

# Control Tower for long-distance rail freight transport

Chris Wensink  
Panteia

# Big delta in customer experiences road vs rail



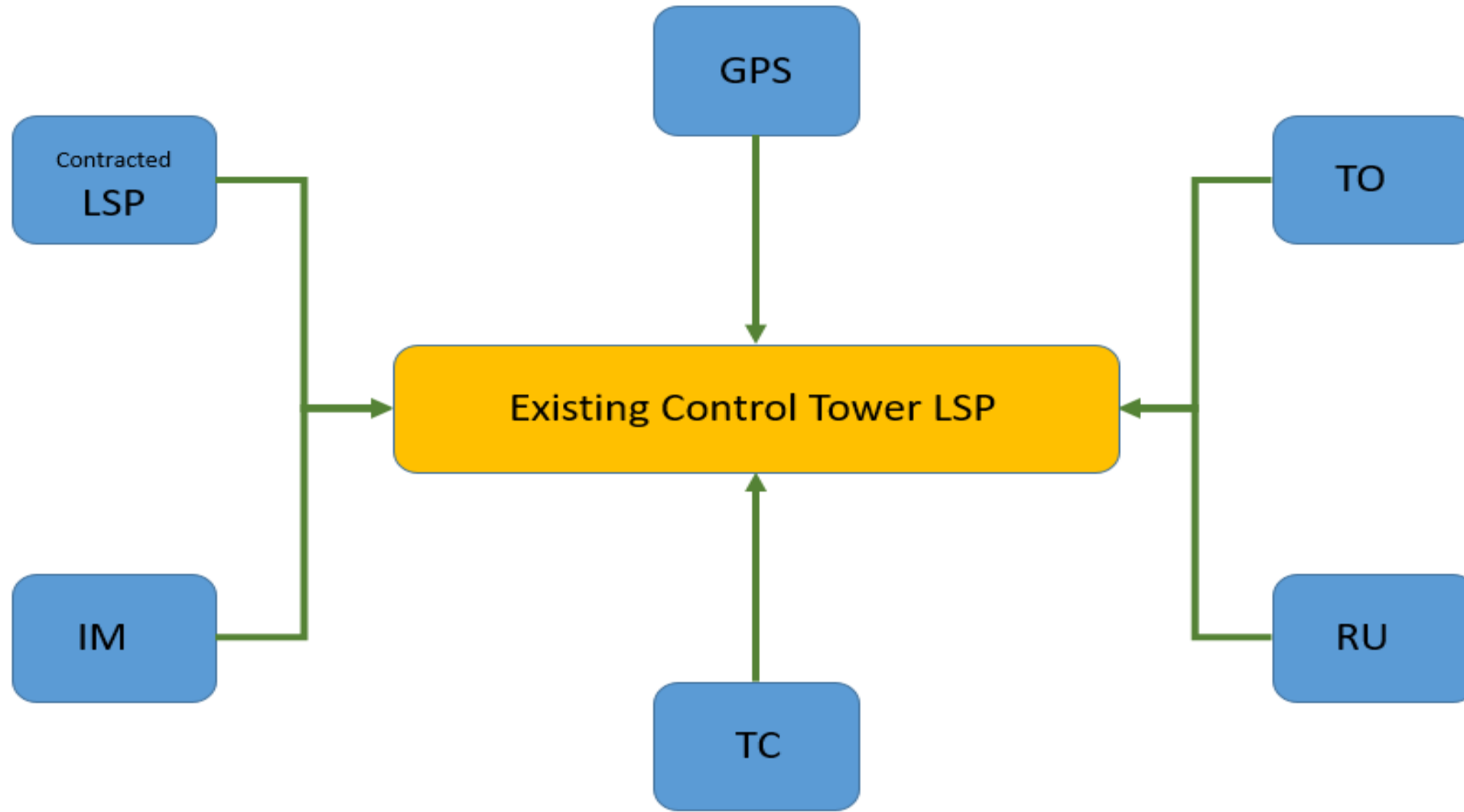
# Control Tower operational since August 2017

