



Karel van Gils | ASPECT 2019 | 23 October 2019

ProRail



Karel van Gils - Director Innovation

ERTMS a change proces

- Overview of ProRail and Public Transport in the Netherlands
- Challenges in the Dutch rail sector
- Our view on the change process

Our mission

We connect people, cities and companies, now and in the future. We make pleasant travel and sustainable transport possible.



ProRail Connects



ProRail Improves



**ProRail makes
sustainable**

24/7

Passenger transport



1.1 million
passengers per day

8 operators
of passengers



Safety
Reliability
Punctuality
Sustainability

24 hours
per day

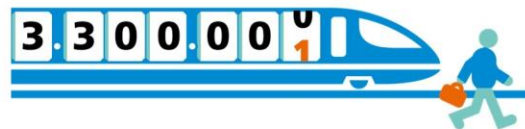
7 days
a week

365 days
a year

16.9 million
population

4 million
local residents

Freight transport



54 milliard
Freight tonne-kilometers
per year

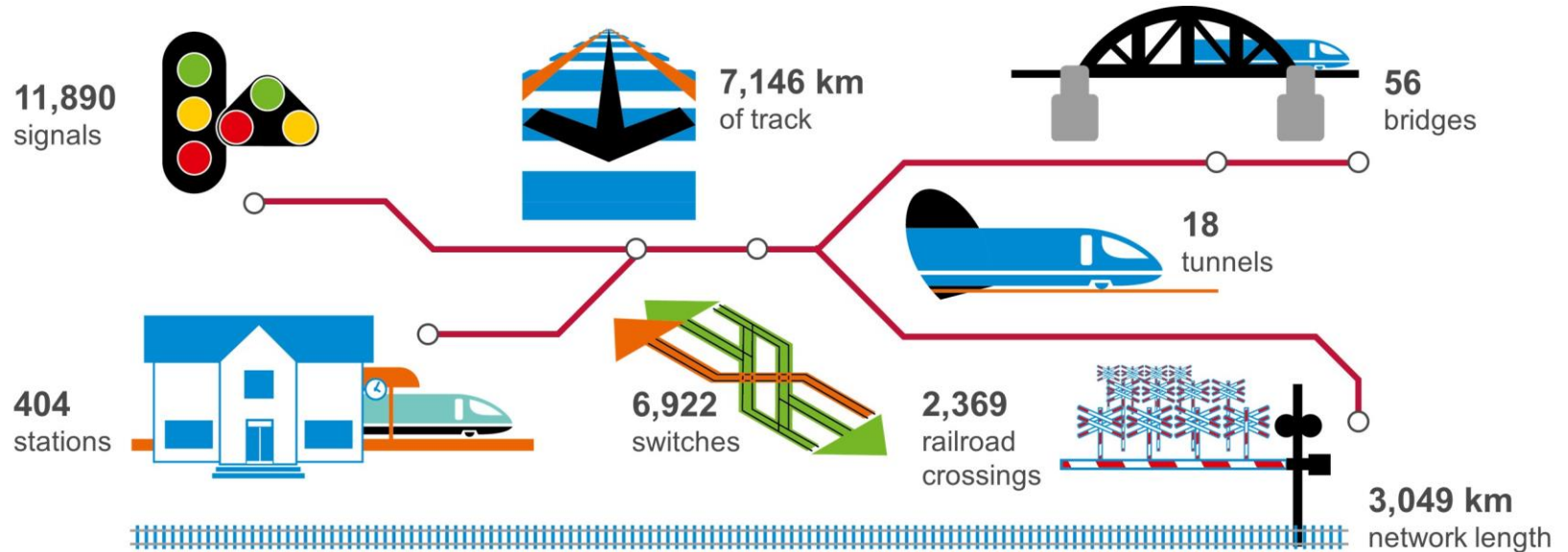


18 railway
undertakings

10 million km.
freight transport per year



Rail infrastructure in the Netherlands



Customers

	 ARRIVA a DB company	 DB	 RAIL FORCE ONE	 RhelnCargo
 railpromo	 DB BAHN	 connexion	 TXLOGISTIK	 HSL Netherlands
 duisport rail	 abellio	 SHUNTER	 K-Logistik	 KombiRail EUROPE
 RTB CARGO	 Keolis	 RAILTRAX	 BENTHEIMER EISENBahn AG	 CAPTRAIN
 International	 LTE logistics & transport	 LINEAS YOUR MARKET MOVERS	 PKPCARGO	 SBB Cargo International

