

TREVICE :

Traitement Evaluation Visualisation des Informations pour la Sécurité urbaine

(Treatment Evaluation Visualization of Informations for urban security)

Call : H2020 FCT-01-2015

Looking for :

- European end-users
- European partners (preferably working in the field of forensic science)
- A coordinator partner

Abstract



The aim of the **TREVICE** project is to validate a new, anticipation platform concept, based on the use of BIG DATA as an aid in decision-making. The principal idea is to offer solutions for the processing of massive quantities of heterogeneous, volatile data in realtime (mainly video and text-based data obtained via social networks), and to categorize and present it to a user in a coherent fashion that ultimately leads to more efficient decision-making. This proposal places particular emphasis on the application of these solutions to the field of urban safety.

Indeed, public security managers are today faced with a huge increase in the volume of information they must take into account before implementing operations.

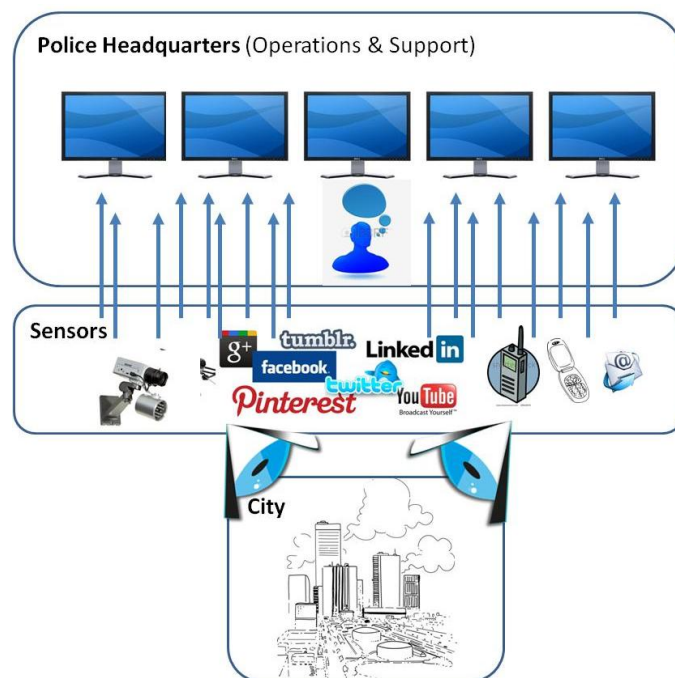


Figure 1. Data flows decision-makers are commonly subject to.

Accompanying the ever-rising volumes of data and its expanding heterogeneity is the increased speed at which it must be processed. While in days gone by data tended to be analyzed in a stable context and relatively infrequently (print and audiovisual media, post-mortem reports, radio stations), these days we tend to process data as it arrives, often directly off the Web (again via social media), or from video-surveillance systems. At this rate, we can soon easily imagine the addition of new sources of data (from drones, networks of sensors, or other connected objects) which would further increase the quantity and variety of available data (Figure 2.).

