAISE visited the European Commission in Brussels, Belgium to attend the EU Forum for the protection of public spaces. The event gathers policy makers from EU member states, representatives from local authorities and private operators.

The one-day meeting consisted of interesting and stimulating presentations from Law Enforcement Networks, legislative updates and physical and cyber infrastructure, all in the field of the protection of public spaces.

Days of Corporate Security Conference

From the 8th-11th May, the Institute for Corporate Security Studies (ICS) conference, Days of Corporate Security, took place in Kranju, Slovenia.

A presentation of the project was given by Matija Repina from BTC, of the pilot exercise that was carried out on 11th May.



CERIS Workshops



On 14th March, the European Commission held an informative workshop in Brussels, Belgium on Europol's new role within Horizon Europe.

APPRAISE was present at the event represented by the project's Scientific Manager Tassos Dimou (CERTH). Part of the event involved a very thought-provoking panel exercise entitled 'Before the change of the mandate - testimonies and lessons learnt'.



APPRAISE partners CS GROUP, CERTH and LINKS attended the CERIS Disaster Resilient Societies (DRS) event held in Toulouse, France on the 16th-17th May.

Partners raised awareness about the project's objectives and the APPRAISE Platform and provided a demo on the Command and Control Centre tool that enables information visualisation and sharing amongst private security operators and LEAs.



Pilot Updates...

Pilot no. 1 has been organised around the Itzulia Basque Country cycle event and is due to take place next week on Thursday July 20th.

Preparations for the pilot are currently being finalised. This involves the strategic planning of logistics, human resources and material and other aspects to ensure we have the agility and efficiency needed on the day.

The technical installations continue to advance and recently different tests have been carried out with the cameras installed in the pilot area which will be used to test the different technical tools and software.

There is still time to join this exciting event, please contact us for further information!

Pilot no. 4 will take place on the 21st September 2023 at the MTG in Gdańsk, and preparations are at full speed. On the 23rd February pilot leaders hosted a police exercise at the International Fair where we acted out the planned steps of the pilot scenario. The meeting was attended by officers of the Regional Police Headquarters in Gdańsk, a counter-terrorist unit, negotiators, and students of the Naval Academy, who played the role of participants in the fair. The meeting was accompanied by a presentation of Holo Light's solution used for shooting trainings with the use of AR. The police officers had a chance to test this technology and provided a number of comments which will help to improve the solution.

A second exercise took place on the 18th May 2023. This event was attended by the Regional Police Headquarters in Gdańsk, private security operators and students of the Naval Academy. Everyone was briefed how the pilot will run and what will be their role in it. We also had the opportunity to test the crowd sensing app developed by INOV. The actors used the app to report on any anomalies that they witnessed and the also students also gave their feedback on the app, which will help to improve it further.





Pilot no. 2 will take place after the ATP Finals, a prominent tennis tournament organized by the Association of Tennis Professionals (ATP). This event will take place at the Pala Alpitour, a renowned indoor sports arena situated in Turin, Italy.

The primary objective of the Pilot is to conduct a simulated terrorist car attack on a soft target, serving as a practical test for the tools developed as part of the APPRAISE project. The Pilot is scheduled for November 30th, 2023, immediately following the conclusion of the ATP Finals. This event will feature a meticulously crafted scenario involving actors, strategically unfolding in key locations such as the exterior of the Pala Alpitour, Piazzale Grande Torino, and the interior of the venue. Extensive inspections have been carried out at the Pala Alpitour to determine the optimal locations for installing sensors and cameras, which will play a crucial role in the pilot.

A wide range of stakeholders are expected to participate in the event and their involvement is of utmost importance as it allows for thorough testing of the tools developed during the APPRAISE project and facilitates precise evaluations. The pilot aims to showcase the seamless interaction between public and private policies in effectively addressing and mitigating terrorist attacks. Furthermore, the active participation of stakeholders can generate substantial resonance, amplifying the impact of the tools and the project itself.

The key tools that will be evaluated during the pilot include both indoor and outdoor drones, as well as an investigative tool that utilizes CCTV camera footage to identify potential terrorists. Notably, this investigative tool has been designed with privacy in mind, ensuring that it does not capture or store individuals' biometric data. This approach aligns with the ethical use of artificial intelligence (AI) and reflects the City of Turin's commitment to safeguarding people's privacy.

Ongoing activities...

Co-Design of SELP compliant procedures & practices - APPRAISE has been using a number of novel approaches and methodologies to adapt the main research framework within the project in accordance with societal, ethical and legal and political (SELP) requirements.

In order to consider societal acceptance and public perception, a short survey has been developed to gain insights into your opinions about the Use of Advanced Surveillance Technologies by Security Actors for Public Space Protection.

The increasing use of cameras, sensors, and digital methods for monitoring the flow of people in public places can make citizens feel both safer but also progressively more surveyed.