- Information sharing between different stakeholders
- Regular **status updates** on two rail corridors (Bettembourg-Le Boulou and Rotterdam-Venlo)

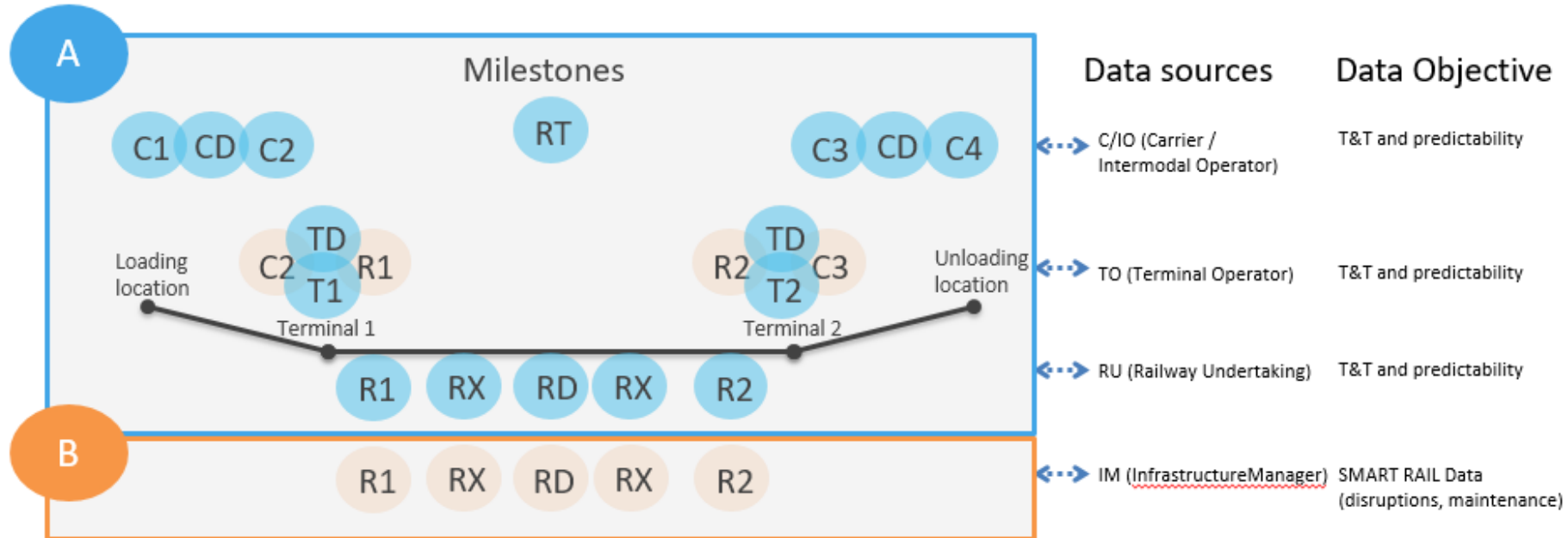
## Achieved:

- ✓ **Increased predictability through swift notification of delays.**
- ✓ **Increased awareness of shipment status through regular and precise status updates.**
- ✓ **More stable lead times through increased predictability.**
- ✓ **Reduced TCO through increased predictability.**
- ✓ **Availability of real-time status updates on the corridor.**

