



# Integrating resource management to revamp the service offer for evolving passenger demands

No matter where in the world, today's passengers demand efficient and seamless journeys. Across the dense Paris region public transport network, SNCF Transilien has adopted a digital, multimodal approach that focuses on the customer and brings together all modes of sustainable transport to make journeys smoother and simpler. **Gilles Artese**, Head of the High-Density-Zone Operations Engineering Department and Director of the NET/ORION Project at SNCF Transilien, explains more.

**Please provide a general overview of SNCF Transilien and some statistics about your operation.**

SNCF Mobilités is responsible for providing public transport services for people and transportation services for goods. SNCF Transilien, an operating unit of SNCF Mobilités, is the provider of public transport for passengers in the Paris region. It has 14 rail

lines, two tram-train lines and 16 Noctilien night-bus routes. Its organisational authority is Île-de-France Mobilités.

The rail network in the Paris region is one of the densest anywhere. It is the second-busiest network in the world, after Tokyo but ahead of London and Seoul and with five times as much rail traffic as New York. Every day it operates 6,200 trains

for 3.2 million passengers. It is crucial in these mass transit zones to aim to guarantee the feasibility of the transport plan from the start of the design phase, and especially to ensure its robustness: The little disruptions that are likely to occur in the rail system must spread as little as possible across the network and be resolved quickly.

**Today, travellers expect efficient, seamless journeys provided by a multimodal door-to-door service offer. How does Transilien ensure that it plays a key role in this environment?**

SNCF Transilien's commitment, along with Île-de-France Mobilités, to meeting its customers' expectations covers every aspect of transport, beyond renewing and developing our network, our material resources and our stations. It focuses especially on improving service quality for each of our 3.2 million passengers per day, and it requires us to accelerate our investment in passenger information, which is taking on critical importance in this period of large-scale works. We want to transform providing information into a truly personalised customer relationship, with the ability to provide made-to-measure intermodal and multimodal answers over complementary channels of communication.

Digital is key to delivering on this promise, with customisable digital channels. This is what we have done by launching an app for the RER C line, which allows customers to receive alerts about works and traffic exclusively affecting their journeys. Given this functionality's success, we have decided to deploy it on the SNCF app.

SNCF Mobilités has adopted a digital, multimodal approach that focuses on the customer, bringing together all modes of sustainable transport and making journeys smoother and simpler. Starting in 2019, this has made the SNCF app a true Personal Assistant for Mobility, allowing customers to plan, reserve, purchase and receive their tickets, all on their phone.

**How does Transilien manage the evolution of its service offer and the many changes that this evolution entails – and how challenging is it? How is the information generated by these changes communicated within the organisation and to travellers?**

In recent years, SNCF Transilien has continued implementing the guiding principles in its contract with Île-de-France Mobilités, with two imperatives: Punctuality and passenger information. In terms of punctuality, the situation varies from one line to another, in a context in which the constant growth in passenger traffic and the increase in modernisation works on the network in the Paris region have negative knock-on effects on the regularity of our trains.

Even so, the redesigns of the service-offer carried out on the L, A and J lines in December 2018, as well as on the D line, are already bearing fruit (compared to service years 2017 and 2018). The Paris-Cergy segment of the L line has seen an improvement in punctuality of eight points during the week. The northern segment of the J line has seen a 30 per cent decrease in the number of train cancellations. The RER A line has added 3.6 punctuality points, which is notable performance on the busiest line in Europe.

**What are the main initiatives implemented by SNCF Transilien to plan a more adapted service offer and manage even more effectively the resources required to deliver the service?**

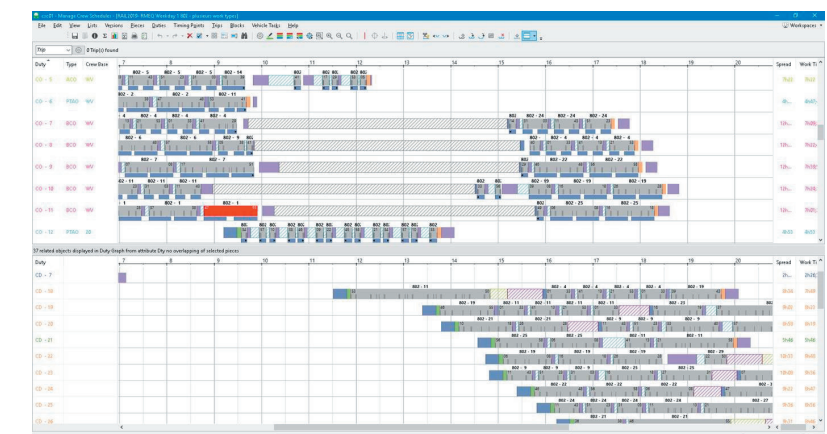
Our analyses have shown clearly that the trend towards redesigning planning tools and processes has spread widely. France is no exception, since all our competitors or partners have already made the move.

