



IMPETUS Newsletter

Issue 1, March 2021

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 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

As this is our very first newsletter, we start off by telling you what the project is all about. You will hear a lot more of the details in future newsletters: for now, we just set the big picture.

We believe in the “personal” touch, so we include interviews with two of our project partners, telling us about their motivation for being part of the consortium. **Joe Levy of CINEDIT** tells us about their AI-based weapon detection tool: how it can help improve security, and how involvement in an EU project can help an SME. Then **Osman Ibrahim of the City of Oslo** gives us the “user” perspective: how IMPETUS can help city authorities.

We then tell you about COSSEC: a **community of users** being created by the project. Perhaps you would like to join?

If you have any energy left after all that you can try our **fun crossword** on the final page: test your knowledge and maybe win a prize!



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What is IMPETUS about?



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€.

Find more on our website
<https://www.impetus-project.eu>



Here is what two of our partners, the City of Oslo and leading security technology provider, CINEDIT, have to say about their expectations in IMPETUS



In this first interview, **Joe Levy of CINEDIT** explains the importance of video analytics tools for weapon detection.



How do you see the whole idea of the project from the perspective of technological SME?

From the perspective of technological SME's, I think there is no room for error which is a good thing because it will tremendously help us validate our technology. On the other hand SME's like ours are very dynamic, things happen fast and when working with Smart Cities like Oslo we learned how to sync and walk at the same pace, therefore to accelerate decision making becomes a new form of art when SME's work with Public Authorities.

How can society benefit from your innovation?

First of all, if alerts about a weapon attack can be raised in real-time to the relevant people there can be huge live saving benefit for first responders. I cannot recall how many times we were told that first responders got shot onsite because they were outgunned by their attackers (Charlie Hebdo Attack - Paris 2015 // Tree of Life Synagogue - Pittsburg 2018). Too often, first responders are not provided with accurate situational awareness when reaching a Red Alert site - this is the problem we are trying to solve, and the rabbit hole is so deep ... With our system, first responders get instant situational awareness and they can better assess and respond to acts of terror without endangering their lives which is crucial when responding to any attack.

Being a part of the project - what added value do you expect IMPETUS will bring to your company?

At CINEDIT we believe that by having our tech deployed at the partner cities will validate the claims of our weapon detection technology for CCTV. We strongly believe that IMPETUS will boost our sales and allow us to reach to other European cities. Additionally, it allows us to create new ties with great partners and we are so thankful for that.

What will be the highest priority of smart cities in the future? Will security prevail?

I think it will involve GDPR compliance, Cyber Security and Intelligent Video Analytics. One cannot work without the others. We have great AI's, yet they would be worthless without

GDPR compliances and proper cyber security. Therefore in the future I foresee smart cities will employ much larger ICT teams and will require greater computing power.

Your key message(s) to target audiences:

Weapon detection is like an insurance: you don't acquire it after an attack - terrorists do not strike twice at the same spot. Our tech is non-invasive, makes the world safer and is GDPR compliant. We hope it will never need to raise alerts about people carrying weapons, but if it does, you can rest reassured, our team made sure our product is 100% reliable.



In the second interview **Osman Ibrahim** from the **City of Oslo** explains how the project will help the city to overcome ever growing threats.



How do you see the whole idea of the project from the perspective of a public authority?

Challenging situations requires rapid decision-making across multiple actors to form a coherent response that minimizes the impact on inhabitants. The key in all this is having robust systems for detecting incidents at an early stage, so that we can intervene early, with the necessary situational understanding necessary to make good decisions.

IMPETUS offers new approaches for early intervention and reducing consequences and for creating actionable information and supporting decision making.

How can society benefit from the overall innovation of the project?

IMPETUS gives us a platform to examine the challenges of implementing modern detection and monitoring technologies in our cities. As a public authority, this gives us an opportunity to explore the use of technological development and to ensure that the tools can be safely deployed in many European cities.



Oslo

Being a part of the project, what added value do you expect IMPETUS to bring to the City of Oslo?

