



IMPETUS Newsletter

Issue 2, February 2022

Welcome to IMPETUS – improving security in public spaces

IMPETUS is a Horizon 2020 Research and Innovation project aiming to help city authorities improve security in public spaces. Our newsletters aim to keep you up-to-date about project goals and achievements, and perhaps encourage you to get involved in our work or (later) use our results.

If you are in involved in public safety – directly or indirectly, as a potential user or as a potential supplier – IMPETUS surely has something for you!

In this issue

Our second newsletter features accounts of our "Acceptance Pilots" (practical tests of our tools) in Oslo and Padova. We speak to some of our team members in Oslo and Padova about getting to know the IMPETUS partners and the overall experience of conducting the trials.

We provide a report on the IMPETUS Day at the TIEMS 2021 Virtual Annual Conference held on 9 December 2021.

What's been happening in COSSEC – our open community for people interested in IMPETUS topics? Perhaps you would like to join?

Also in this Newsletter: News in Brief and Forthcoming Events.



About IMPETUS



IMPETUS will help smart city authorities to protect their citizens and improve security in public places. The project will use state-of-the-art technologies, adapt them to smart city requirements and extend them with new functionalities. The thing that makes IMPETUS special is its *integrated* approach that addresses three complementary but overlapping areas to deliver a single, coherent solution: Technology, Ethics and Working Processes.

Technology

Leverage the power of the Internet of Things (IoT), Artificial Intelligence (AI) and Big Data analysis to provide powerful tools to help operational personnel manage physical and cyber security in smart cities.

Ethics

Balance potentially conflicting needs to collect, transform and share large amounts of data with the imperative of ensuring protection of data privacy and respect for other ethical concerns – all in the context of ensuring benefits to society

Processes

Define the steps that operational personnel must take, and the assessments they need to make, for effective decision making and coordination – fully aligned with their individual context and the powerful support offered by the technology.

What kinds of threats are addressed by the IMPETUS solution?

IMPETUS will provide technologies that address different types of threats:

- **Specific threats** where the nature of the threat is known e.g., a chemical or biological attack, a cybersecurity attack, a physical attack (gun vehicle, bomb, ...).
- **Evolving threats** where the nature of the threat is not yet known but where indications of "unusual" activities or measurements lead us to suspect that some kind of threat may be developing.

The **IMPETUS** solution is more than just technology: it also provides *practitioner's guides* offering "how-to" advice for all actors involved in dealing with urban security: decision-makers, managers and operational personnel.

IMPETUS will demonstrate its solution in two pilot cities: Padova and Oslo.

The **IMPETUS** consortium consists of 17 partners from 11 different EU Member States and Associated Countries, including 2 local government authorities (City of Padova and City of Oslo) that will lead the field trial implementations. The project will also be supported by a Community of Safe and Secure Cities (COSSEC) – see below. The project has a duration of two years (September 2020-August 2022), a budget of 9.3 M€ and a requested EC contribution of 7.9 M€.



We talk to the leaders of Acceptance Pilots of Oslo and Padova...



Following the success of the Acceptance Pilots in Oslo and Padova, we feature these events in this second IMPETUS Newsletter to give our readers some insight into the events. We approached Osman Ibrahim, David Røttingen and Simon Gjetrang of the City of Oslo and Bruno Bonomini, Giulia Canilli and Arianna Dissegna of the City of Padova for a first-hand account of the meetings and field demonstrations....

In the first interview we had a chat with Osman, David and Simon from the City of Oslo to tell us about the Acceptance Pilot in Oslo.

Many people hear the term, "Acceptance Pilot", and don't know what it's about... can you describe what an "Acceptance Pilot" is?

An acceptance pilot is an initial test and validation of tools. At this stage, the tools and platform are not complete and fully integrated, therefore the Acceptance Pilot aims at testing the tools individually in dry



simulations. The validation process offers feedback for tool partners and the consortium and provides essential feedback for further development and enhancement of both tools, platform and frameworks.

What was the Motivation behind this, and what did you aim to achieve with the pilots?

