CPR Equipped Rescue Can

Team Red A
CPR Equipped Rescue Can

Standard lifeguarding rescue can with waterproof cavity for CPR mouthpiece and gloves. Easy to open hatch that is durable and re-sealable.

CPR Equipment: Pocket mask or mouthpiece, Latex gloves, Sterile packaging
Impressions of Existing Products

- **Lifeguard Feedback about Current Model:**
  - Streamlined Shape
  - Lightweight
  - Durable
  - Buoyant
  - Impact Resistant
  - Good Handles

- **Problems with Velcro Model:**
  - Strap gets caught and torn off
  - Velcro degrades with water, sand
  - Equipment falls off
Customer and Market

- Incorporating CPR unit into Rescue Can increases efficiency
  - All certified lifeguards receive CPR training
  - 2,078 water rescues in 2009
  - 272 or 13% of rescues needed medical attention
  - 72% of beach lifeguards have rescued someone

- Customer: Waterfront Management
  - Especially for locations with only 1 lifeguard on duty
  - Price: $30-$50
## Product Contract

<table>
<thead>
<tr>
<th>Customer Needs</th>
<th>Attribute</th>
<th>Metric</th>
<th>Unit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Easy to Transport</td>
<td>Transportability</td>
<td>Weight</td>
<td>kg</td>
<td>&lt; 3 kg</td>
</tr>
<tr>
<td>Dry Equipment</td>
<td>Waterproof</td>
<td>Is it dry?</td>
<td>binary</td>
<td>yes</td>
</tr>
<tr>
<td>Easy to Use</td>
<td>Simplicity</td>
<td>Time to open</td>
<td>sec</td>
<td>&lt; 5 s</td>
</tr>
<tr>
<td>Original Can Profile</td>
<td>Performance</td>
<td>Is cavity unobtrusive?</td>
<td>binary</td>
<td>yes</td>
</tr>
<tr>
<td>Easy to access supplies</td>
<td>Accessibility</td>
<td>Diameter of opening</td>
<td>cm</td>
<td>&gt;10</td>
</tr>
<tr>
<td>Easy to close</td>
<td>Re-sealability</td>
<td>Time to close</td>
<td>sec</td>
<td>&lt; 6 s</td>
</tr>
<tr>
<td>Durable</td>
<td>Impact Resistance</td>
<td>Lifespan</td>
<td>years</td>
<td>&gt;5</td>
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<tr>
<td>Easy to clean</td>
<td>Cleanliness</td>
<td>Time to clean</td>
<td>sec</td>
<td>&lt;60</td>
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<tr>
<td>Still floats</td>
<td>Buoyancy</td>
<td>Same as original?</td>
<td>Binary</td>
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</table>
Risk #1: Operation of Hatch

Lifeguards must be able to open the hatch easily with one hand, while wet, and when under stress.
Locking Mechanism Data

Time to Open CPR Compartment

<table>
<thead>
<tr>
<th>Method</th>
<th>Seconds</th>
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<tbody>
<tr>
<td>Twist and Pull</td>
<td>4</td>
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<tr>
<td>Screw</td>
<td>6</td>
</tr>
<tr>
<td>Plug</td>
<td>5</td>
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<tr>
<td>Removable Nose</td>
<td>2</td>
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</tbody>
</table>
Risk #2: Use of Rescue Can

- Lifeguards Require:
  - Easily accessible
  - Durable
  - Items inside can’t bounce around
  - Waterproof
  - Sand-proof
  - Similar can profile
  - Similar price

- What We Did:
  - Modify existing rescue can
  - Use waterproof hatches and sealants
  - Would manufacture as one injection-molded part with hinged lid.
Thank you