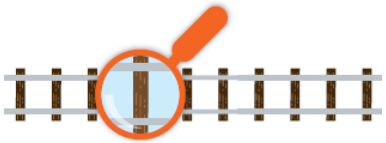
BEREC IoT WORKSHOP

BEHIND THE SCENES, INDUSTRIAL RAIL

SNCF : A WORLD BENCHMARK FOR MULTIMODAL TRANSPORT SOLUTIONS

3,000 STATIONS
SERVING

2 BILLION PEOPLE
A YEAR



30,000 KM
OF LINES

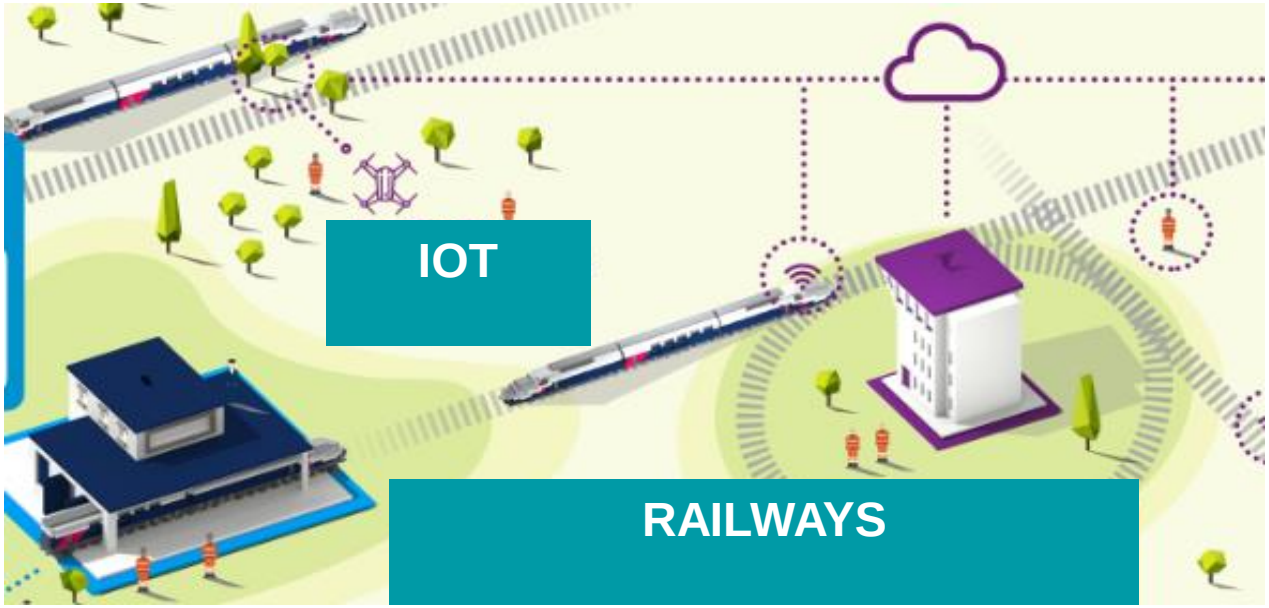
15,000 TRAINS
RUNNING EVERY DAY

5 MILLION PASSENGERS
A DAY

CONNECTIVITY

IN THE HEART OF RAILWAY PRODUCTION

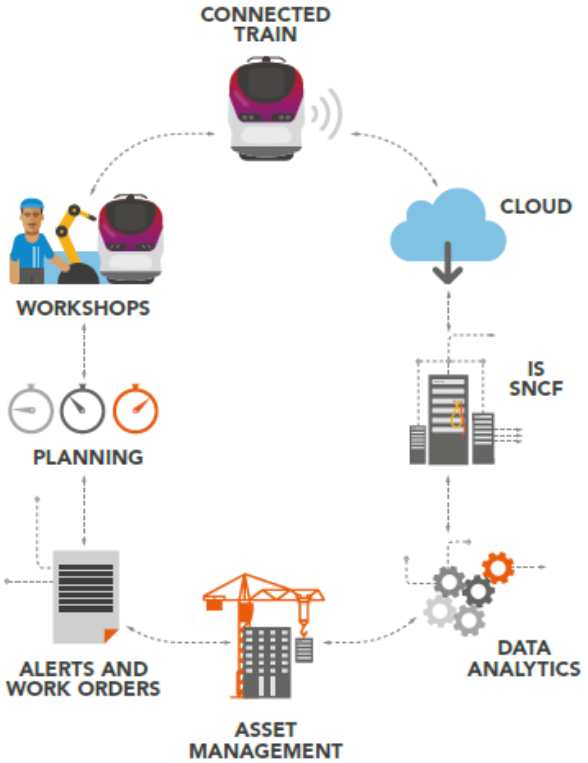
- Operating systems
- Connectivity for customers and employees
- IoT and Industrial Internet