Firstly, our motivation was to test and validate the tools in an Oslo context, to get a better understanding of both opportunities and challenges that IMPETUS brings when integrated in a smart city. This meant to involve both the end-user and project partners in the training, planning and execution of the specific tests performed in Oslo. Secondly, we saw the Acceptance Pilot in Oslo as a first chance for the consortium to meet face-to-face. This further increased our motivation to involve all IMPETUS partners on-site in Oslo, both to the get a better understanding of tool capabilities and to increase team spirit.

Tell us a little more about the methods and technologies use in the pilot... what were the focus areas: technology, ethics, security?

The focus areas of the AP in Oslo were on the main pillars of the project: technology, ethics and processes. During the actual testing, the focus was to validate the technologies and processes, with some of them tested in the end-user environment. After each test, the end-user provided feedback on the usability and impact on operations through semi-structured interviews. All project tools were involved in the Acceptance pilot Oslo in different settings. We tested data capture of sensor tools, user interface and functionalities, had discussions and tool presentations. Ethics are a pivotal part of the Acceptance Pilots, and prior work on ethics in the project came to great use when we met during planning and execution of the AP.



How would you use IMPETUS platform – as a whole – in your Smart City?

We see the IMPETUS platform as a great opportunity to increase security in public spaces in both Oslo and other smart cities. We aim to use learning points from IMPETUS to increase situational awareness between SOCs in smart cities.

Who was involved in organising this – major players or team members?

The Acceptance Pilot in Oslo involved 50+ people including Oslo municipality, project partners and the SOC end-user: the Agency for Emergency Planning organised the Acceptance Pilot in Oslo together with Agency for City Hall Services and project members. The National CBRNe Center also participated in testing, but City Hall Security Service was the main player. During the planning phase, partner cooperation, sharing of competence and sharing of knowledge within the consortium were essential for making the AP both relevant and fruitful. I'd say that all project partners contributed to making the pilot successful!



How did the volunteers in the city squares react to these, and what was the general perception?

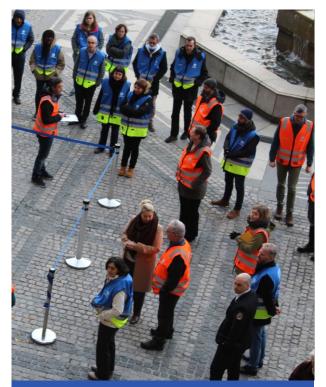
During the outdoor exercises in Oslo, we sealed of public spaces. However, we interacted with the public in the form of answering questions outside the perimeters, and they seemed curious about the exercise, especially at City Hall. The volunteers involved were excited and curious about the tests and the IMPETUS project.

Can you remember something that a participant said about the demo?

Somebody said: "Finally we get a grasp on IMPETUS – activities are finally put together."

Who were these pilots directed towards?

Firstly, the Pilot was directed at the city end-users and tool partners, in order to get meaningful first impressions and feedback on the initial solutions of the project.



Field exercises were highly successful and held in rather public areas. This is a scene from the square in the City of Oslo

Secondly, we directed the pilot towards the consortium in order to increase meaningfulness of tests, get a better understanding of the tools and enhance teamwork.

Were there any shortfalls of the demonstration?

We were not able to integrate all the cyber tools and platform in time for the event, hence not all tools were tested live during the first Acceptance Pilot in Oslo. However, all the exercises planned for the outdoor testing in public spaces took place and were successful.

The meeting between key IMPETUS stakeholders was a massive success and quite possibly one of the main IMPETUS events of the year.

What did you get out of the Acceptance Pilot?

We were very happy with both the attendance and exercises performed in Oslo. The consortium got better insights and understanding of the tools and platform capabilities, which is reflected in the survey distributed after the event. With the assistance of project partners, we were able to integrate tools in an operational environment (SOC) during some of the exercises. This gave us a better perception on the IMPETUS tools characteristics such as usability and functionality, and how the tools could affect security in public spaces in our city. Last but not least we experienced great teamwork, collaboration and learning within the consortium.



