

# The lost passengers

*Insights into the group of passengers that stopped travelling by train after COVID-19*

**Menno de Bruyn, Danique Ton, Niels van Oort**

European Transport Conference, Milano  
7 September 2023



# Authors



**Menno de Bruyn**  
Transportation and  
behaviour researcher  
Netherlands Railways

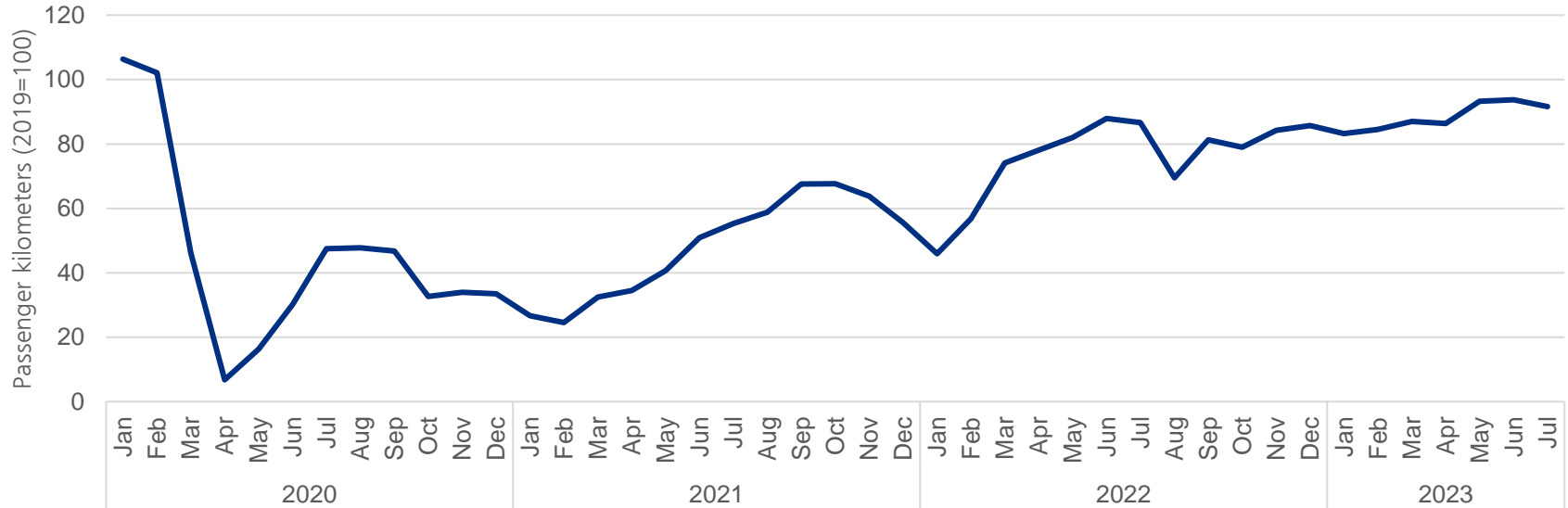


**Danique Ton**  
Stations and access/egress  
researcher  
Netherlands Railways



**Niels van Oort**  
Director Smart Public  
Transport Lab  
Technical University Delft

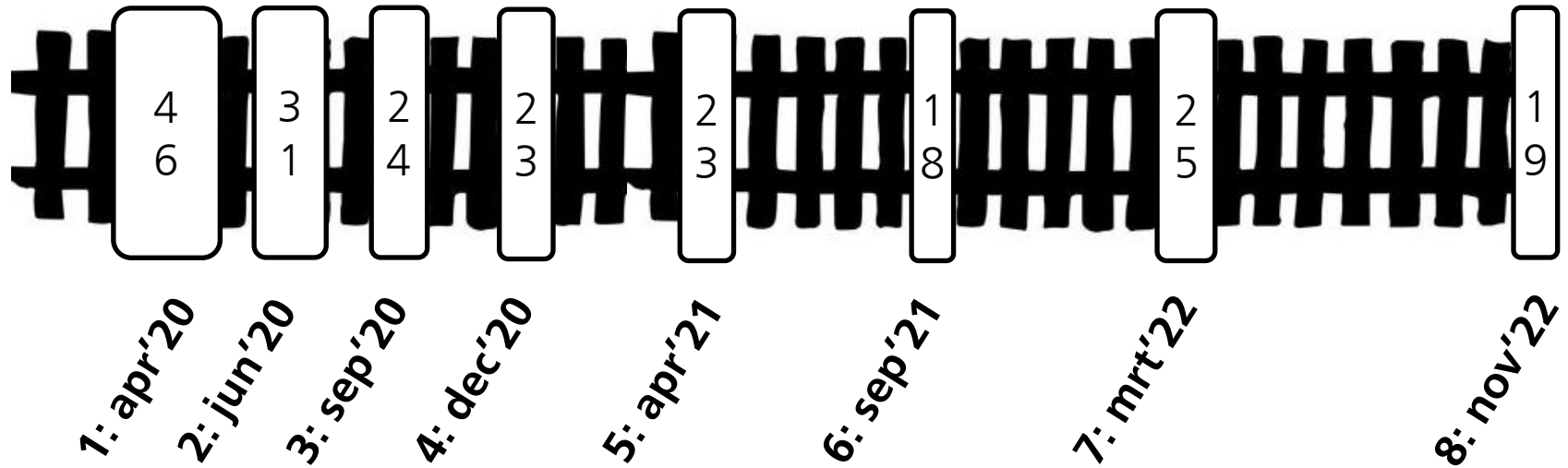
# COVID-19 has big impact on train ridership



# NS and TU Delft research the impact of COVID-19 on train travel

1. What is the impact on current train travel?
