1. Easy Lift

Seat lift for manual wheelchairs
$2.9 Billion
manual wheelchair market (2018)
User’s voice

- Compact
- Easy to use
- Stable
- $1000 - $2000
<table>
<thead>
<tr>
<th>CUSTOMER NEED</th>
<th>PRODUCT ATTRIBUTE</th>
<th>ENGINEERING SPECIFICATION</th>
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</thead>
<tbody>
<tr>
<td>Convenient elevation and lowering of seat to perform activities</td>
<td>Translation range</td>
<td>Translates 6&quot; vertically in &lt; 5 seconds</td>
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<tr>
<td>Controlled elevation and lowering</td>
<td>Translation capacity</td>
<td>Average person exerts &lt; 15 W of elevation power; lowers at &lt; 5 in/s</td>
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<tr>
<td>Locks elevation and holds user at any height within range</td>
<td>Locking mechanism</td>
<td>Gas spring oil chamber locking mechanism supports up to 400 lb</td>
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<tr>
<td>Can be installed on a wheelchair for extended use</td>
<td>Wheelchair compatibility</td>
<td>Retrofits on top of standard wheelchair seat size of 18&quot; x 18&quot;</td>
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<tr>
<td>User can lean forwards, backwards, and sideways to perform activities</td>
<td>Stability</td>
<td>Device does not tip over, remains flat on wheelchair seat</td>
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<tr>
<td>Lightweight, portable</td>
<td>Weight</td>
<td>Device weighs &lt; 10 lb</td>
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</table>
Translation mechanism

- Pulley system
- Gas cylinder
- Scissor lift
- Rack and pinion
- Seat
- Frame
- Supporting bracket
Control interface

push button
Next steps

- Addressing mockup model feedback
- Improving stability of device
- Simplifying and adapting installation process