Security actors need to tread the line between maintaining public safety and encroaching on citizens' rights and freedoms carefully.

Therefore, APPRAISE is extremely interested in better understanding citizens' views about the use of public place protection technologies by security actors: what are the boundary conditions for acceptance, and what are the overall perceptions of the solutions considering attitudes, personal values, and privacy concerns.

If you would be interested in sharing your views by completing this survey or joining our citizen community please email us for further information at appraise-h2020@csgroup.eu.

Real-time early detection of security threats in soft targets - In this task led by AITEK, all the latest efforts are related to how to achieve a modular solution capable of supporting the operators with the early detection of threats in soft targets that are to be tested in all four project pilots. A close cooperation with end-users has helped to better understand the challenges identified during the early analysis stages and provide requirements to drive the development phase.

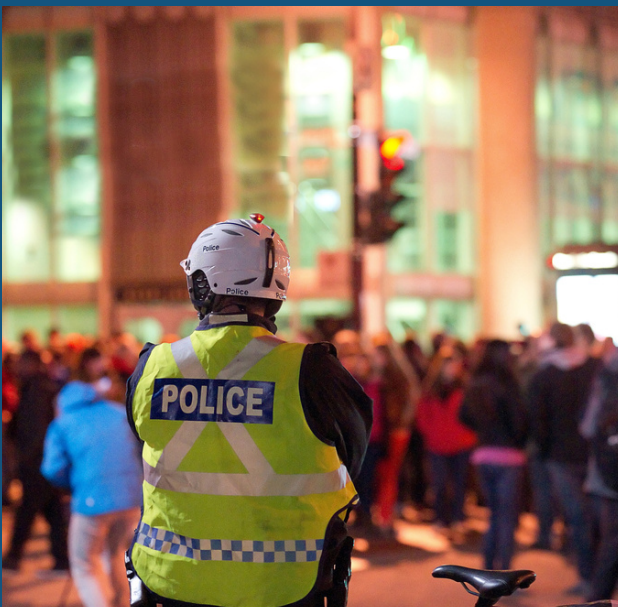
All the partners have achieved the important milestone of designing and implementing a first set of prototypes, these are grouped into the following tools:

- Detection of threat-related objects and people from visual data
- Video-based event and anomaly detection
- Drone-based wide area mapping & Surveillance
- Crowd sensing and human sensors
- Real-time crowd dynamics analysis
- Terrorism related event detection from diverse sensors
 - Audio surveillance
 - Gamma camera tool
 - Event detection from different sensors- Audio
 - Counter UAV system
 - Detection of cyber-attacks and misuse on security systems

A direct and continuous liaising with the pilot owners led to the refinement of the validation scenarios for each involved tool which, after several iterative cycles to fine tune each step, was eventually consolidated into a final version of the pilots to be executed into the second half of the project that have already successfully deployed and tested during Pilot no. 3 in Ljubljana.

Internet content analysis tools for threat intelligence - Internet content analysis tools for threat intelligence enable the discovery, acquisition, and analysis of content from online sources, including social media and Surface/Dark Web, to enable proactive security by identifying imminent attacks against soft targets.

Within the scope of the first pilot demonstration that took place in Ljubljana, Slovenia, relevant internet content analysis tools were deployed and used for analysing relevant textual and multimedia content acquired from Twitter and the Dark Web. In particular, extracted videos and images were examined for propaganda, logo, and landmarks detection. Textual content was analysed to extract entities of interest (e.g., persons, locations etc.) and for performing sentiment and subjectivity analysis. Identification of key actors within criminal groups formed in social networks took place by leveraging the collected textual content and metadata.

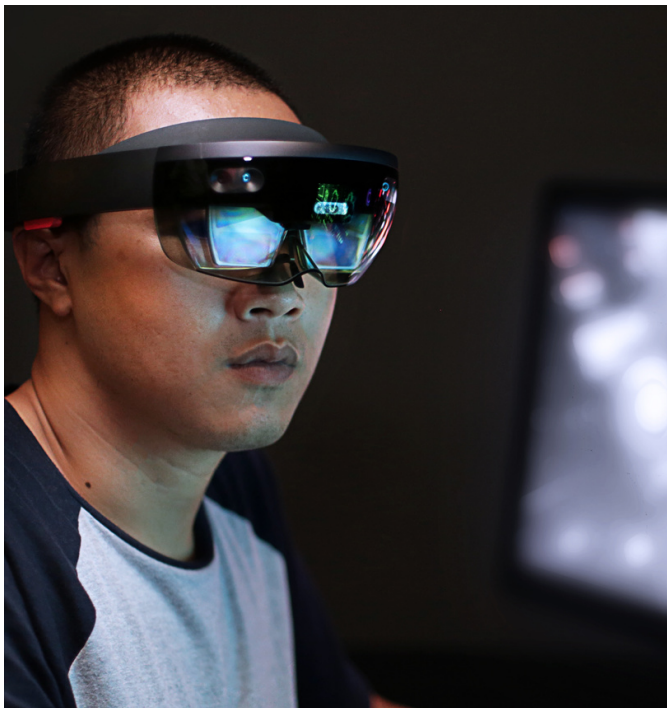


Actionable intelligence for proactive security in soft targets - The main goal of these activities is to deliver a set of data analytics tools to correlate information and extract actionable and user-oriented knowledge by processing data gathered by sensors and detections tools.