Our participation in the IMPETUS project offers us a unique chance to participate in the making of tools and solutions that build towards our chief goal: to ensure a safe and secure city for the inhabitants of the City of Oslo, now and in the future. We bring the end-user perspective into the project, and learn from pilots, experiences and expertise available through the project partners.

What would be the key actions during the project lifetime to maximize the impact of the IMPETUS results?

The key to success in IMPETUS will be to leverage the resources and knowledge of the project participants into the development effort. By working on technological development, end-user integration and ethical consideration in a tightly interlinked way, our consortium can draw upon the partner resources in all project stages. We have also established an internal network group in Oslo with potential users, which will serve as an end-user group throughout the development process and following project completion.

What will be the highest priority of smart cities in the future? Will security prevail?

The increasing digitalization of our cities is gradually changing our cities. It opens the way for new ways to understand our cities in real-time and provides us with the tools to react instantly when incidents occur. It also opens for new vulnerabilities that adversaries can use to strike at us. The rapid technological advancement presents ethical challenges, and the responsibility falls on us to ensure that the right to privacy in our cities balances the need for security.

Your key messages to target audiences.

As a project partner, the City of Oslo is excited to be a part of the project and looks forward to participating with an end-user perspective. We believe that the results of the IMPETUS project will provide a valuable toolbox within different ethical frameworks when it comes to ensuring a safe and secure environment for our citizens.



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



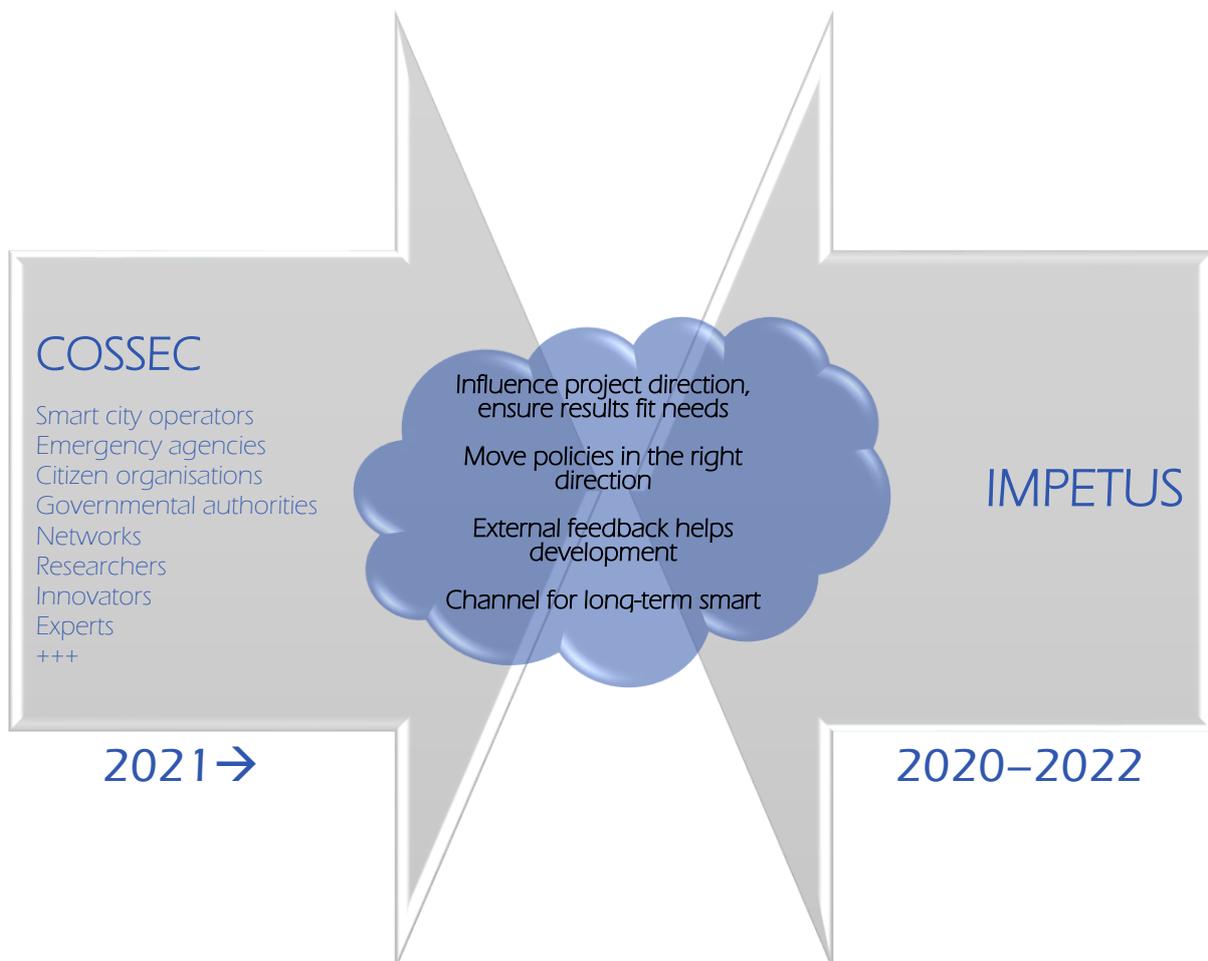
What is COSSEC?