# Implementation on the corridors



# Multiple milestones and sources



## Legend

C1: loaded

C2: Arrived at terminal

T1: Loaded on train

R1: Train departed

R2: Train arrived

T2: Available for pickup

C3: Departed from terminal

C4: Unloaded

CD: Carrier disruption

TD: Terminal disruption

RD: Rail disruption

RT: Real-time information

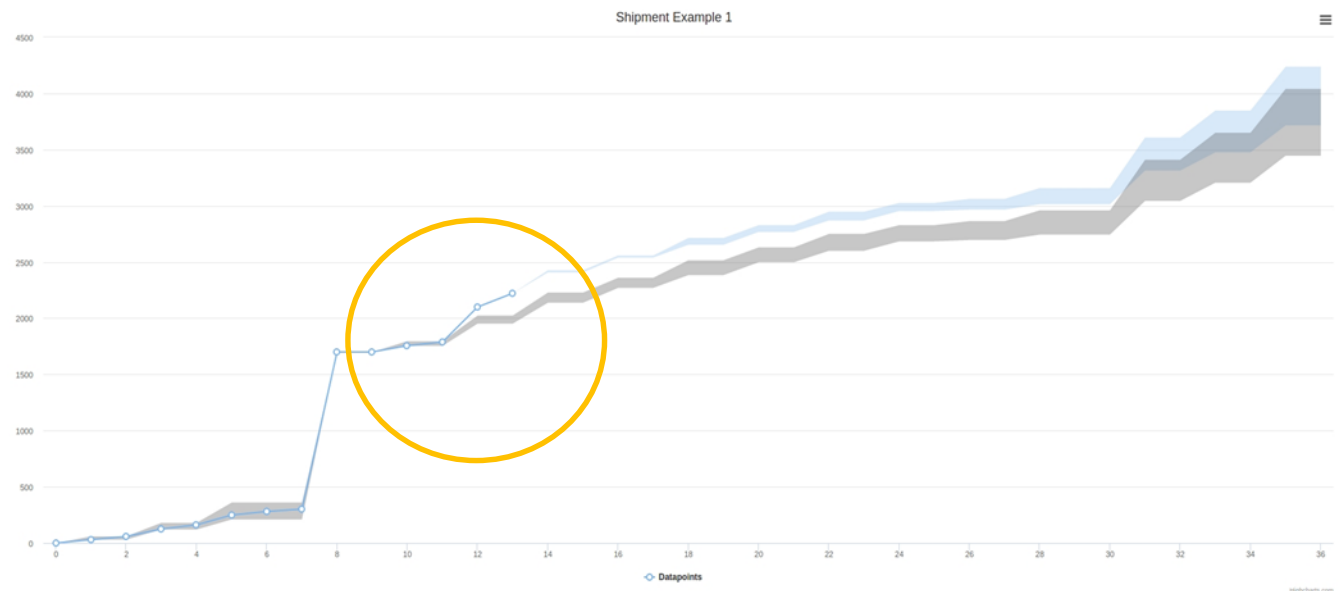
RX: Predefined Critical points eg border crossings

