Green A
Mockup Review
Prophagia+
Customer Needs

Embarrassed Emma

- ~70 years old
- Lives Alone
- Dysphagia
Customer Needs

Embarrassed Emma

• Food
• Family
• Herself
Customer Needs

Embarrassed Emma

• Food
• Family
• Herself
Customer Needs

Embarrassed Emma

• Food
• Family
• Herself
Previous Vision
Previous Vision

1. Blade close to face
Previous Vision

1. Blade close to face
2. Doesn’t meet power needs
Previous Vision

1. Blade close to face

2. Doesn’t meet power needs

3. Doesn’t cut meat
New Vision

$30

- Portable
- Discreet
- Versatile
New Vision

• Small form factor
New Vision

• Small form factor
• Surface conforming
New Vision

- Small form factor
- Surface conforming
- Sharp, protected blades
Subsystems

- Housing
- User Interactions
- Motor/Blade interface
Subsystems

- Housing
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- Housing
- User Interactions
- Motor/Blade interface
Risks

- Client Outreach
- Utility (does it cut)
- Battery Life
- Small Form Factor

- Design Simplicity
- Discretion
Risks

- Client Outreach
- Utility (does it cut)
- Battery Life
- Small Form Factor

- Design Simplicity
- Discretion
# Product Contract

<table>
<thead>
<tr>
<th>Customer Need</th>
<th>Product Attributes</th>
<th>Engineering Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can be taken to restaurants/outside events</td>
<td>Size of product</td>
<td>&lt;1000 cm³</td>
</tr>
<tr>
<td></td>
<td>Weight</td>
<td>&lt;2.25 kg</td>
</tr>
<tr>
<td>Can create food edible for people with dysphagia</td>
<td>Battery Power</td>
<td>&gt;60 Watt battery</td>
</tr>
<tr>
<td></td>
<td>Size of processed food</td>
<td>&lt;1/2 cm³</td>
</tr>
<tr>
<td>Can be used all day without charging</td>
<td>Battery Life</td>
<td>Battery that lasts at &gt; two hours</td>
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</tbody>
</table>

*Experimentally determined*
Mockup: Works-like

Goals

• Battery Selection
• Motor Selection
• ASHA Dysphagia Standards
# Mockup: Works-like

<table>
<thead>
<tr>
<th>Food</th>
<th>Side length</th>
<th>Food Tested</th>
<th>Power Needed [W]</th>
<th>Time to blend [s]</th>
</tr>
</thead>
<tbody>
<tr>
<td>Veggies</td>
<td>&lt;1.27 cm</td>
<td>Carrots</td>
<td>&gt; 50</td>
<td>&lt; 7</td>
</tr>
<tr>
<td>Fruits</td>
<td>&lt;1.27 cm</td>
<td>Mixed Melons</td>
<td>&gt; 42</td>
<td>&lt; 3</td>
</tr>
<tr>
<td>Meats</td>
<td>&lt;1/2 cm</td>
<td>Chicken</td>
<td>&gt; 58</td>
<td>&lt; 12</td>
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</tbody>
</table>

"American Speech Language Hearing Association"
Mockup: Works-like

Goals

- Battery Selection
- Motor Selection
- ASHA Dysphagia Standards

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<th>Features</th>
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Mockup: Works-like

Goals

• **Battery Selection**
• **Motor Selection**
• **ASHA Dysphagia Standards**

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Mockup: Works-like

Goals

- Battery Selection
- **Motor Selection**
- ASHA Dysphagia Standards

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“McMaster-Carr” Compact Round-Face DC Motor
Mockup: Works-like

Goals

• Battery Selection
• Motor Selection
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<td>Small Motor size</td>
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<tr>
<td>Chopped Meats</td>
<td>&lt;1/2 cm³</td>
<td>Yes</td>
</tr>
<tr>
<td>Soft Veggies</td>
<td></td>
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<tr>
<td>Wet Fruits</td>
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Mockup: Looks-like
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• User journey
Mockup: Looks-like

• User journey
• Features
Mockup: Looks-like

• User journey
• Features
• Utility
Mockup: Looks-like

- Easy to pick up
- Sanitary base
- Multi-switch activation
- Multiple blend modes
- Charging feedback
- Easy to clean
- Small viewing window
Mockup: Looks-like

• Easy to pick up
• Sanitary base
• Multi-switch activation
• Multiple blend modes
• Charging feedback

• Easy to clean
• Small viewing window
Mockup: Looks-like
Moving Forward

- Client Outreach
- Form Factor
- Battery life