Are we closer to understanding these tools in public spaces and actually seeing them in action on a regular and continuous basis?

Yes. We got a better understanding of tool capabilities, and how to implement them into our city infrastructure. During both the planning and execution of the AP both opportunities and challenges came up. These are important learning points for future integration into the smart city. Simulations and data capture done on some of the tools can assist in future development of the tools.

What were the lessons that you learned from this pilot, and is there something you'd change in future demos/events?

First and foremost, we learned a great deal about capabilities and end-user perception on the tools. These lessons can increase relevance in the future development of the IMPETUS frameworks. We also had learning points to the facilitation of the AP, and these were communicated to our colleagues in Padova who had their AP four weeks later. Some key learning points were to increase scale of tests, include more volunteers, make room for a wider schedule and increase COSSEC involvement.

Given that this Acceptance Pilot in Oslo gave members the opportunity to meet face-to-face for the *first* time since the start of IMPETUS, how was it to meet in person?

When you're meeting in person you are more open to each other and it's easier to understand each other, to get to know each other much better. When meeting in person there is much more time for follow up discussions during social events like dinner etc. Meeting online also has its advantages, so I'm in favour of both live and online meetings.

Do you have any expectations for the IMPETUS-Oslo/Padova partnership in the future?

We hope to continue our great partnership with Padova, and share ideas, learning points and knowledge for future work and development in the IMPETUS project. Both in terms of the work on IMPETUS frameworks and for the planning of future validation exercises. Oslo and Padova have already expanded our collaboration by and participating together as endusers in a new EU-project proposal submitted in November 2021.



Consortium members discussing lessons learned on the last day of the AP, in the splendid surroundings of the council chamber in City Hall

Can you foresee collaborating with other cities or institutions on this?

Yes, we aim to include COSSEC in a larger degree for the upcoming live exercise during the summer 2022. We would appreciate feedback and ideas from other smart cities both during the planning and execution of the Live exercise, in order to increase relevance and meaningfulness of the validation process. We would actively share our experiences from IMPETUS into networks we are part of withing emergency and security fields, such as our Oslo network with private and public actors, city network in Norway, Nordic Capital network and within research and innovation networks.

Do you have a message for members and/or newsletter readers?

First, we would like to thank the IMPETUS consortium for great collaboration so far. Second, we hope to see as many COSSEC members as possible for the upcoming tests and future development. Your insights are precious and welcomed.

Lessons learned from Oslo to Padova

We definitely learnt a few lessons from both of the APs! Like how tools work! For IMPETUS, we learned how to facilitate tests for different tools. We learned that we need more time to run these tests. We also learned how to include the operational environment into the tests.

We talk to the leaders of Acceptance Pilots of Oslo and Padova...



In the second interview, we had a chat to Bruno, Giulia and Arianna from the City of Padova about their experiences at the Acceptance Pilot in Padova.

Many people hear the term, "Acceptance Pilot", and don't know what it's about... can you describe what an "Acceptance Pilot" is?

A good definition of pilot test is: "a type of Software Testing that verifies a component of the system or the entire system under a real-time operating condition. The purpose of the Pilot Test is to evaluate the feasibility, time, cost, risk, and performance of a research project.... to conduct a dress rehearsal for the usability test that follows" (https://www.quru99.com/pilot-testing.html). So, the APs have been a set of tests — undertaken in a limited and controlled environment with only a portion of possible endusers — aimed at providing feedback to the developers. Typically, in fact, there could be somewhat of a mismatch between the end-users (with their needs and expectations) and the developers (with their actual potential to fulfil the

requests) and it is very important to find an agreement



about what can be really achieved before the final delivery. The APs, hence, have given us the opportunity to understand the status of the development: From one side, does what has been undertaken correspond to what was expected? From the other side, are the requirements achievable, considering the developers' skills, their budget, the time available, the maturity of the technologies, etc.?



What was the motivation behind this? What did you aim to achieve with the pilots?

