

Wheelchair Passenger Safety on Trains



Wheelchair Passenger
Safety Solutions

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Increasing numbers of disabled travellers

People with disabilities represent around one-sixth ($\approx 80\text{m}$) of the EU's overall working-age population*

Due to the ageing population this number is continuously increasing* which means:

- Increasing numbers of wheelchair and mobility scooter users
- Increasing use of heavy battery operated wheelchairs
 - Improved access is required in public transport services
 - Safety standards have to rise to protect disabled and non-disabled passengers

•Source: EU Commission

http://ec.europa.eu/justice/discrimination/disabilities/index_en.htm





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Increasing demands

Increasing demands of elderly and disabled people:*

- Accessibility in public transport
- Participation in public life
- Employment prospects
- Education and training

➤ These demands have been acknowledged and will be supported by EU governments

•Source: EU Commission

http://ec.europa.eu/justice/discrimination/disabilities/index_en.htm





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Inadequate facilities available

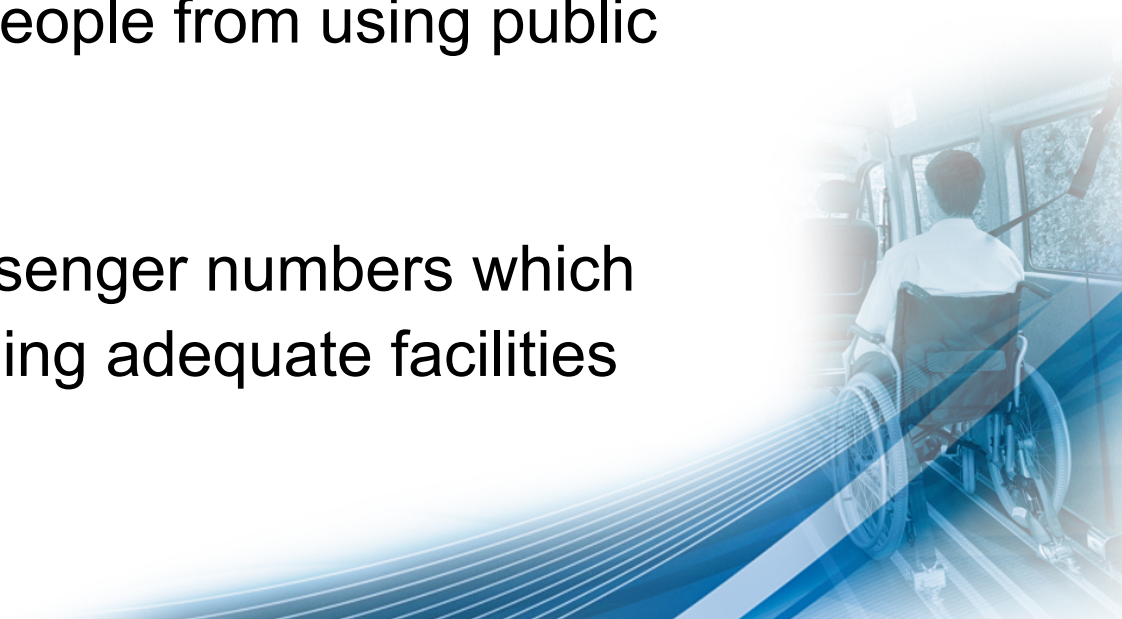
People with disabilities have less opportunity to use transport services. Subsequently, fewer of them have access to work or education.*

Lack of accessibility* and securing devices is preventing a large number of disabled people from using public transport

This is impacting overall passenger numbers which could be increased by providing adequate facilities