2. How do travellers experience train travel?
3. What are their expectations for the future?
4. Special topics

# NS/ TU Delft COVID-19 research consists of 8 waves

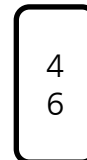


Longitudinal

52.682 unique respondents

Average: 4 waves

5.052 all 8 waves



46= number of respondents \*1000

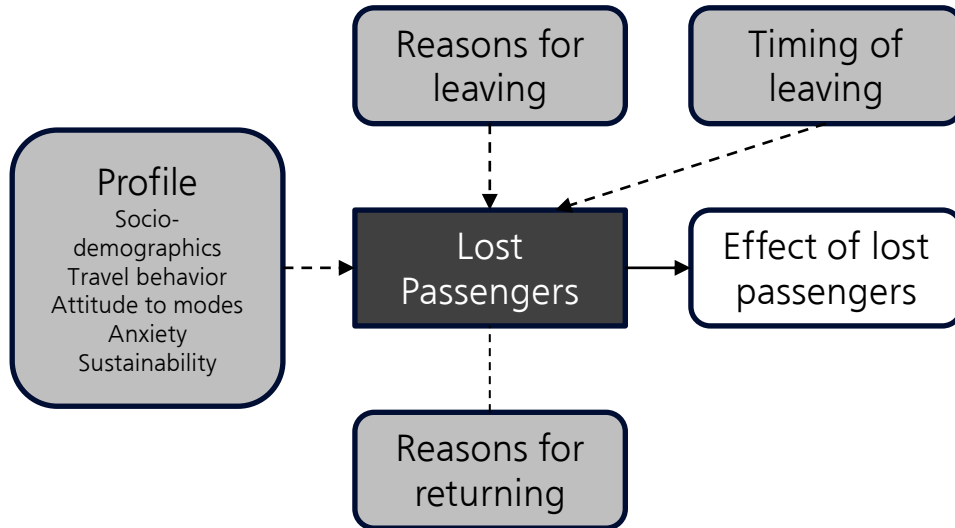
# NS/ TU Delft COVID research on ETC

- 2021: Van Hagen, De Bruyn, Ton, Severens, Duives, Van Oort: *COVID-19 and train travel behaviour*
- 2022: Hafsteinsdottir, Van der Knaap, Van Oort, De Bruyn, Van Hagen: *Change in train travelling behaviour during COVID-19 due to anxiety*
- 2023: De Bruyn, Ton, Van Oort: *The lost passengers*

