product overview

aiding caregivers transferring wheelchair users
technical features

• low force, low friction system to transfer user

• able to support up to 150 kg

• height and rotation adjustable to allow for versatile transfer options

• comfort, safety, and support during transfer
target market

• Caregivers
  – Approx. 2 million wheelchair users in the United States
  – Nearly 60 percent of wheelchair users are overweight

• Nursing Homes
  – 1.5 million occupants in the United States
**Product Contract**

- **Product Description:** Portable slide mechanism for transferring wheelchair users

- **Intended Customers:** Caregivers and Nursing Homes

- **Market:** Wheelchair Transfer Devices

<table>
<thead>
<tr>
<th>Customer Needs</th>
<th>Product Attributes</th>
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<tbody>
<tr>
<td>Move wheelchair user to various locations</td>
<td>Versatile Directionality</td>
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<tr>
<td>Lift user to various heights</td>
<td>Lifting Capability</td>
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<tr>
<td>Easy to use</td>
<td>Light, Low Force to Move</td>
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<tr>
<td>Convenient to store</td>
<td>Size, Collapsibility</td>
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<tr>
<td>Support the user safely during transfer</td>
<td>Safety</td>
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risks addressed

- **Seat Option Changed**--from pad to cloth
  - **Benefits:**
    - Risk of infections reduced
    - Alignment is no longer a concern
    - Seat is less obtrusive
    - Allows for collapsibility
  - **Integrating into Wheelchair, Ergonomics and Kinematics**
future design challenges

• Torsional bending of railings

• New method of suspension

• Load, support a 150 kg person