INDUSTRIAL INTERNET

A REVOLUTION FOR RAILWAY MAINTENANCE

- Combining IoT with Big Data will bring us major gains in **safety and performance**



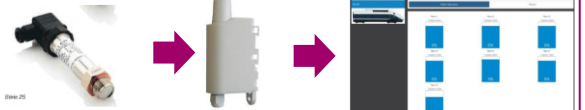
- Predictive maintenance will replace preventive maintenance

REMOTE DIAGNOSTIC OF OUR ROLLING STOCK

BEHIND THE SCENE : HOW TO MAINTAIN OUR LAVATORIES IN OUR TRAIN USING IOT SENSORS & LPWA NETWORKS ?

FEATURES

Gathering information using IoT sensors to enable remote diagnostics of water tank level



PRESSURE SENSOR

TRANSMITTOR Sigfox ou LoRaWAN

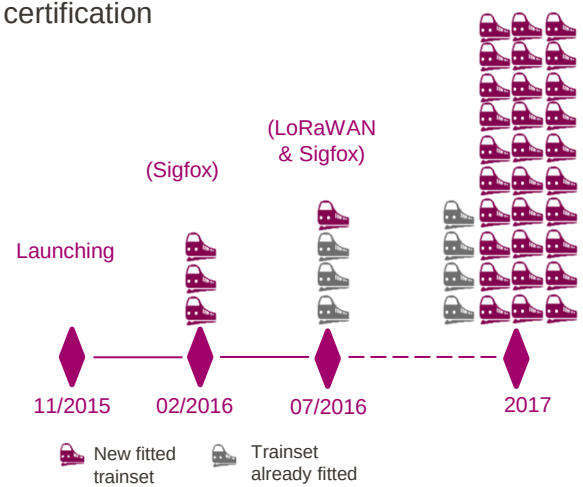
DIGIDAG PLATFORM

3 gains :

- Savings of **maintenance costs**
- Increased **availability for the user**
- Reduced **maintenance operation time**

ROLL OUT

30 additional trains and a permanent certification



LEARNINGS

When it seems too easy, beware !

LPWA networks for train to ground communication are not ready yet.

What to expect from LTE-M and NB-IOT coming soon ?

CONNECTING OUR NETWORK

BEHIND THE SCENE : THE CUTTING EDGE THERMOMETER

FEATURES

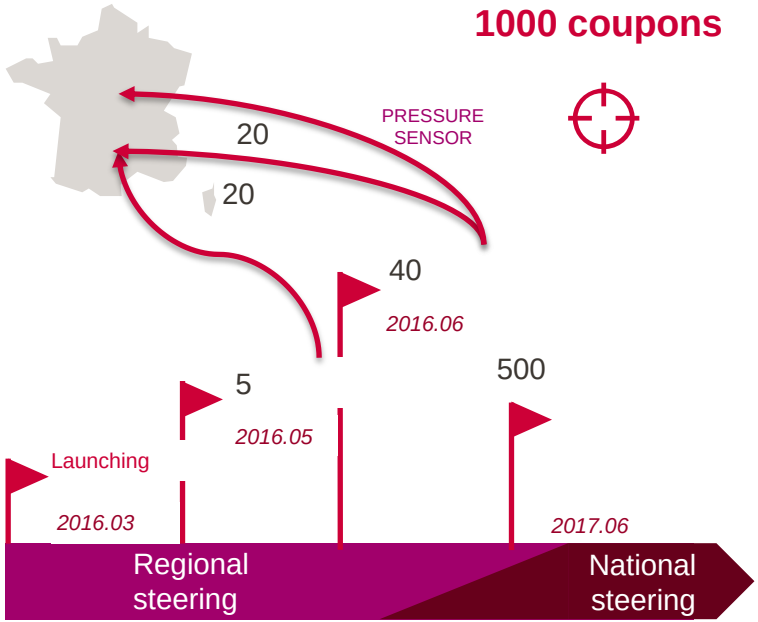
- ✓ Warning of abnormal temperature (high / low) to trigger a targeted visit
- ✓ Geolocation of each sensor
- ✓ Autonomy of 2 years

Reliable and quality telemetry with traceability

Productivity

500 COUPONS BEING DEPLOYED
ESTIMATED VOLUME OF HOURS 53H / MONTH SAVED

ROLL OUT



LEARNINGS

- How to produce the highest technology on short series in good financial conditions ?

MERCI