Cerema

Infrastructures

Support for the highway maintenance policy that integrates the climate and the traffic

Context

Causes

- Networks subjected to severe wear by heavy goods vehicles
- Road surfaces that are 30 to 40 years old Restricted budgets
- Health and environmental imperatives

Conséquences

- Deterioration in the winter, with service disruptions in mild winters
- Shortage of input for pre- and post-crisis management

Vue de la RN 4 – Photo Cerema

Work leads

- Know and understand the impacts of the stress
- Know and understand the modes of deterioration
- Assess the performances of different techniques (structures and materials)
- Try out new solutions
- Benchmarking in France and other countries

EThe challenges

- Keep assets in a good condition, irrespective of the traffic and the climate, and as economically as possible
- Take regional specifics, the climate, the traffic into consideration

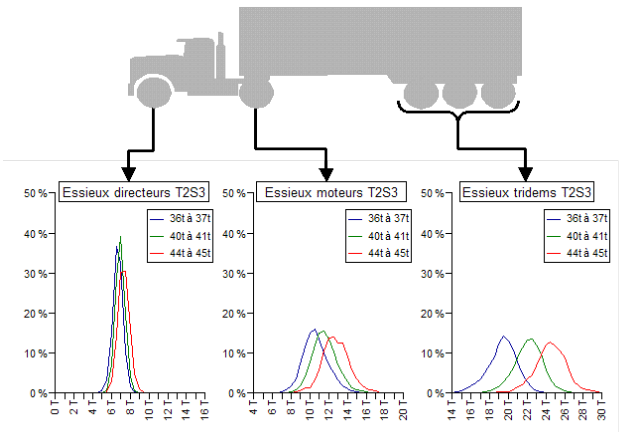

Figure 1 : Répartition des charges d'un T2S3 par essieu pour 3 classes de PTR : 36t à 37t, 40t à

Combined impact of climate and traffic (work by Cerema validated on RRNnc)

- Analyse the existing data
- Work on the characterisation of the stress: climate, traffic, stress related to the structure of the roads, geometry
- Creation of a "real time" observatory: escalation of formatted information, lookouts
- Regular review of winter deterioration and case studies

Dégradation of surface course – Photo Cerema

Dégradation of surface course – Photo Cerema

Identification of technical solutions

- Durable (sustainable development)
- Resource-friendly (sustainable development)
- Adapted to recycling (circular economy)
- Energy-efficient (energy transition)