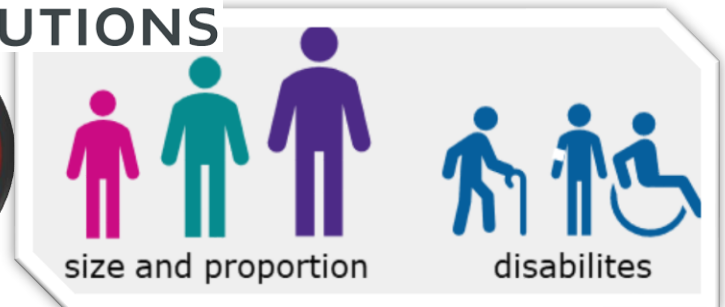


## Master Thesis



Source: Human Solutions, Bombardier

# Ergonomic Boundaries of Egress/Ingress in Public Transportation

This thesis should elaborate the requirements for egress/ingress in the context of public transportation. The topic egress/ingress has been thoroughly analyzed in passenger vehicles, but precise boundaries in public transportation have not been considered with the same amount of detail. Therefore applying automotive standard methods of human simulation software such as RAMSIS should be used to determine the boundaries of egress/ingress comfort and ability in public transportation. Additionally the special needs of people with disabilities should be identified and translated into design guidelines.

### Scope of work:

- Literature survey
  - State of the art of ergonomic requirements and virtual validation in automotive context
  - Legal boundary conditions and best practice guidelines in public transportation
- Creation of selected of public transportation public interior layouts
- Definition of several use-cases
- Definition of population to virtually validate the defined use-cases within the selected layouts
- Ergonomic validation for able-bodied persons, elderly persons, disabled persons and wheelchairs
- Documentation and presentation of the work results

### Requirements:

- Knowledge & experience with CATIA V5 or other CAD systems
- Advantageous: Fundamentals of automotive engineering
- Basic knowledge of statistical methods

**Duration:** 6 month  
**Start:** As from now  
**Workplace:** Institute of Automotive Engineering / AVL List GmbH

An expense allowance is offered for the Master's thesis.

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