

Rail-café, 30-3-2023

# Delft Institute for Railway Technology

(DelftRail)



# Societal Development & Challenges

## European Green Deal



NL: 30% capacity increase by 2030



EU:

- Passenger:  
*majority of medium distance travel by rail by 2050*
- Road freight to rail:  
*30% by 2030*  
*50% by 2050*

## Challenges



**Mobility:** *Increase capacity*



**Sustainability:** *Reduce CO2/energy footprint*



**Improved asset management**



**2021 – European Year of Rail**





# Expected outcome

Strengthen international position and visibility of Delft rail research

## To achieve in 5 years:



Long term (funding) commitment of private partners and ministry (with 2 mio-euro of CvB)



Funding for annual costs of 56 PhD students and 14 postdocs



A shared, digital twin research infrastructure



An interfaculty MSc study in system (railway) technology



# Participation & Commitment

## 3mE

- Delft Center for Systems & Control
- Materials Science & Engineering

## EEMCS

- Software and Computer Technology (Incl. Intelligent Systems)
- Electrical Sustainable Energy

## TPM

- Engineering Systems & Services
- Multi-Actor Systems
- Values, Technology & Innovation

## CiTG

- Engineering Structures
- Transport and Planning
- Materials, Mechanics, Management & Design
- Geoscience and Engineering



# Plan of action

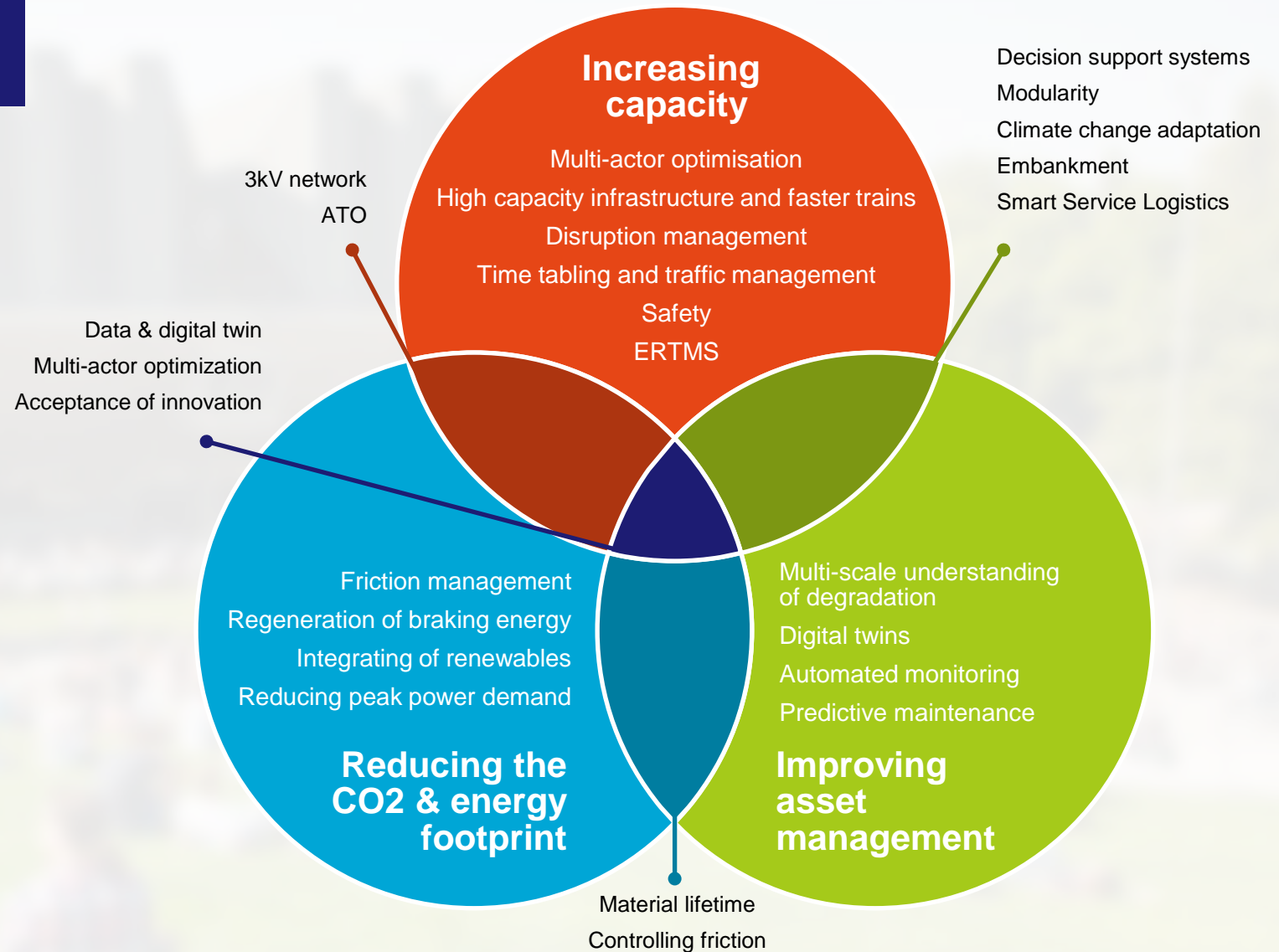
## Research agenda

### 3 themes

- Increasing capacity
- Improving asset management
- Reducing CO<sub>2</sub> and energy footprint

### Overarching topics

- Data & Digital twin
- Multi-actor optimization
- Acceptance of innovation







# Questions & Advices

[www.tudelft.nl/delftrail](http://www.tudelft.nl/delftrail)