•Source: EU Commission

http://ec.europa.eu/justice/discrimination/disabilities/index_en.htm





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Disabled travellers

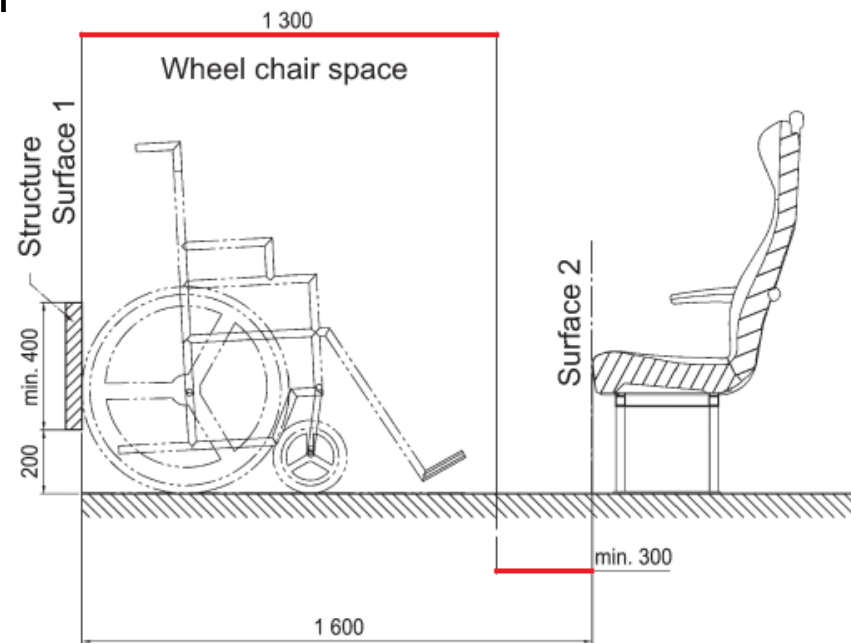
HOW CAN WE IMPROVE WHEELCHAIR PASSENGER SAFETY?