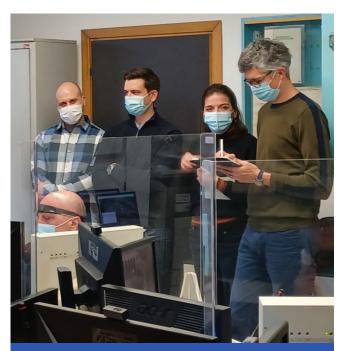
The whole Consortium needed to better understand the real potential of the IMPETUS tools and the platform: it's different to read about a technology or about a device and to "touch", to "see" it. So, to better understand if a tool is useful and if it could bring an improvement to the daily work of the end users, these people have to try the tool directly.

The tools and the platform -at this stage of the project – are not ready. Though trying them in a preliminary version is extremely powerful: from the end-user point of view, it is a matter of involvement: "the developers are listening to me, they are developing something useful for me, for my job". If these kinds of tests are not undertaken, the end-user who will have to use the tool will consider it an imposition. The risk that the end-user may not adopt the new tool is very high.

From the developer's point of view, it is a matter of understanding, considering that the developers usually do not really know what the end-user's daily work is and what they really need. Typically, these two "worlds" speak different languages... testing together before the final delivery is key in obtaining the best results possible.

Tell us a little more about the methods and technologies use in the pilot... what were the focus areas: technology, ethics, security?

Before the APs, we tried to create a kind of a preliminary contact between the tech partners and the end users: within the Consortium, we worked in minigroups (composed by tech and non-tech partners to mix different experiences and skills) to prepare some presentations related to the tools and the platform, which also needed to be understood by a different audience (not prepared, not aligned, often "far" from the project's objectives and activities). We then shared these documents with the SOC operators to clarify what we were working towards, what their level of engagement would be and, moreover, the possible advantages the tools could have brought.



Team members monitoring the field exercises from an off-site control room in Padova

The Consortium has also developed an official Validation Plan (Deliverable 7.1) with the aim to validate and evaluate the tools and the platform from different points of view, following a structured methodology.

The APs were planned, in full agreement between the Cities and the Partners, to inform the end-users of the potential of the tools, to undertake a kind of "hands-on" training, to directly try and provide meaningful and usable contributions.

All the end-users have been supported during the tests from the tech partner responsible for the tool development and then interviewed by a third person (a referee), who assisted with the tests (typically someone from Sintef, the coordinator partner).

The tests, according to the Acceptance Pilot definition, have been evaluated considering mainly two aspects: usability of the tools and impact on the operational framework.

But this does not mean that the unethical use of data has been allowed. All the tests have been planned and carried out according to detailed ethical and data privacy procedures defined and formally documented in the project.

In Padova, the tests have been undertaken in four different locations because, as seen in Oslo, the tools can provide support to different kinds of end-users, and not only the SOC operators/supervisors. Indeed, the cyber security tools should support the IT department, other tools should be managed by analysts able to get information from different heterogeneous data (e.g. collected from the sensors installed in the City or some social media). The analysts could share this information to support both the SOC operators when an emergency occurs and decision-makers when an event in the City has to be planned.

How would you use IMPETUS platform – as a whole – in your Smart City?

The IMPETUS platform has to be considered the container of all the tools provided by the tech partners. The platform developers have been working to add other additional tools, to substitute the current ones and to customise the User Interface according to the needs of every end-user.

So with one unique platform we will be able to "tailor" a specific dashboard to support different end-users, each with a different focus, role and responsibility. For example, the same platform could be "prepared" to support the city's IT specialists to discover vulnerabilities that need their attention in the cyber security tool from the dashboard; that same dashboard may be less useful for the local police SOC operators that would, instead, need the weapon detection tool in their dashboard of the IMPETUS platform.

The "big hope" of the IMPETUS platform is to provide the same information, in real time, to the different SOCs present in the City to improve co-ordination efforts, readiness to intervene and the quality of the intervention.

Who was involved in organising this?

The organisation has been managed by our colleagues in the City of Padova; but, since the kick-off, we have been working together with our colleagues in the City of Oslo, with constant support by Sintef.