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 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.

Membership is by invitation only - but anyone can request that they be invited. There is no membership fee.



COSSEC plans to arrange a series of face-to-face workshops, including one at each of our two partner cities, Oslo and Padova. These will give us an opportunity to meet our COSSEC members face-to-face. Discussion groups, information sessions and interactive demos will be held during the workshops. The project has a budget that can be used to contribute to travel costs to these events. Travel restrictions arising from COVID-19 are so far preventing us from arranging these events. Depending on how things evolve, we may decide to arrange virtual events instead.

Interested in joining COSSEC?

Please contact Sandro Bologna, our COSSEC manager

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News in brief



IMPETUS virtual Kick-off Meeting 1–3 September 2020

IMPETUS was kick-started with a virtual kick-off meeting from 1st to 3rd September 2020. Over 70 participants from the project consortium attended the meeting. The three full days provided lots of opportunities for project partners to initiate collaboration and exchange views with each other.

Joe Gorman presents at the TIEMS 2020 Annual Conference, 2–4 December

On 3rd of December 2020, IMPETUS project coordinator, Joe Gorman, presented his talk “IMPETUS: a research and innovation project addressing urban safety” at the online TIEMS 2020 Annual Conference.

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

Forthcoming events



IMPETUS looks forward to participating in the forthcoming “*project to policy kick off seminar*” being organised by the REA B4 unit together with DG CNECT and DG HOME. The seminar will raise awareness of different sectors of the European Commission involved in policy making about on-going relevant research, and help projects understand how they can best contribute to policy issues. The seminar takes place 22-23 March 2021.

Want to know more? Please contact:

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Dissemination Manager: Snjezana Knezic, TIEMS

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Test your knowledge about smart city security!



