

How Location Intelligence Can Help Police Services with Crime Pattern Detection

The Client

The Geneva Police Service's missions are to enforce the laws and to ensure public safety of 464'000 citizens. Geneva is the heart of a cross-border region amounting up to 800'000 residents. Its territory covers 45 townships, and its workforce consists of 1,721 employees. In 2010, the Geneva Police Service has recorded 61'910 criminal code offences within its territory.

The Challenge

The Geneva Police Service sought to implement a location intelligence solution capable to translate the available data into strategic and operational analysis. Until now, the large volume of business intelligence data stocked by the Geneva Police Service was insufficient to detect crime patterns and series. Consequently, the available data has not been operated proactively to enforce the law and maintain order. Therefore, the client wished to take advantage of the business intelligence technology, coupled with cartographic tools, to develop and advance its situational analysis capability to establish and conduct preventive and dissuasive actions to fight delinquency.

The Solution

Galigeo answered the client's need by implementing the Webigeo location intelligence solution. By combining the data from the data warehouse (business intelligence and others) with GIS tools, Webigeo allowed geospatial analysis. As opposed to other location intelligence solutions, Webigeo enables the integration of dynamic mapping in the reports generated by the IBM Cognos application.

The first stage of the project was to geocode all the events (e.g., robberies, burglaries, and assaults) warehoused in the Geneva Police Service databases. By performing a geocoding operation, the coordinates of a crime could now be exploited and analyzed. The spatial data obtained by geocoding and the non-spatial data from the data warehouse are related within an IBM-Cognos report, thus creating a true link between the BI data and the spatial data.

The Webigeo location intelligence solution provides statistical and pre-formatted cartographic indicators, as well as dynamic and interactive dashboards for event analysis and modeling. The mapping tool contributes to an enrichment of the reporting through a geographical representation of the events, which until now had been analyzed, only from a statistic angle. In addition, the Webigeo solution gives the possibility to select the events directly on the map and to generate a new IBM-Cognos report from this map selection.

About Galigeo

Since 2001, Galigeo has been providing value-added software solutions in Geospatial Business Intelligence. By combining geographical dimensions with existing data from business intelligence applications, Galigeo enables organizations to gain critical insights from enhanced Business Analytics.

Contact

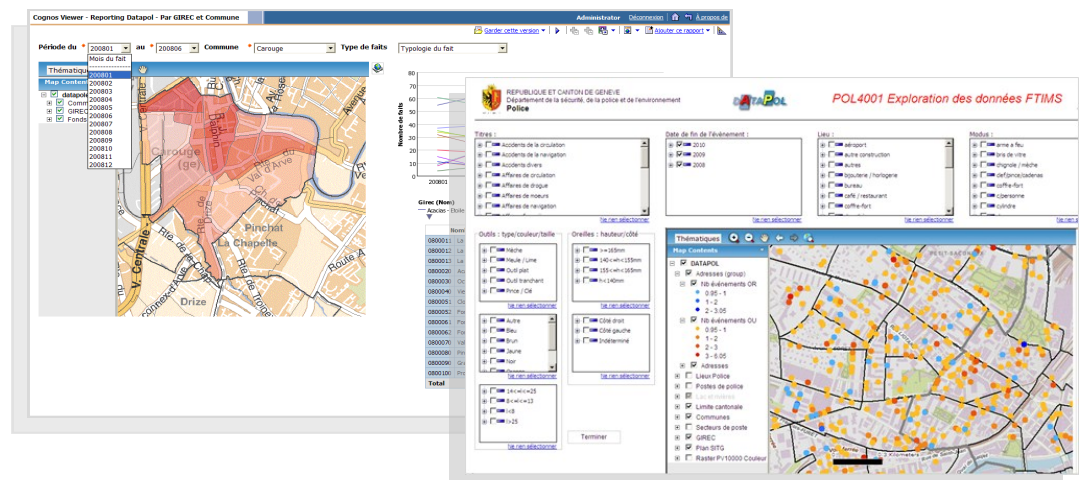
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Galigeo Location Intelligence Solution for the Geneva Police Service

Technology Description

Features	Functionalities
Dynamic and Interactive Map	Map linked to business data, either directly in reports as a complement to tables and charts, or as an interactive map viewer. The latter offers advanced navigation and spatial query features (such as a buffer and included points).
Geographic Dashboard	Stand-alone Web cartographic portal for viewing, analyzing, and querying business data.
BI-Mapping Bidirectional Link	Unique and dynamic integration solution between the mapping and BI systems.
Distribution	Print or export the formatted reports and maps with legends to PDF or to MS Office applications.
Web and API Solution	Web architecture for creating and viewing reports and maps. FLEX API lets users include its functionality in applications while preserving their graphic charters and all their features.
Upload of New Contents	Upload data directly from the operational level via a structured form.
Fly Distance and Walk Distance	This widget calculates the distance
Access to External Data	Easy access to external data, such as Navteq, Bing, and Street View.
Territory Management	This feature helps territory management by creating new sectors analysis and making them accessible according to various criteria.
Complex Filters	Capacity to filter large volume of spatial data.

Our Clients

Galigeo is trusted by some of the world's largest companies and governmental organizations.

Our Partners

Our partnerships strengthen our ability to help our clients achieve superior performance.



The Result

Users now have access to an interactive mapping tool, through a single portal, and fully integrated with IBM-Cognos. By providing various dashboards and indicators integrating a spatial component, Webigeo has helped the Geneva Police Service to achieve the three following objectives:

- An increase in the analysis and detection capabilities at strategic and operational levels
- The strengthening of resource allocation efficiency
- The capability to establish preventive and dissuasive actions to fight delinquency

In coupling the geographical data with the alphanumeric data (e.g., from mobility systems), the client has now access to a powerful tool that structures the data. Furthermore, geospatial data, coupled with the predictive analysis tool, can

- Visualize and identify trends in criminal behaviors
- Understand and predict effectively when and where certain types of crimes are most likely to occur

Since the implementation of the Webigeo location intelligence solution, the Geneva Police Service has already gained great insights to help decision making. The situational analysis capability improvement has led to concrete actions and measures that have decrease by 3 % the number of criminal code offences.