Two main initiatives comprise the DNA of the NET ('Nouvelle Exploitation Transilien' or 'New Transilien Operations') project: ➤



**GILLES ARTESE** is the Head of the High-Density-Zone Operations Engineering Department and Director of the NET/ORION Project at SNCF Transilien. Since joining SNCF in 1997, Gilles has acquired wide-ranging technical experience and in-depth knowledge of the rail industry, having managed many projects and headed several departments at Transilien. He holds an engineering degree from ENSAM (l'Ecole Nationale Supérieure d'Arts et Métiers).

**BELOW:** Screenshot of HASTUS software.







## ALEXANDRE SAVARD, GIRO'S DIRECTOR OF BUSINESS DEVELOPMENT FOR RAIL, SAYS:



The context in which GIRO's HASTUS solution is being deployed at SNCF is unprecedented. The rail industry is changing profoundly. SNCF has embarked on a huge organisational and technological transformation, and GIRO is proud to participate in this major endeavour with our partner Sopra Steria.

GIRO has been supporting rail operators for 40 years, and our having been selected by SNCF at the outcome of an international call for tender confirms and reinforces our strategy for passenger rail. HASTUS, our integrated platform

for planning and managing resources, will enable SNCF to meet the challenges that it is facing. Whether improving the robustness of the service offer to meet growing demand, continuously adapting service around the many infrastructure works on the network, or preparing the most competitive proposals to respond to calls for tender, the optimisation capabilities of HASTUS will show their worth across the board, from planning to operations management.

The HASTUS installation at SNCF is one of the largest in the world. It is entirely hosted in the cloud; this allows us to adapt the system architecture to the organisation's evolving needs, while ensuring the solution's high performance. Our collaboration with SNCF also includes the operations of its TGV high-speed and TER regional trains, for which HASTUS installations are already in progress. GIRO looks forward to a long-term, innovative association with this leading rail operator. The rail industry is changing enormously, and the transformation being undertaken by SNCF is an outstanding example.

### 1. Tools

Benchmarking for planning among European rail operators has shown that APS (Advanced Planning Systems)-type software is used more and more. These APS installations allow integrated management of all resources, over all time frames, with functionalities for optimisation and to help in decision-making. This market is sufficiently mature, and the tools have proven their relevance and effectiveness. For SNCF Transilien we have turned our choice of tools towards the HASTUS software package.

### 2. Units and roles

Our planning entities were structured like our information systems, dedicated to separate resources and distant from each other. The NET project brings participants in processes closer together geographically to work more collaboratively with short feedback loops and greater mutual understanding. To achieve this, we are creating a PPU ('Plateforme de Planification Unique' or 'Single Planning Platform') within each line. In the same way, we are carrying out a profound redesign of roles to keep in step with this fundamental change.

**“The NET project brings participants in processes closer together geographically to work more collaboratively with short feedback loops and greater mutual understanding.”**

## What benefits will integrated resource planning bring to SNCF Transilien and its passengers?

The NET project aims to improve the robustness of the transport plan through planning of trains and drivers that is systematically consistent with the transport offer. The existing processes and systems result in each element being worked on in isolation and, too often, with discrepancies between the train paths and the assignments of rolling stock and drivers. Implementation of optimised processes using the tools of an integrated software package will eliminate these discrepancies and, moreover, make it possible to produce more quickly a revised transport plan that is consistent among all resources.

For this reason, the NET project is a keystone of our strategy. So, in concrete terms:

- Travellers will benefit from a more robust transport plan and, accordingly, from more reliable information
- Île-de-France Mobilités will benefit from quicker, more informative transit studies
- All staff, including resource managers, will benefit from a more effective tool (NET/ORION) and from smoother processes, which will result in more stimulating work.

Without a project like this, Transilien would have no way of boosting its performance in terms of robustness.

## Thanks to the initiatives under way, including the NET project, how do you see the future of SNCF Transilien, in a context of increasing demand, opening to competition and major works such as the 2024 Olympics and Grand Paris Express?

Adapting the rail system is a major challenge that will focus our activities in the years to come. In a context marked by the expected explosion in traffic, which will go from today's three million to four or even 4.5 million passengers by 2025, and the awarding of the 2024 Olympics to Paris, which creates an added pressure on the timelines for our modernisation works, it is a critical issue. In a network as dense as those in London and Tokyo, SNCF Transilien must develop and enhance its skills and expertise in the field of mass transit to maintain the relevance and effectiveness of its service offer over the long-term, while investing €800 million a year in network regeneration over the next 10 years. NET is a major asset for us.

We are convinced of SNCF Transilien's ability to meet these challenges, of our economic and technical relevance in a competitive world, and of the commitment of our staff.