Development Progress

- Formulated Design Concepts
- Acquired Materials
- Created Test Series
- Created Mock-ups

Shank Deflection and Material Selection

Fish bites down on the hook

Angler sets the hook

Hook is engaged in both upper and lower lips

Mock-ups

Shown above from left to right: team developed Mock1, team developed Mock2, and a standard treble hook for comparison.

Mock-up Testing

- Bending (shown below)
- Corrosion Resistance
- Customer Satisfaction
- Engagement Mechanism
- Fatigue
- Snag
- Tensile (shown below)

Preliminary Materials Testing

<table>
<thead>
<tr>
<th>Material</th>
<th>Modulus of Elasticity (GPa)</th>
<th>Yield Strength (MPa)</th>
<th>Modulus of Resilience (MPa)</th>
</tr>
</thead>
<tbody>
<tr>
<td>316 Stainless Steel</td>
<td>190</td>
<td>290</td>
<td>0.11</td>
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<tr>
<td>Medium Carbon Steel</td>
<td>206</td>
<td>310</td>
<td>0.23</td>
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<tr>
<td>Titanium Alloy</td>
<td>70</td>
<td>500</td>
<td>1.8</td>
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<tr>
<td>High Carbon Spring Steel</td>
<td>210</td>
<td>580</td>
<td>2.2</td>
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<tr>
<td>420 Stainless Steel</td>
<td>200</td>
<td>1400</td>
<td>4.9</td>
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