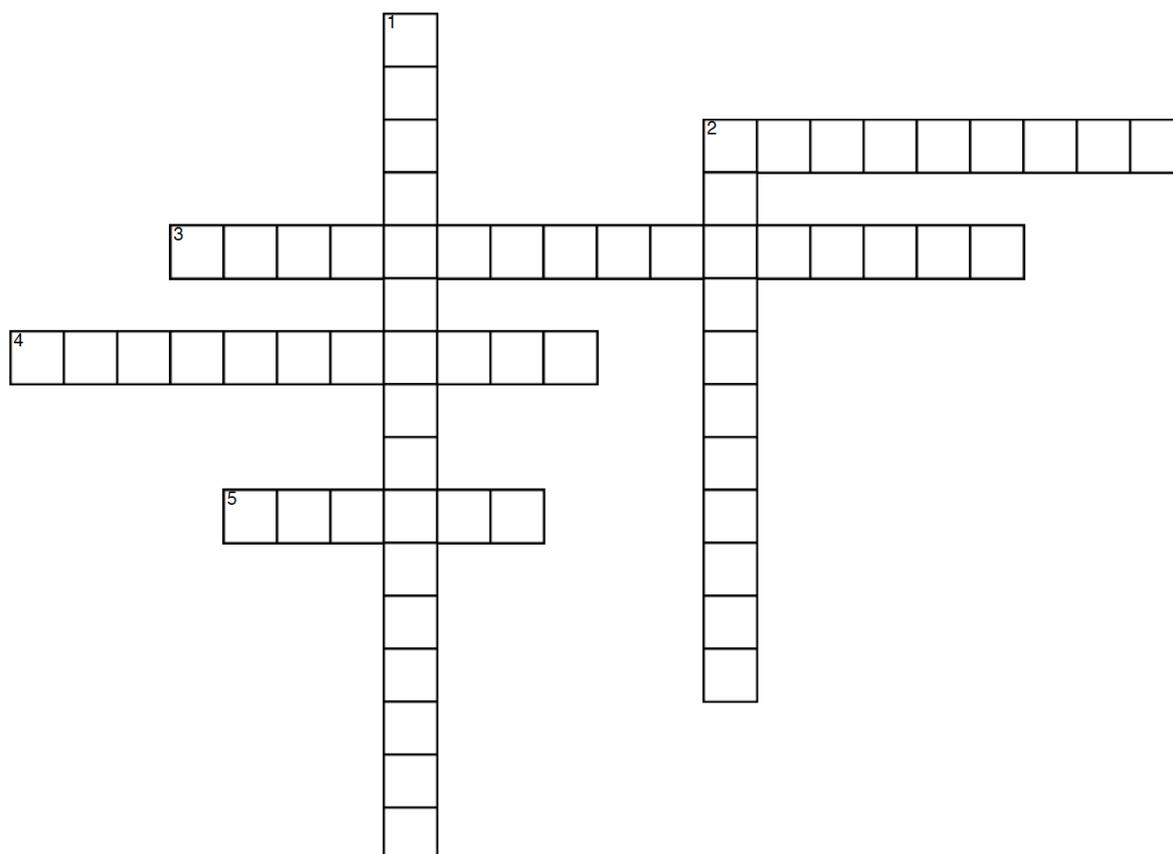
Please send your solution by email with subject field "IMPETUS crossword01" to our dissemination manager Snjezana Knezic (contact details above). The winner will receive a small souvenir from Croatia and an honourable mention in the next newsletter ☺.

ACROSS

2. An action of identifying the presence of something or accessing information without specific cooperation with the sender (9).
3. The interconnection via the Internet of computing devices embedded in sensors, software, and other technologies (8,2,6)
4. An attempt by hackers to damage or destroy a computer network or system (5,6).
5. A statement of an intention to inflict pain, injury, damage, or other hostile action on someone in retribution for something done or not done (6).

DOWN

1. Actions to keep city safe aiming at prevention of risks from various sources (8,8).
2. Practices defined by law which ensure that data is collected and disseminated in accordance with public expectations (4,7).



The IMPETUS Consortium

RESEARCH	INDUSTRY & SMEs	NGOs	CITIES
 SINTEF  Institut Mines-Télécom  UNIMES University of Nimes  cni Consorzio Nazionale Interuniversitario per l'Informatica National Inter-university Consortium for Informatics	 SIMAVI Software Imagination & Vision SIMAVI  THALES Thales Nederland  CINEDIT INTELLIGENT VIDEO ANALYTICS CINEDIT  INSIKT INTELLIGENCE insikt intelligence  XM CYBER XM Cyber	 Entrepreneurship Development Centre for BIOTECHNOLOGY and MEDICINE Tartu Biotechnology Park  LSP Croatian Institute for Security Policies  The International Emergency Management Society	 City of Padova  Oslo City of Oslo

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