Locally, of course, we've had to involve local authorities and we kindly receive support from the other Consortium partners who are also based in Padova, namely Universita Degli Studi Di Padova and Unismart.

The exercises undertaken in the square have been the most "scenographic" and, for an external observer, the most impressive because there were shots, smoke and many people running, but these tests were not the only ones that provided good results. All the tech partners were so clever to make such a significant improvement comparing the tools' status during the AP in Oslo and, only after a month, the ones in Padova.

The Social Media Detection tool, for instance, in front of the right users, has impressed in terms of how easy it is to learn how to use it and the precious information that it can provide.

How did the volunteers in the city squares react to these, and what the general perception?

The volunteers that were involved have been partially trained. "Trained" because of safety reasons, "partially" because we needed to keep what would have happened "secret" (i.e. to test the PTRO, we needed to get a reaction that was as spontaneous as possible). Even if they were aware that it was a simulation, they were quite scared when they got out of the mini-square. During the last day of the AP, we collected some feedback from the volunteers.

Who were these pilots directed towards?

The main targets of this AP were the local stakeholders, in addition to the consortium partners. We would get the local stakeholders involved of course, explaining and demonstrating the potential of the IMPETUS platform and tools. We'd evaluate the progress made by the partners. Again, let us say they made an impressive step ahead in only one month of development (from the AP in Oslo). We also involved COSSEC members; all the Italian members were invited, and some participated and provided significant contribution. For sure, they will be even more interested in the future developments.

Were there any shortfalls of the demonstration?

Not shortfalls, some difficulties, and unforeseen events, but we took the best out of them. For example, a few partners could not come to the AP due to COVID restrictions, and we had to rethink the testing modality last minute, but, at the end of the day, we were really satisfied with the result.

The meeting between key IMPETUS stakeholders was a massive success and quite possibly one of the main IMPETUS events of 2021... what did you get out of the Acceptance Pilot?

The IMPETUS recipe: a lot of commitment, the right amount of cooperation, just enough stress and fatigue, and finally a tasty plate of positive and innovative experience.



Field exercises performed in the square in Padova were the most "scenographic" event of the AP



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Are we closer to understanding these tools in public spaces and seeing them in action on a regular and continuous basis?

Not all the tools are at the same readiness level, so although all the tests were successful, there is still the need of further developments and tests. But the perspective of a wider and continuous use of the tools has certainly become more realistic after the AP.

What were the lessons that you learned from this pilot?

We learnt several lessons actually... it was not easy to organise this AP (considering also the strong constrains and limitations the COVID pandemic has caused) and we are sure the live exercise will be very challenging as well. Maybe one lesson is that there are some stakeholders that have to be more deeply involved, since a common and shared effort is the best way to achieve a better result.

Do you have any expectations for the IMPETUS-Oslo/Padova partnership in the future?

The collaboration with the city of Oslo has been positive since the beginning. Indeed, the two cities applied for a Horizon Future project in the environmental emergency field, which would involve the local Civil Protection agency in Padova. As for IMPETUS, this project would require new technologies to support the operators on the field. We would be thrilled to start a new adventure in collaboration with the city of Oslo.

Can you foresee collaborating with other cities or institutions on this?

Recently three cities from the Region of Veneto, the area were Padova is located (North-East of Italy, close to Venice), joined the COSSEC. So, these cities will follow our activities, and if the results are positive, we may think of a common regional development in the smart security field.

Do you have a message for members and/or newsletter readers?

Guys, carry on supporting the IMPETUS team!

IMPETUS Day at the TIEMS 2021 Virtual Annual Conference



What a day! A full day (Thursday, 9 December 2021) at the TIEMS 2021 Virtual Annual Conference was allocated to IMPETUS – and aptly dubbed "IMPETUS Day". Around 130 people attended and viewed the 13 presentations on the day.

This year's TIEMS conference was on "New Emergency Management in a Resilience Era Facing Health, Climate and Energy Challenges". The conference was co-hosted by the French High Committee for National Resilience (https://www.hcfrn.org/), the "French chapter" representative of TIEMS, with Capacity Building International (https://capacitybuildingint.com/) as the technical operator of the conference.

