DIGITALISATION AND INNOVATION
- SERA CONVENTION –
- 20 JUNE 2017-

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A STRATEGIC LEVERAGE
FOR SNCF RÉSEAU'S PERFORMANCE

THREE OBJECTIVES

PROVIDE A **BETTER SERVICE** TO **CLIENTS**

- More capacity on the existing network
- Better quality of service, in terms of safety and regularity

IMPROVE THE TECHNICAL EFFICIENCY

- Removal of certain repetitive tasks; innovation enables employees to focus on tasks with a real added value

IMPROVE **THE ECONOMIC PERFORMANCE**

THREE AREAS

NETWORK CAPACITY MANAGEMENT

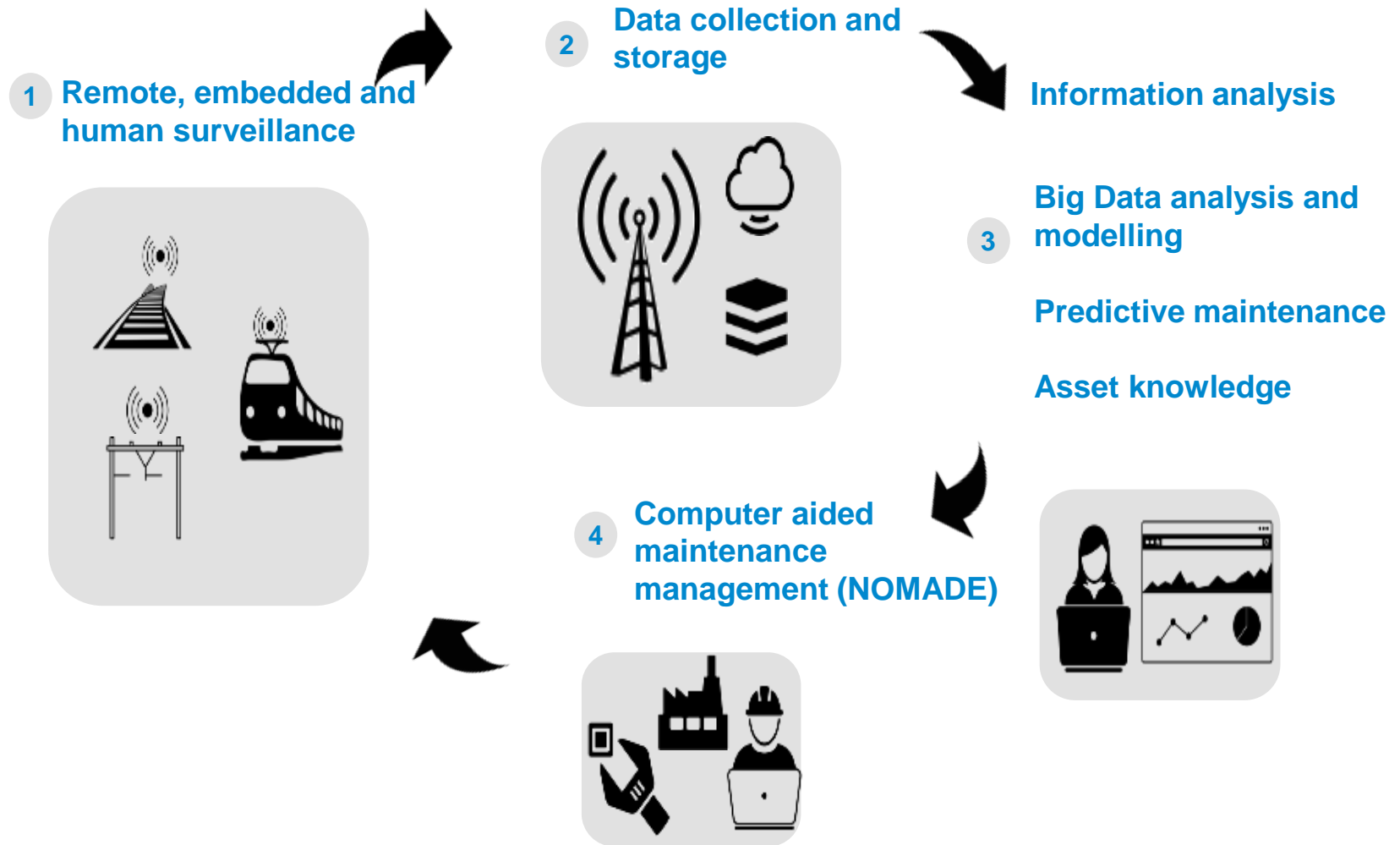- A new Industrial System for Timetable Production