## But also in Transportation Research:

- Ton, D., Arendsen, K., de Bruyn, M., Severens, V., van Hagen, M., van Oort, N., Duives, D. (2022). *Teleworking during COVID-19 in the Netherlands: Understanding behaviour, attitudes, and future intentions of train travellers*. Transportation Research part A 159, 55–73.
- Kroesen, M., de Vos, J., Le, H.T.K., Ton, D. (2023). Exploring attitude-behaviour dynamics during COVID-19: *How fear of infection and working from home influence train use and the attitude toward this mode*. Transportation Research Part A 167, 103560.

# Research scheme



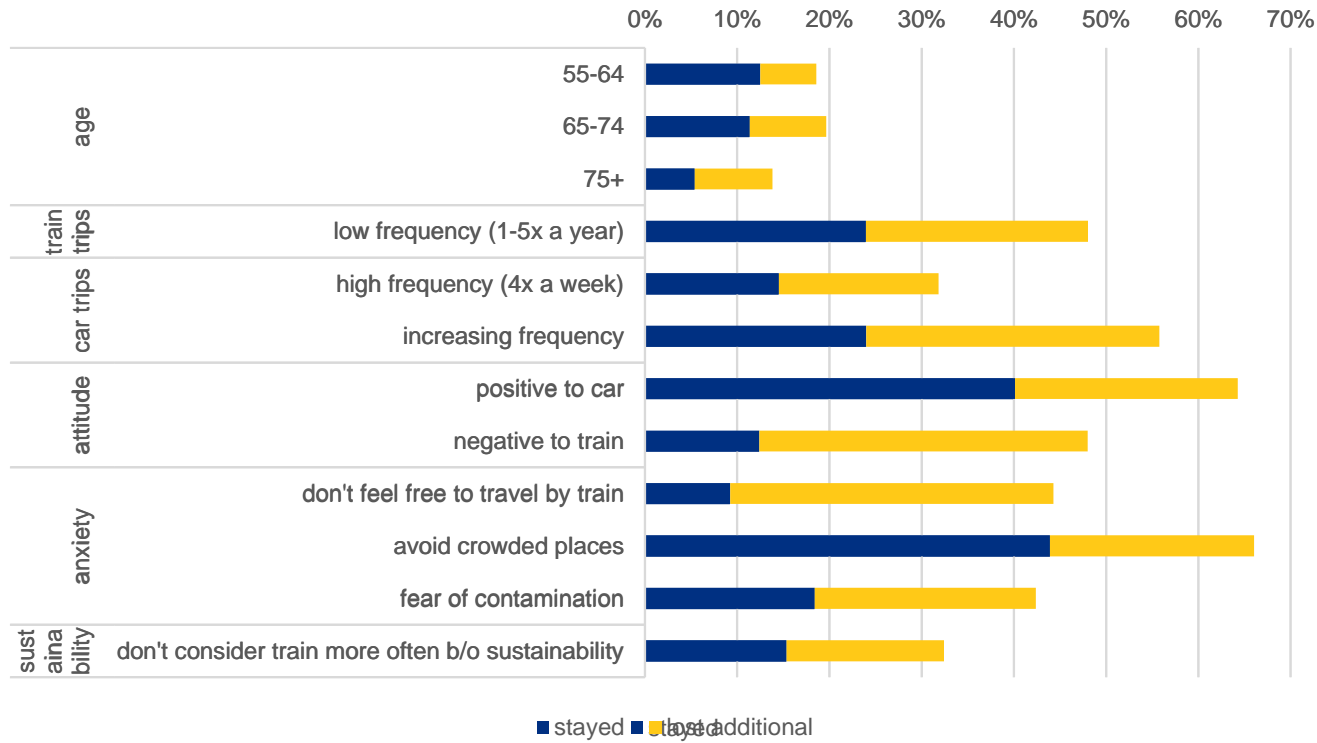
# Definition of lost passengers

100% less than pre-COVID AND did not travel by train last week

Total	18,821		
Delta compared to pre COVID	more	as much	less
	953	8,171	9,697
Train travel last week	yes		no
	3,944		5,753
% less compared to pre COVID	<100%		100%
	4,843		910