This conference gave the IMPETUS partners an opportunity to describe how their technologies and tools can be used in the IMPETUS platform in the context of urban safety in a smart city. Emergency management personnel must prepare themselves and their local communities for the challenges, and opportunities, they may face in the future. There is a call for emergency managers to build and/or enhance new approaches, tools, and capabilities to meet these challenges. Given that one of the key focus areas of IMPETUS is the management of process, ethics and technology often seen in emergency mitigation using improved security solutions, IMPETUS was a compelling and welcome addition to the conference program.

IMPETUS offers long-term social benefits in urban safety through strategic investments in technologies and processes in disaster prevention, such as physical and cyber security breaches in public spaces and city infrastructures. Furthermore, IMPETUS considers citizen preparedness, and directly involves them in smart city solutions in this era of resilience.

The IMPETUS Day started with a talk from Joe Gorman (Project Coordinator, SINTEF, Norway), who introduced the project and the speakers. Matthieu Branlat (SINTEF, Norway)

presented some key results from IMPETUS and Jelena Radošević (ISP, Croatia) reported the results of the IMPETUS Public Opinion Survey with respect to ethical issues regarding smart city technologies. Sandro Bologna (TIEMS, Italy) ask attendees the relevant question: "Is your Smart City a Resilient City?" and explained how joining the COSSEC network could help you and your city become more resilient.



Nesrine Kaaniche (Telecom SudParis, France) spoke about privacy-preserving challenges in urban safety, with focus on data mining in public spaces and how privacy enhancing technologies (anti-tracking software) used in IMPETUS can enhance resilience. Martina Ragosta (SINTEF, Norway) introduced the technology validation strategies in a realistic operational environment, such as the Acceptance Pilot recently held in Oslo. Martina also spoke about how the pilot studies and IMPETUS platform users could benefit from IMPETUS tools and technologies, particularly with respect to managing physical and cyber security. Resilience in public safety in Smart Cities was given a new perspective by Osman Ibrahim (Oslo Municipality/Kommune, Norway), where he described how bridging enhanced preparedness and adaptive capacity through "training-by-gaming" can be achieved.



Radu Popescu (SIMAVI, Romania) spoke about how the integrated components of the IMPETUS platform can be consolidated and used by government agencies, civil society, emergency services and urban infrastructure for improved technical and operational alertness. The IMPETUS Social Media Threats Detection Tool, which ethically monitors online content for security in Smart Cities, was presented by Joaquin Tuells (INSIKT, Spain). The IMPETUS Weapon Detection Tool was demonstrated by Joe Levy (CINEDIT, Switzerland). Joe showed a video of a live demonstration of how the technology and its operators (1) detected the weapon (in this case a gun) in the city square, (2) alerted police and security personnel to the threat, and (3) secured the threat, preventing any harm or loss of life. The weapon detection tool was particularly exciting to see in action!



The concept of the "Attack Graph" was jointly described by Keren Saint-Hilaire (Telecom SudParis, France) and Joaquin Garcia-Alfaro (Institut Polytechnique de Paris, France) for the real-time monitoring and mitigation against cyberattacks using the fluid link between networks and vulnerabilities as a case in point. Paolo Mocellin (Università Degli Studi di Padova, Italy) and his team from UPAD highlighted UPAD's involvement in IMPETUS, and also brought the importance of "crowd science" to the fore, particularly movement of people in risk scenarios in public places.

Overall, the speakers gave excellent talks at the IMPETUS Day at the TIEMS conference. We look forward in anticipation to more results and outcomes the IMPETUS Project can produce!

The sessions can now be viewed on YouTube:



IMPETUS Day Session 1 YouTube IMPETUS Day Session 2 IMPETUS Day Session 3 **IMPETUS Day Session 4**

IMPETUS outreach: Community of Safe and Secure Cities (COSSEC)



COSSEC stands for "Community of Safe and Secure Cities". It is a group of individuals representing organisations or projects that have an interest in or might be affected by the work being done in IMPETUS.

