

PS-CRIMSON

A one-look overview of the city
in 5 seconds



Published October 2022

Nowadays, cities are digitalising more and more services, like data gathering for mobility, safety and communication with citizens. This data is required to be able to govern an increasingly complex and dynamic city. However, authorities still need to tackle information fragmentation caused by separated data per department and a lack of common platforms and toolsets.

The ITEA project PS-CRIMSON, a collaboration between six academic and industrial partners from the Netherlands and Canada, developed a unique 3D smart digital model that combines all of the gathered data on one common platform. With this platform, public safety and disaster management can be improved, as pilot projects in Eindhoven and Vancouver have shown.

Impact highlights

- > Thanks to PS-CRIMSON, a city representative responsible for video surveillance can now work with one single screen and, once logged in, take a virtual walk through a 3D model of the city and see everything which is happening in a single view. This facilitates his/her work a lot compared to the previous situation where (s)he needed to monitor up to 60 live screens in the control room and handle dozens of calls during the day from local citizens and officers regarding suspicious events.
- > Thanks to AI image technology developed by project partner Eindhoven University of Technology, the search engine can determine where an incident is taking place to an accuracy of 10 meters, when someone sends a mobile picture to the police.
- > Thanks to the 3D smart model of Esri Canada, developed within PS-CRIMSON, city representatives can now see the effects of an earthquake down to the level of interior units in the damaged buildings and the different levels of flooding that would follow.
- > PS-CRIMSON project partners won a tender for Smart City Hilversum, which is now being deployed to create insights on traffic.
- > ViNotion has sold PS-CRIMSON results to other cities, including Amsterdam, 's-Hertogenbosch and Bruges.
- > Atos is in the lead for a smart city project in Germany.

Project results

The PS-CRIMSON consortium has delivered a platform that serves as a single entry point for city representatives. This facilitates data collection, sharing, management, analysis and dissemination from public and private urban infrastructures and resources. This single entry point to a smart city platform provides access to the information of different types of systems from different departments. It saves city representatives a lot of time and money and gives them one view of all of the data they are gathering, enabling them to combine these and act upon them quickly. A focus lies on the public safety and disaster management domains, where the platform's benefits are extremely important.

For public safety, in the background of the platform, software is monitoring all of the city data and filtering out relevant events that require attention. This preprocessed information allows the city representative to make splitsecond decisions, see connections between the different data and, most importantly, feel in control, even in an emergency.

For disaster management, the PS-CRIMSON application and model is able to show the effect of an earthquake on a densely populated downtown. The application and model can simulate the different scenarios and enable the city to predict and pre-assess the damage with a much greater level of detail and accuracy.

The partners showed a unique complementarity in their collaboration: Atos and Esri Canada offer the integrated platform, ViNotion and Sorama are experts on sensors, Esri Canada created the digital twin for indoor city modelling, Cyclomedia is responsible for the photorealistic 3D texturing and the Eindhoven University of Technology supports this with innovative solutions on AI. Together, they cover the full value chain for a smart city solution, integrating the different silos of data and technology together in one common platform.

Exploitation

By offering a complete smart city solution which is valued by cities, the project has already had its first commercial successes.

The project partners won a tender for Smart City Hilversum, which is now being deployed to create insights on traffic. They are now the first adopters of the PS-CRIMSON platform to share valuable public data between different departments.

Similar projects are being tendered by other cities in the Netherlands, Germany, Belgium and Canada, where the partners are offering all or part of the PS-CRIMSON results. Atos is in the lead for a smart city project in Germany and ViNotion has sold PS-CRIMSON results to other cities, including Amsterdam, 's-Hertogenbosch and Bruges.

PS-CRIMSON's offerings enable the platform's users to detect suspicious situations, localise them, follow the subjects involved and intervene before escalation takes place. Thanks to the project's world-class technology results that can be extended to many other domains, this can now all be done with a high performance and accuracy which is two to three years ahead of the market, making cities a better and safer place to live in!

PS-CRIMSON

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PROJECT LEADER

Egbert Jaspers, ViNotion

PROJECT START

September 2016

PROJECT END

March 2020

PROJECT WEBSITE

<https://itea4.org/project/ps-crimson.html>

PARTNERS

The Netherlands

Atos Nederland

Cyclomedia Technology

Eindhoven University of

Technology

Philips Lighting

Sorama

ViNotion

Canada

Esri Canada