Challenges in the Dutch railsector



Growth of mobility

Freight +25-50%
Passengers +34%
Especially in urbanized area



New technology

Digitalisation
Robotics
ERTMS
ATO
Power supply system

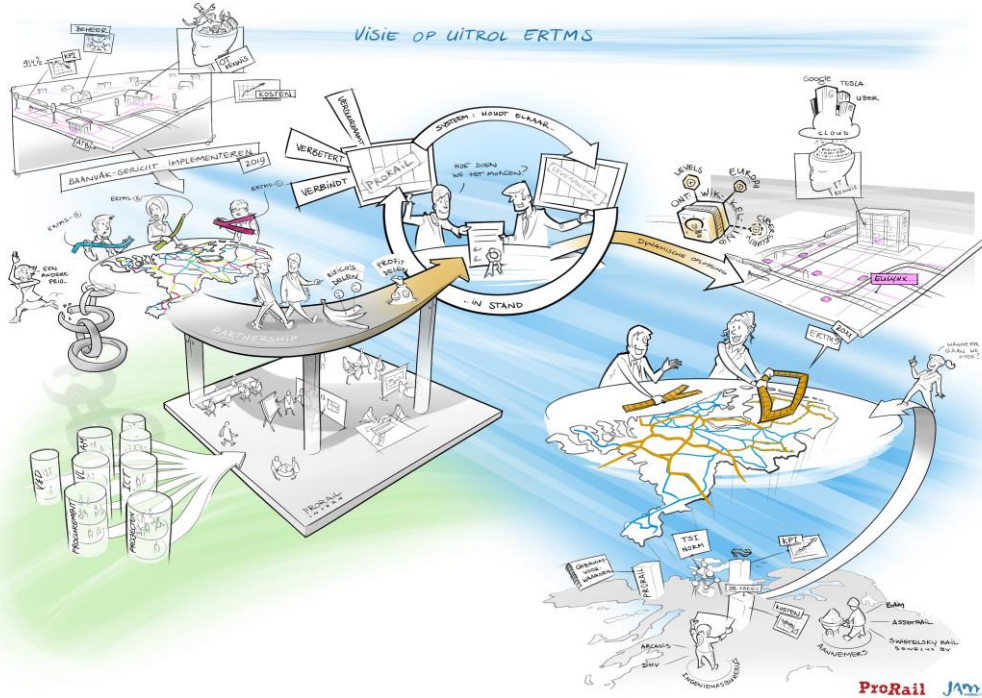


Sustainability

Modal shift
Climate goals
Circularity in materials



ERTMS is a major change process



ERTMS brings 4 major changes for ProRail and the industry

1. From track based roll-out to national implementation
2. From operational technology to data driven IT
3. From customer-supplier approach towards partnerships
4. From separate contributions to joint performance

1. From track based roll-out to national implementation

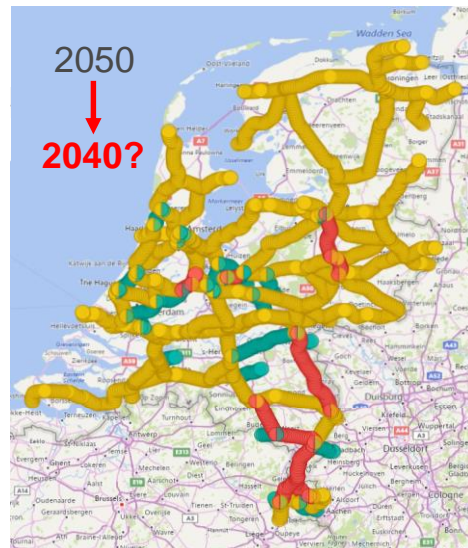
National implementation ERTMS, minimal investments in “old-for-old”



- 8% ERTMS (now)
- ATP (Program PVT)
- ATP (now)



- 8% ERTMS (now)
- 25% ERTMS (new)
- ATP (Program PVT)
- ATP (now)



- 95% ERTMS
- ATP (Program PVT)
- ATP (now)



Standardisation Interlocking – EULYNX

2. From operational technology to IT





From connecting analogue to connecting digital



Railcenter in Amersfoort, for testing and training facilities

The background of the slide is a photograph showing several hands of different skin tones stacked on top of each other in a circle, symbolizing teamwork and partnership. The hands are positioned in the center of the frame, with fingers pointing towards the center. The lighting is soft and natural, highlighting the texture of the skin and the fabric of the sleeves.

3. From customer-supplier approach to partnership

4. From separate contributions to joint performance



The ERTMS development and management value chain affects all



**CHANGE
IS
NOW**

The ERTMS program is beyond a technical project,
it's a major change process.



ProRail

Connects. Improves. Makes sustainable.