● Single Source

● Multiple source

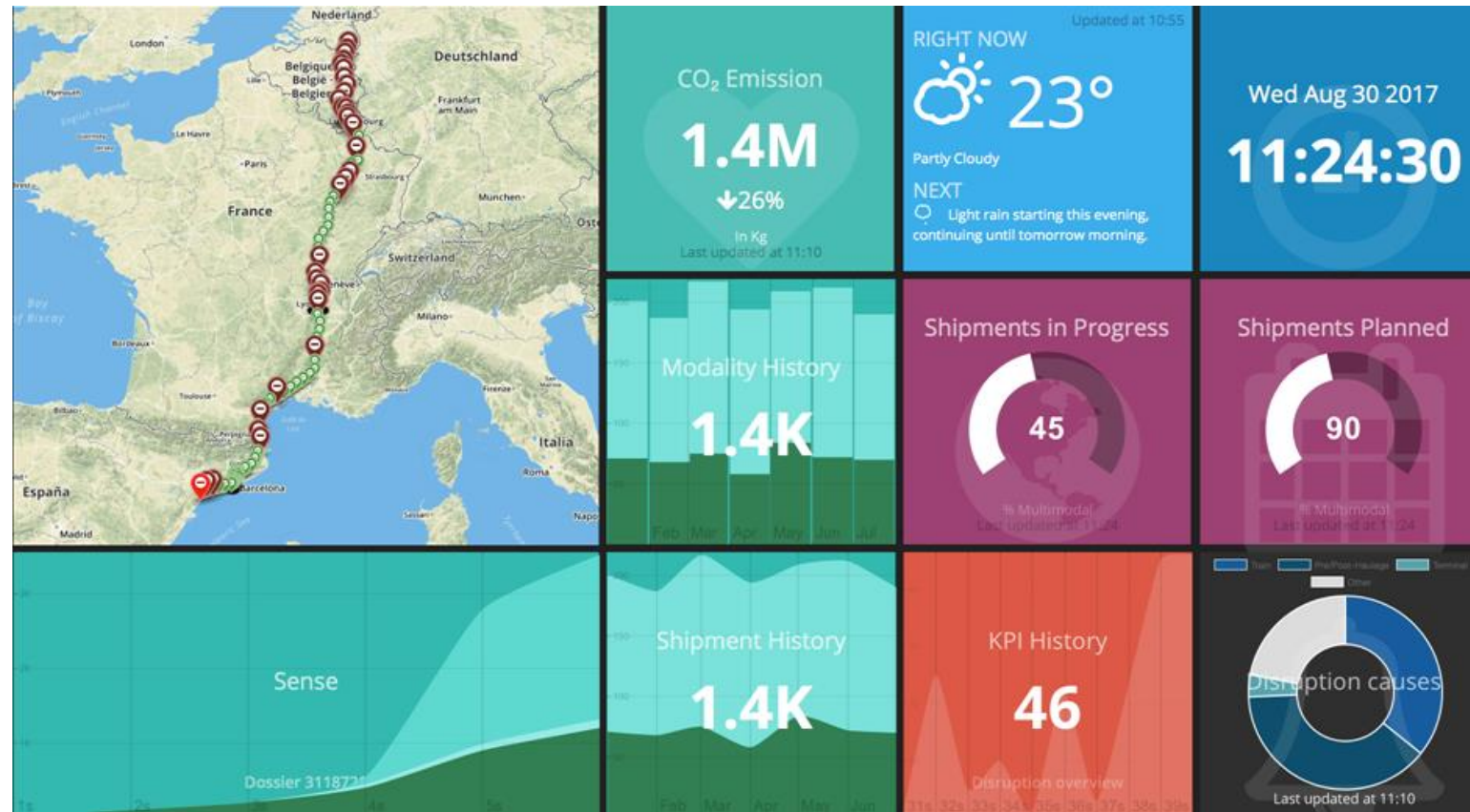
# Result: scheduled min-max scenario (grey) and actual min-max scenario of shipment (blue)

- At point 12 a delay occurs. This could lead to either a delay in arrival, or a time of arrival that still falls within the tolerance of the min-max scenario (the dark grey area).
- Iterative improvement based on historic data
- Order status adjusted according to position



# Monitoring dashboard

- Monitoring dashboard and integrated module for door-to-door operational management
- For event management a work flow applies for the corridor, so required actions can be taken and monitored.
- Dashboard shows actual and historical insights in the performances of the intermodal corridor.



# Options for fine-tuning of the Control Tower

- Data on the same milestones can be cross-validated and outcomes shared with the stakeholders involved. Thus, all parties can have the same view on what happens when and why.
- On B-LB corridor notifications on arrival of the train at the end terminal differed according to different data sources.
  - After examining and sharing the data analysis, it was found that delays in notifications from the contracted LSP could be explained by operational habits. A solution was found easily, resulting in better processes for all parties.
- This is an iterative process, which is expected to yield even better and more precise results over time when more operational experience has been gained in using the operational Control Tower Rail.



# Lessons Learned

## Lessons learned about stakeholders and value cases

- Built up trust for information sharing are crucial, don't rush it
- Alignment of milestones (and definition of milestones)
- Explain and align what can be shared and what not
- Low hanging fruit is difficult enough in rail sector
- Single source data is not enough
- Multiple level buy-in is needed

## Conclusions and recommendations

- Control Tower based data sharing in the rail freight sector is possible and has clear benefits
- Modal shift not only depends on infrastructure, but also on quality of service
- A shift of mindset is possible. Requires relationships of trust and leadership
- SMART-RAIL's Control Tower can serve as **show case**

Thank you

**Chris Wensink**

c.wensink@panteia.nl

