



## Quality Control and Fusion of Road and Weather Data at SAPN

### SUMMARY

Data quality is a key issue, especially for private SPs and TICs who need to deliver accurate travel and traffic information. This note describes the data integrity platform developed by SAPN in France. It highlights the role of CENTRICO partners in developing and coordinating, sustainable, high quality and user focused information.

### INTRODUCTION

The SAPN (la Société des Autoroutes Paris – Normandie) manages 368 km of motorways that connect Paris with the cities of Rouen, Le Havre and the Normandy coast. SAPN undertakes a vast array of activities in order to guarantee the source and quality of the information later disseminated.

In order not to “drag” erroneous information all along the traffic information chain (Collection, Treatment, Dissemination) it is important that the raw data (speed, temperature, traffic volumes, etc) is particularly controlled and validated. While the quality information was historically verified and validated by SAPN TIC operators, SAPN decided to implement an innovative Traffic and Weather Platform (PFM) which would itself qualify and validate raw information obtained from roadside sensors.

### PFM ARCHITECTURE

The PFM is linked with heterogeneous facilities, from which information is retrieved to the SAPN TIC every 6 minutes, using various physical links and/or communication protocols:

- Loops Traffic collection
- Radar Traffic collection
- Weather collection
- Toll collection
- Future facilities ...

### THE TRAFFIC AND WEATHER PLATFORM

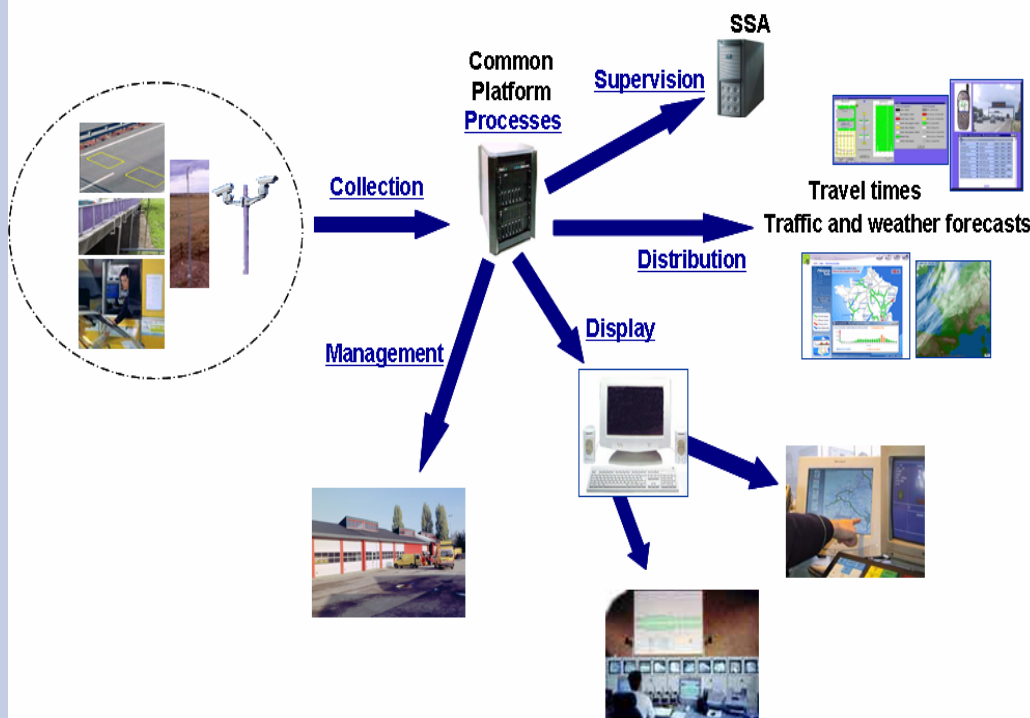
- Collects all data coming from different motorway roadside systems, regardless of their nature (Traffic, Weather, Tolls)
- Applies processes to the raw data from roadside systems in order to guarantee the quality of the information
- Reconstitutes the data that was absent or of poor quality
- Constitutes a unique platform, for the distribution of data to “users client applications”
- Supervises and manages roadside data collection systems
- Displays the raw information under a single format for different users



# Centrico BRIEFING NOTE

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## SAPN Common Platform



### FUNCTIONALITIES

The functionalities of the PFM include:

- Calculation of fictitious data where there is no real station
- Reconstitution of traffic data (incorrect, missing or data manually disqualified)
- Calculation of tendency (traffic and weather)
- Calculation of traffic conditions (fluid, pre-congestion state, etc.)
- Alerts for traffic exploitation, toll exploitation and weather
- Management of alarms (alarms from roadside devices, platform interfaces and platform processes)

### BENEFITS OF PFM

With the PFM, less erroneous raw data arrive in the SAPN traffic information chain. Moreover, the reconstitution functionality avoids the lack of data and allows the delivery of more reliable services.

The strong automation of the PFM avoids all human intervention in the treatment of the data and permits an automatic control in real time. In addition, any problems occurring in one component of the data collection chain is quickly detected and a clear alarm is generated. The PFM is an open platform where it is possible to add new types of raw data and a new "users client" application.

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