The idea of COSSEC is to extend involvement in the project to stakeholders beyond the project consortium. COSSEC members will influence

COSSEC Status (as of December 05, 2021)

Number of members: 30
Diversity of members: 10 cities
Diversity of members: 1 citizen group
Diversity of members: 14 EU countries
Number of Workshops: 1 (limited by COVID-19)
Number of Webinars: 2

IMPETUS activities so that solutions emerging from the project will meet local needs in other cities and/or meet other concerns or requirements they might have. Some COSSEC members will be early adopters of project results.

We foresee that COSSEC will continue after the end of the IMPETUS project itself, as a forum for organizations interested in using IMPETUS results, or with a wider interest in the topics addressed by the project. For more details, see COSSEC Platform:

https://pr4gdm.giftmaru.com/

The first COSSEC webinar was held on 4 May 2021, the theme of which was "Use of Advanced IT for the Protection of Public Spaces". This was a 2-hour virtual meeting, chaired by Sandro Bologna of TIEMS, covering:

- 1. The basis of IMPETUS,
- 2. SURE (Smart Urban Security and Event Resilience),
- 3. Snap4City (the Firenze Smart City Control Room),
- 4. OASC International (Open & Agile Smart Cities),
- Application of security technology for the protection of public spaces,
- Influence project direction, ensure results fit needs

 Move policies in the right direction

 Governmental authorities Networks
 Researchers Innovators
 Experts
 +++

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 Aveiling the right direction

 External feedback helps development

 Channel for long-term smart city R&D program

 2021->
- 6. Operational impacts of security technology application for the protection of public spaces, and a
- 7. General discussion around the most challenging topics.

Following the joining of more members to COSSEC, the second COSSEC webinar shortly followed on 16 June 2021, and was focused on the "Ethical and :egal issues with the Use of Smart City Technologies for Public Protection. Sandro Bologna chaired this 2-hour session, which covered topics including:

- 1. The introduction of a survey in the use of smart technologies in detecting security threats in public spaces, and the ethical issues thereof,
- 2. A European perspective on the ethical issues, personal data protection and potential misuse of personal data,
- 3. Ethical issues of perceived fairness in Machine Learning (ML), and an
- 4. Open discussion on the above topics and other controversial claims.

Municipalities, other projects (not only EU projects) and initiatives to improve the security of public spaces and community resilience are invited to apply for joining COSSEC.

If you want to learn more about COSSEC, please contact: Sandro Bologna, our COSSEC manager s.bologna@infrastrutturecritiche.it



News in brief



TIEMS/CBI/IMPETUS Webinar on Smart Cities Disaster Response

This webinar, held on 28 October 2021, provided the opportunity for the IMPETUS partners to describe how their technologies and tools can be used in the IMPETUS platform in the context of urban safety in a smart city. If you missed the webinar, you can watch the full video here.

IMPETUS at the CERIS-FCT Workshop

On 25 February 2021, IMPETUS took part in the CERIS–FCT Virtual Workshop on Protection of Public Spaces aimed at identifying operational issues that may leave a city vulnerable to attack and how technology innovations, such as public CCTV, transport systems and social media platforms, can be used to counter attacks on urban meta-systems.

Read more: https://impetus-project.eu

Forthcoming events



IMPETUS looks forward to:

1. Live exercise in Oslo during June/July 2022; COSSEC members invited

Want to know more? Please contact:

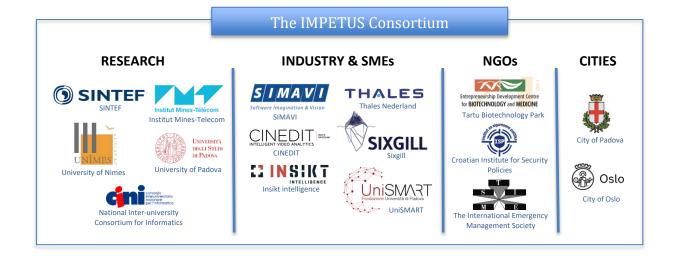
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