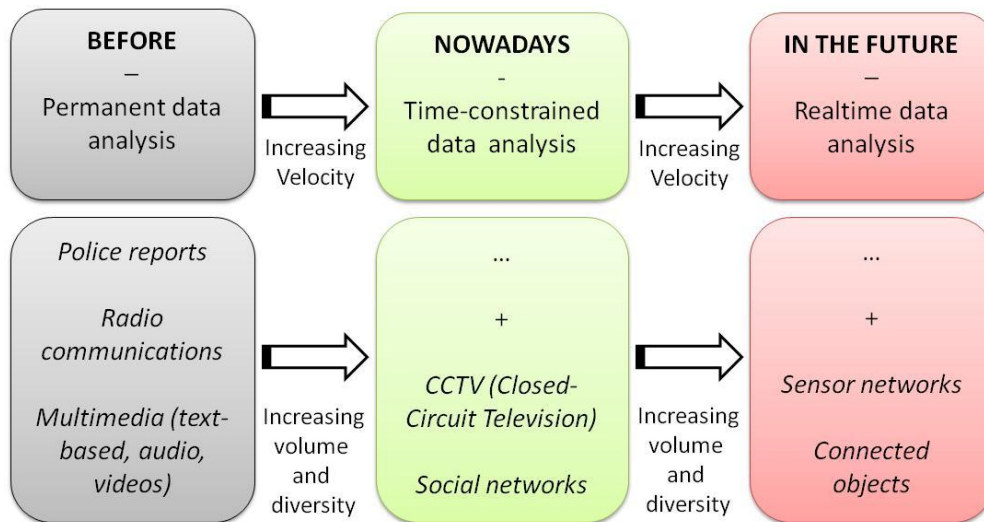


Figure 2. Volume, Variety, and Speed of data processed by public safety managers.

Thus, the flow of data rises in terms of the quantity of information received, though all of it is not necessarily relevant, and this is further exacerbated by the speed at which data arrives. As a result public safety managers are now suffering from information overflow, from disparate and volatile sources, and furthermore have to process this data in realtime to guarantee public safety. Their decision-making work in organized yet frequently exceptional situations therefore becomes more complex by the day.

We therefore feel that it is of prime importance to offer solutions for the processing of this data with a view to providing more efficient support for decision-making. The specific context of decision-making in complex and exceptional circumstances, would most certainly benefit significantly from the implementation of semi-automatic processing interacting closely with decision makers. The anticipation platform proposed in the TREVISE project aims to integrate processing and viewing solutions based on interactive systems in which people play a prime role.

In the course of this project we will use the expression "anticipation platform" to indicate the principal result we expect to attain. By this we mean a set of processing tools and components that allow users to immerse themselves in a decision-making context that is better adapted to operational environments currently in use, or those proposed as future solutions. The term anticipation here denotes the capacity of the platform to offer the presentation and analysis of data that allows the decision maker to become more reactive when confronted by events within their responsibility and to accelerate decision-making by considerably enhancing their understanding of the context in which decisions are made.

To achieve the objectives of this project, we propose to carry out a study of the professional issues faced by the "Police Nationale" (the French national police force), using the Ecole Nationale Supérieure de Police (the French Academy for Police Superior Officers) as an intermediary, in a context of the management of increasingly complex events. We will work on solutions for the processing of video- and social network-based data, such as the analysis of data flows, their categorization and visualization (ONERA, MONDECA), linked with interactive tools that are integrated in a global platform (ONERA). In order to implement such an innovative platform, we will analyze the principles of exchanges between decision makers and the system we are proposing (ONERA), and evaluate the benefits by the implementation of a method of testing (ENSP) these tools in a simulated environment (MASA, MONDECA, ONERA).

The platform produced by the work of the TREVISE project will be deployed at the ENSP for the testing and evaluation phases. The processing and viewing tools offered within the platform will then be presented promptly to the Police Nationale.

The simulated environment for the platform, designed for testing and evaluation purposes, also serves as a first prototype of a training system for new decision-making tools based on the processing of BIG DATA.

The aforementioned platform, a prototype of a new interactive tool for the processing and viewing of heterogeneous BIG DATA as an aid for decision-making, could also be used directly in a variety of sectors after an industrialization phase. The platform will address new areas where it is critical to use solutions for the processing and viewing of BIG DATA as a support for decision-making and the rapid deployment of resources. One can easily envisage the rapid use of the platform as decision-making support in the following sectors:

- Multi-event management by civilian security services (police, firemen)
- Crisis management (local authorities, health, private or public operators)
- Organization of emergency services faced with natural disasters
- Strategic planning of military operations
- Training of major decision-makers in civil security
- Training of major players at operational staff command centers

Actual consortium description:

Partner n° 1 : MASA Group - France - (<http://www.masagroup.net/>)

Partner n° 2 : Office Nationale d'Études et de Recherches Aérospatiales (ONERA). Two teams involved : DTIM/PSR and DCSD/PSEV – France - (<http://www.onera.fr/>)

Partner n° 3 : MONDECA SA (MONDECA) – France – (<http://www.mondeca.com/>)

Partner n° 4 : Ecole Nationale Supérieure de Police (ENSP) – Research center – France – (<http://www.ensp.interieur.gouv.fr/>)

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