1. What are the current PMR TSI regulations for wheelchair transportation?

Space requirements facing the **front** of a passenger seat

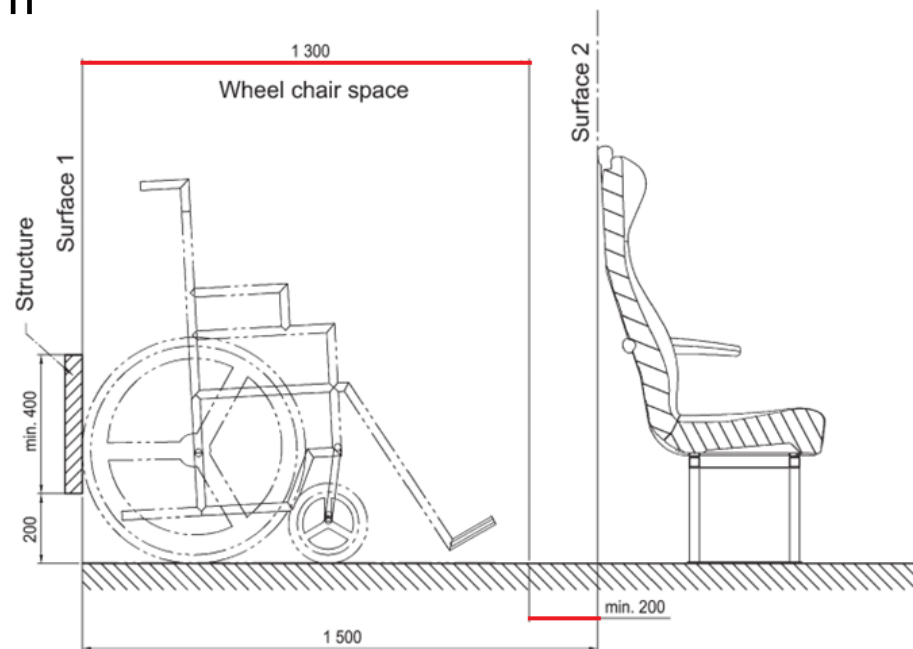
- 1300mm + 300mm



1. What are the current PMR TSI regulations for wheelchair transportation?

Space requirements facing the **back** of a passenger seat

- 1300mm + 200mm



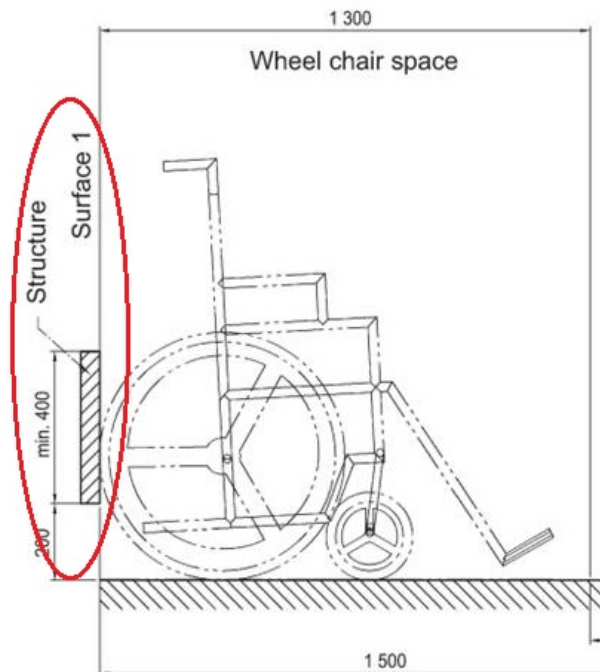


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1. What are the current PMR TSI regulations for wheelchair transportation?

Other requirements

- Backrest/ structure behind the wheelchair



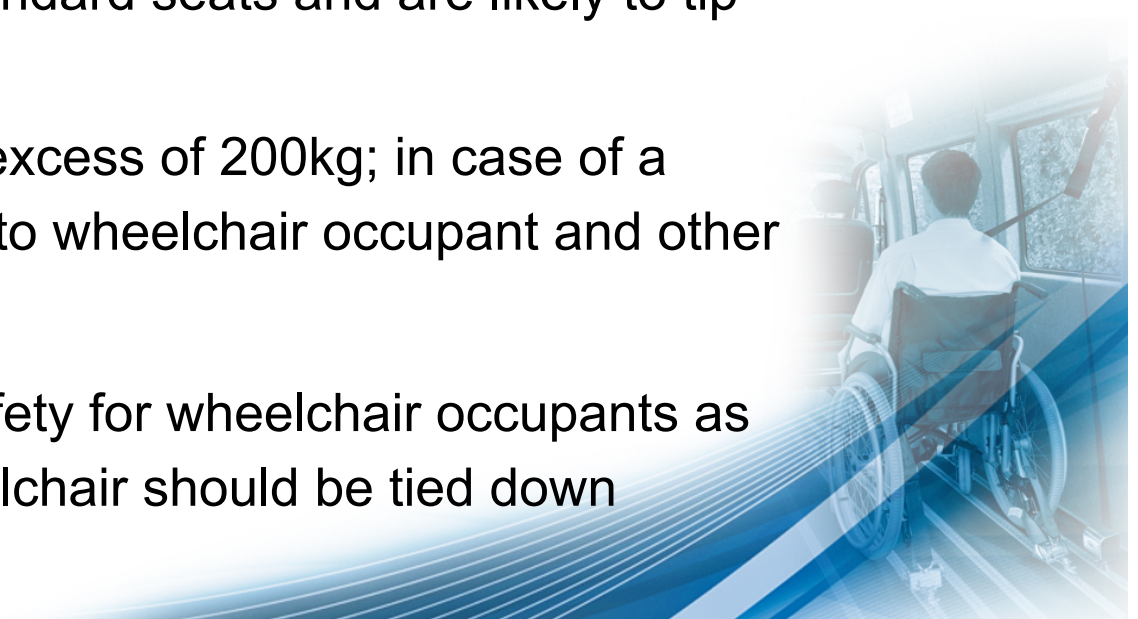


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2. What are the implications?

Wheelchair passenger safety differs from standard passenger safety

- Many occupants cannot sit in standard seats; they have to travel in their wheelchair
- Wheelchairs are not fixed like standard seats and are likely to tip over
- Some wheelchairs can weigh in excess of 200kg; in case of a sharp turning it can cause injuries to wheelchair occupant and other passengers
 - To offer the same level of safety for wheelchair occupants as for other passengers the wheelchair should be tied down





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3. How can we make improvements?