# Profile of lost passengers

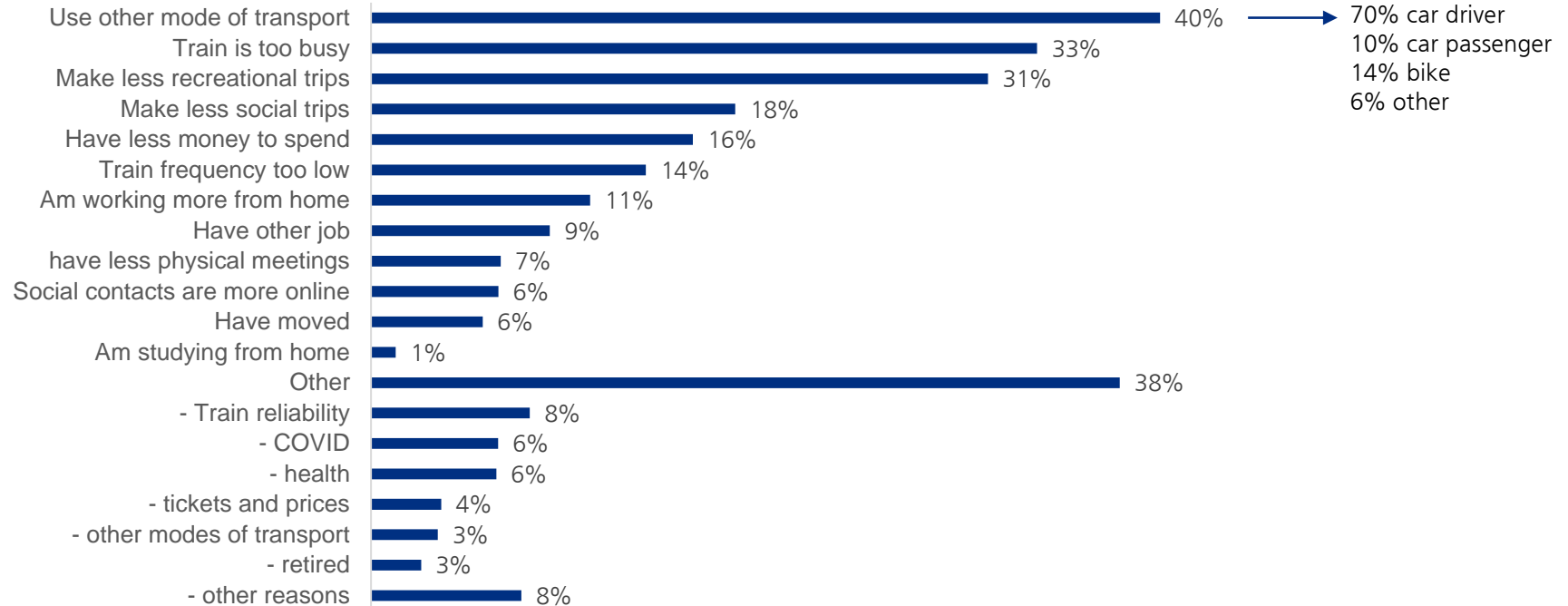


# Effect of lost passengers not as big as you would think

- It is a relatively small group: 5% of total population, and 10% of group that travels less by train
- It mainly consists of infrequent travellers, so not many trips are lost
- Roughly: about 15% of the drop in train ridership is due to lost passengers, other 85% is due to staying passengers travelling less often.