Up to now, we have successfully tested, during the recent pilot in Ljubljana, three tools all of which have been developed within the context of these technologies, namely: proactive monitoring, threat intelligence and situational awareness.

We are also planning to include a new tool for the next pilot and, at the same time, improve the capabilities and functionalities of the previous ones.

Public-Private interoperability and collaboration services for soft target protection - During pilot 3, the data model designed to harmonize and integrate different outputs from several sensors in the APPRAISE context was tested to accomplish the alert visualization in DITHO. Also, the cyber-secure information sharing framework was also tested. This framework not only allows multiple users from different organizations to share information and intelligence in a secure way to protect soft targets using different profiles but additionally provides other important services for the APPRAISE context (a gateway service acting as an information broker between the APPRAISE subsystems, a road traffic service, a geographical server and a crowd sourcing service to allow the communication with the crowd). Also under development is a crowdsensing administration dashboard where the LEAs, security partners and/or other relevant stakeholders can upload event guidelines and security instructions with different priority levels to transmit to the crowd.



A Technology based on Augmented Reality is also being developed and tested in order to allow the security forces to use holograms to create dynamic training which increases efficiency, safety, and preparedness of security operators for their missions. It offers a customised-training mode with options for speed, accuracy, perception, reaction and bias training. Different transitions, animations, and states for avatars (terrorists, hostages, and friendly people) are included. Besides training, Augmented Reality technology was also used via HoloLens (HL) smart glasses to enhance human-machine interaction and improve situational awareness in critical security scenarios. A bi-directional system Enhanced Vision App (EVA) was developed to allow an operator wearing HL to view holographic data overlaid on the real world.

Each of the tools developed will be refined and improved based on the end-user's feedback. A performance assessment will also be made based on the information collected from the pilot.

Intelligent hypervision and operation management for soft target protection - APPRAISE is developing, among other technologies, a hypervision system, named the DITHO. The DITHO makes possible the monitoring of all necessary information available about a public space in order for it to be protected, through the use of a digital twin representing that same space.

The DITHO enables the visualization of the situation and the ongoing operations, using multi-source, multi-format, multidimensional information, and to provide novel operation management capabilities powered by AI assisted processing. This novel system fosters the collaboration between LEAs and private security operators and improves responsiveness and effectiveness of the operations.



DITHO in private security operator control centre



DITHO in LEA control centre



Mobile DITHO

The first pilot in Ljubljana simulated a full-scale terrorist attack exercise, this gave us an opportunity to successfully evaluate this novel hypervision system. During the exercise, the ATLANTIS water park was monitored which enabled the BTC security operators to detect and manage threats and incidents. The operators took advantage of the APPRAISE capabilities to manage the situation, gather useful information, and easily and directly share it with public and private security operators in the field. Among the tools for intelligent supervision and operation management, APPRAISE also delivered an investigation tool enabling the LEA operators to easily review videos and other event-related information focussing on the detected incident.

The upcoming research and development work will concentrate on improved capabilities for the visualization of crowd analysis, the identification of the person of interest, and multiple views of tactical situations commonly used by SWAT teams, which is deemed necessary to enable a successful pilot in the Basque Country.



APPRAISE framework validation and pilots - All supporting activities, including the APPRAISE framework validation and pilots, are evolving according to the planned schedule.

APPRAISE partners have now successfully finished the first execution of pilot testing activities. The first pilot testing and validation activities were demonstrated in pilot no. 3 that took place at the BTC Water Complex, ATLANTIS in Ljubljana. The first pilot is always challenging to test but APPRAISE technical partners and end user partners showed a high level of professional and technical readiness of the APPRAISE technologies and planned processes which were conducted on the base of pre-prepared scenarios.

Currently, project partners are in the final phase of preparations for pilot no. 1 taking place in the Basque Country this month, with a focus on a cross-border cycling event held between Spain and France.

Within all four APPRAISE pilots, the framework integration, deployment and pilot preparation have now all taken place. These steps are particularly important to ensure the smooth operation and execution of all the project pilots and user evaluation activities.



Join the APPRAISE

community...

Do you work in the area of the protection of public spaces? LEA, first responder or private security?

APPRAISE needs your knowledge and expertise. Join our community and create a direct impact on the research outcomes of the project plus much more!

email us at appraise-h2020@csgroup.eu and get involved.

Contact us



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