A system is needed that:

- Comprises wheelchair and occupant restraints
- Enables optimum transport safety for wheelchair users
 - Wheelchair tie-down and occupant restraint systems (WTORS) offer maximum safety

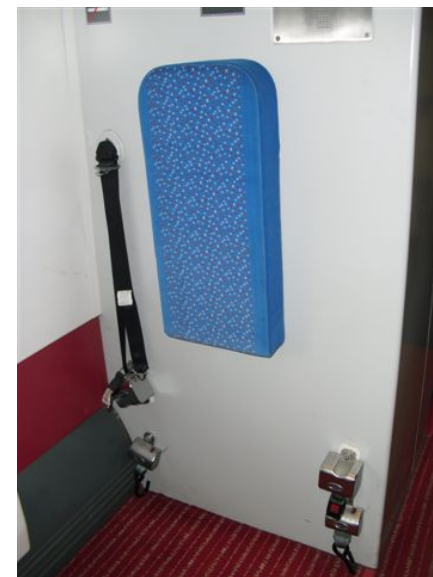




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4. What does Q'Straint offer? – Our train customers

CAF Turkey

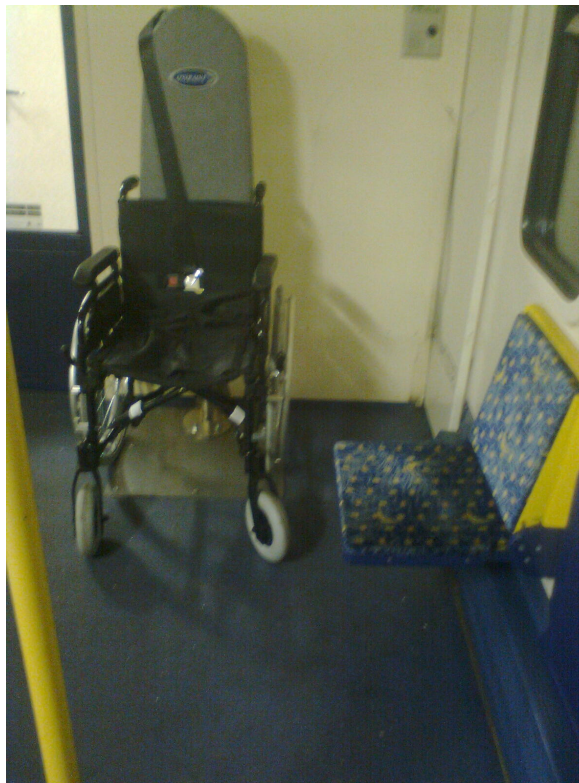




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4. What does Q'Straint offer? – Our train customers

Latvian Railways





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4. What does Q'Straint offer? – Our train customers

Metrowagonmash in Serbia





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4. What does Q'Straint offer? – QM3 and Quantum

Rearward facing securement systems





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5. What are the benefits of providing securing facilities on trains?

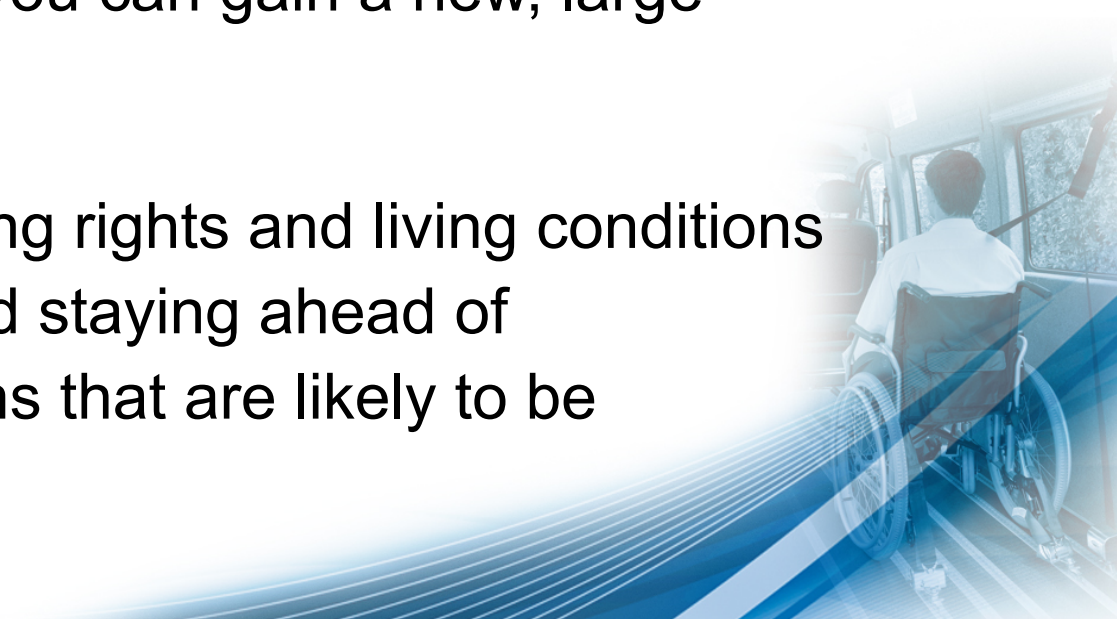
Making appropriate securing facilities available for wheelchair users is a source of untapped potential for economic growth.*

