

ERTMS_ _ _

Railforum, 27 november 2019
Peter Scheffel



Toekomstige ontwikkelingen

Meer reizigers en goederen → meer treinen

→ meer geavanceerdere treinbeveiliging

→ meer beïnvloeding

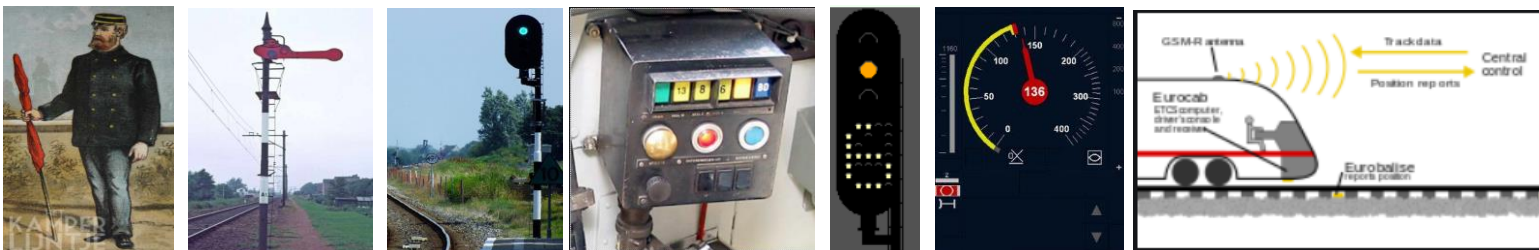
→ meer besturing

→ meer nieuwe techniek

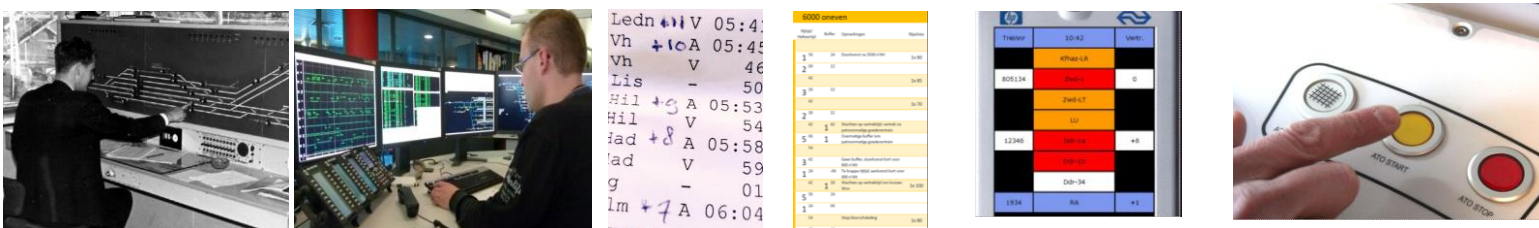
→ meer communicatie



meer beveiliging en beïnvloeding



meer besturing



meer nieuwe techniek



meer communicatie



Ontwikkelingen

- Van plannen en uitvoeren van plannen naar realtime besturen
- Van decentrale installaties naar centrale systemen
- Functies verschuiven van de baan, naar de trein
- Functies verschuiven van mensen naar machines
- Van statische ontwerpen naar continue ontwikkeling
- Meer treinen, meer onderlinge afhankelijkheid, minder tijd



Snelheid van verandering



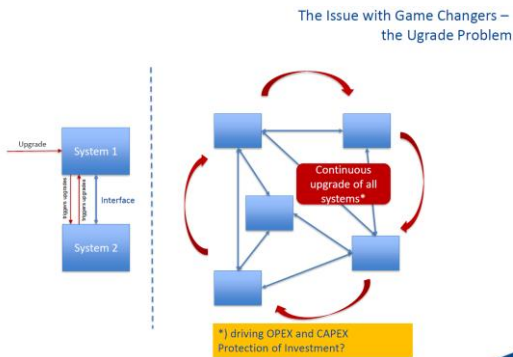
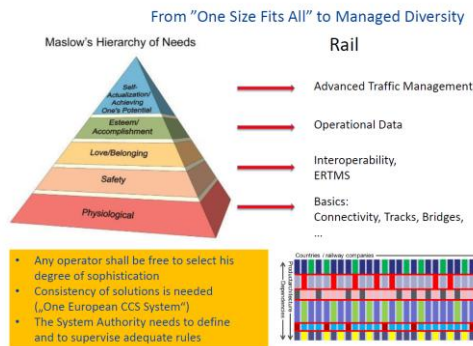
**If change is happening
on the outside faster
than on the inside the
end is in sight.**

Jack Welch

QUOTEHD.COM

Beelden van CCRRCC ERTMS conferentie in Valenciennes, oktober 2019

Ons denken in de nieuwe wereld



Ons handelen in de oude wereld

MRCE The impact of ETCS-Upgrades – some facts & figures (2)

- During almost 30% of the lifetime of these Locomotives, MRCE has been within a phase of ETCS Upgrade-Projects so far
- Approx. 1.5% of their lifetime, these Locomotives have been out of Operation for Upgrade activities

Challenges linked with the upgrade (4)

Authorisation process based on 2018/545/EU

- When a vehicle type authorisation is available for a vehicle type which got an upgrade to B3, the authorisation for placing each individual vehicle of this type on the market is still necessary.
- Pursuant to the practical arrangements for the railway vehicle authorization, article 34 (3) says:

The decision of the authorising entity shall be issued within one month following the date of receipt of the application in case of authorisation in conformity to type in accordance with Article 14(1)(e).

- Waiting one month (worst case) after an executed upgrade for a formal check on two (ANNEX I) documents and seven formal checks (ANNEX II) doesn't positively impact the railway business.

Federal Office of Transport, Hanspeter Hännli
16th of October 2019

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Stelling:

De sector kan die snelheid prima aan...of niet?

- Bij wie ligt de grootste uitdaging nu?
 - Waar lig jij wakker van?
 - Wat is de sleutel?