TRAFFIC MANAGEMENT

- 16 « rail control towers »
- New tools for operational management in dense areas

NETWORK SURVEILLANCE AND MAINTENANCE

- 13 000 maintenance employees equipped with a phablet to steer the day to day maintenance of tracks
- 20.000 connected sensors will be installed along the network before 2020 (vs 3.500 today)

SNCF
RÉSEAU

A REAL TIME KNOWLEDGE OF THE NETWORK

2 **Data collection and storage**

1 **Remote, embedded and human surveillance**

Information analysis

3 **Big Data analysis and modelling**

Predictive maintenance

Asset knowledge

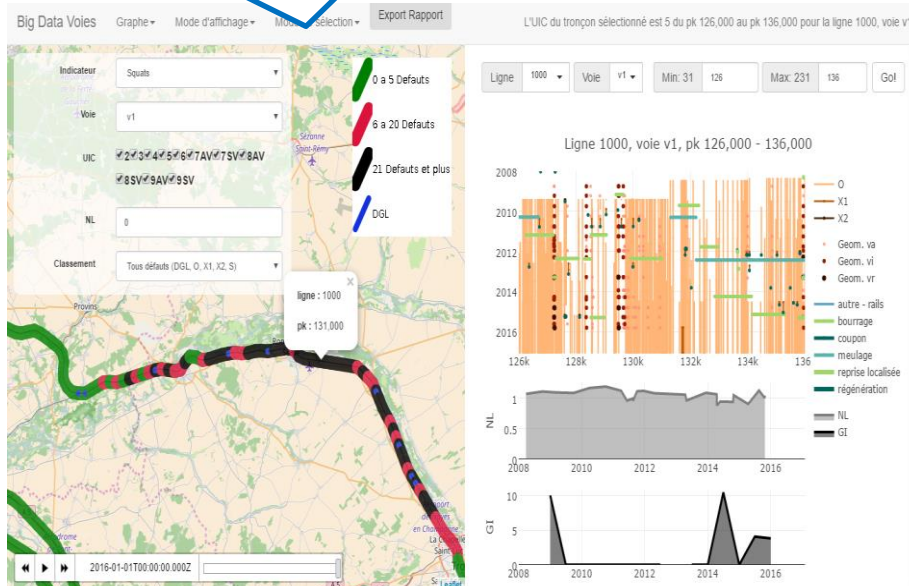**4** **Computer aided maintenance management (NOMADE)**

BIG DATA ON TRACKS: A DECISION MAKING TOOL

ANALYSING THE EVOLUTION OF TRACK GEOMETRY AND RAILS AS A FUNCTION OF TRAFFICS, INCIDENTS AND ASSETS

1 A map that enables to quickly spot areas with defects

2 7 restitution and analysis views of the selected area

Objectives

➔ **Make the right intervention, at the right place and at the right time**

Means of success

+ **Easy visualisation of tracks conditions**
+ **Risky areas identification**
+ **Provision of elements of context that are indispensable to make decisions**
+ **Ex-post evaluation of the efficiency of the interventions**

More than 10 years of track, traffic and incident data;

Terabytes of data analysed