By providing these facilities you can gain a new, large customer group

Support EU plans of improving rights and living conditions of people with disabilities and staying ahead of developments and regulations that are likely to be introduced

*Source: EU Commission

http://ec.europa.eu/justice/discrimination/disabilities/index_en.htm





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Summary

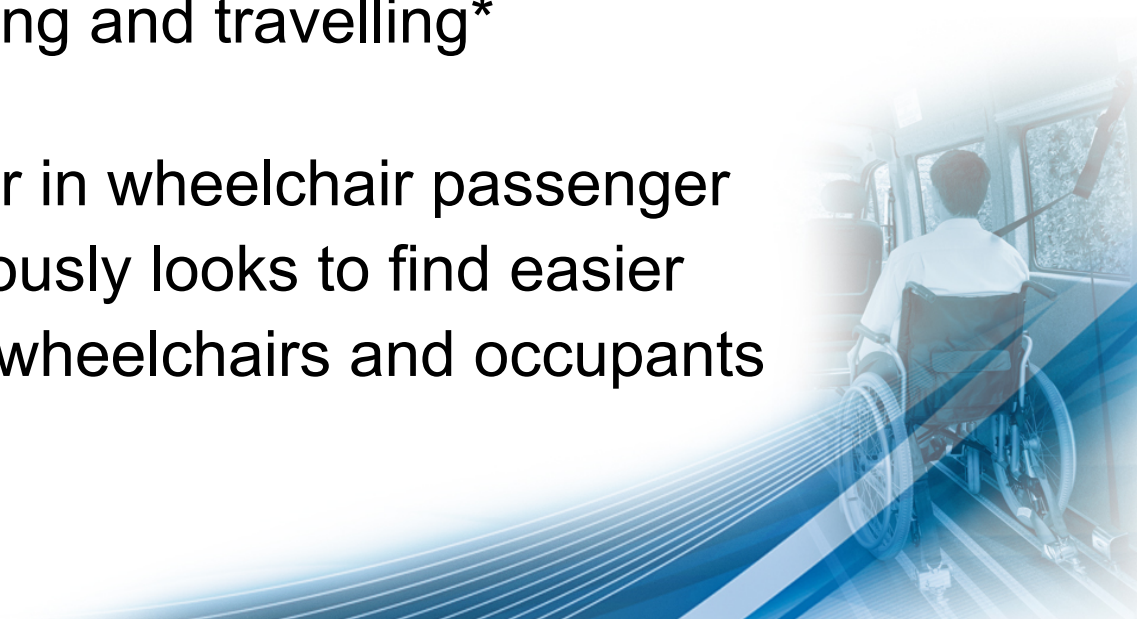
There is a large, increasing number of wheelchair users who want to use public transport

The EU Commission supports efforts ensuring that people with disabilities can enjoy their fundamental rights such as working, training and travelling*

Q'Straint is the market leader in wheelchair passenger safety solutions and continuously looks to find easier and better ways of securing wheelchairs and occupants

*Source: EU Commission

http://ec.europa.eu/justice/discrimination/disabilities/index_en.htm



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