

CSeries Aircraft Design for Persons with Reduced Mobility (PRM)

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Objective:

Describe the steps Bombardier Aerospace is taking to ensure that its CSeries family of aircraft will be accessible to passengers with reduced mobility

Context:

The CSeries Interiors Design Team began with the following perspectives:

- We should view physical/mobility impairments as part of the normal variation within the range of human mobility
- At some point, many of us will experience physical impairment and challenges:
 - Childhood
 - Pregnancy
 - Age (ie-growing old)
 - Sports
 - Accident
 - Disease
- Mobility Impairment can be either temporary or permanent and affects numerous individuals
- Our starting point was that air transportation should be accessible to all:
- Presentation of Inclusive Design:
 - Seeks to accommodate the greatest number of people as reasonably possible given the current state of technology, safety, manufacturability, weight and cost
 - Design for physical impairments should NOT be considered as 'specialized' design.
 - Accessibility design issues should be approached from the perspective of the most extreme case within the population, and yet should not negatively impact the use of any other member of the travelling public

CSeries Aircraft's PRM Lavatory Project:

- Volunteers from two key organizations, Keroul and the Association Québécoise de Voile Adaptée, were invited to participate in a simulation study to inform and evaluate lavatory design
- Participants were asked to enter a mock-up lavatory. Once inside, they transferred from an aircraft aisle chair and back again. During this simulation a wide range of issues were considered for each person's ability including:
 - Privacy
 - Ease and safety of transfer
 - Availability to all amenities (ie-"reach")
- Following the simulation a short interview followed to identify the less tangible issues potentially influencing design parameters
 - Dignity
 - Functionality
 - External Contributors

Reporting the Results:

- Detailed visual presentation of the lavatory
 - Comparison with current industry standards (side-by-side)
 - Highlight key features of CSeries lavatory