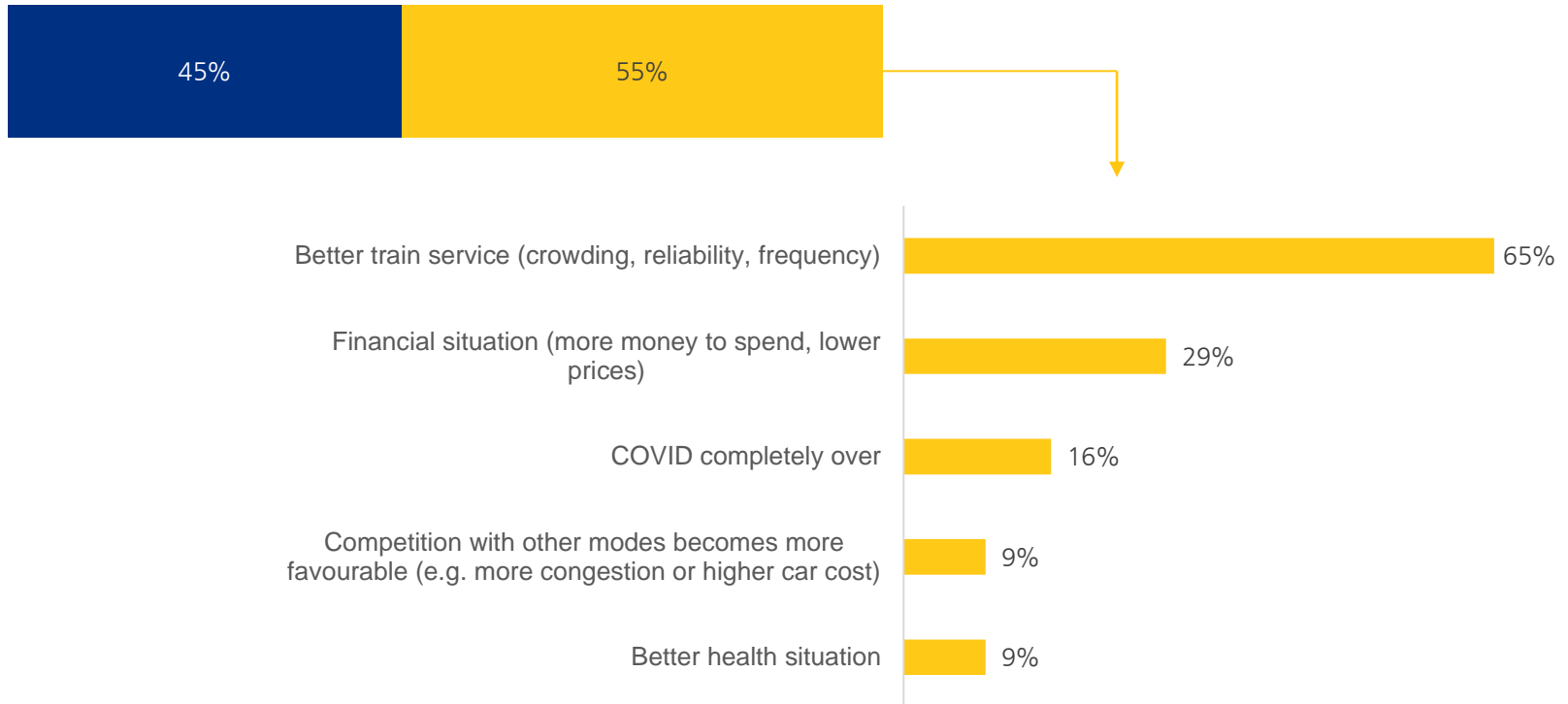
# Why did the lost passengers leave?

Reasons for not travelling anymore



# How to regain lost passengers?

■ Do not come back ■ Might come back, if...



# Questions?