WPI Projects With Impact

Achieved through the discipline of value creation

Definitions

- **Value creation** – the process of solving an important unmet stakeholder need better than any alternative
- **Innovation** – value creation with sustainable impact
- **Value** – benefits/costs as perceived by the stakeholders
- **Stakeholders** – end-users, sponsors, and other affected parties
- **Key insights** – the few issues that most define the problem and solution

5-What’s for understanding important stakeholder needs

- What is the situation in the ecosystem?
- What is the problem/opportunity resulting from the situation?
- What is the reason the problem/opportunity has not been solved?
- What is your key insight into the actual stakeholder need to be addressed?
- What is your key insight into a compelling solution that addresses the need?

Tools

Project Assessment

Opportunity space & first end-users

End-users, customers, & stakeholders

Your capabilities

Competition, current solutions, & alternatives

Value Factor = \( \frac{\text{Quality} \times \text{Convenience}}{\text{Costs}} \)

Example Value Factor Analysis (VFA)

<table>
<thead>
<tr>
<th>Quality Features</th>
<th>User need</th>
<th>Elmers</th>
<th>Our solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Importance</td>
<td>Satisfaction</td>
<td>Total</td>
<td>Satisfaction</td>
</tr>
<tr>
<td>1 Bonding</td>
<td>5</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>2 Types of ceramics</td>
<td>2</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>3 Color (transparent)</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td>Total</td>
<td>18</td>
<td></td>
<td>45</td>
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<table>
<thead>
<tr>
<th>Convenience Features</th>
<th>User need</th>
<th>Elmers</th>
<th>Our solution</th>
</tr>
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<tbody>
<tr>
<td>Importance</td>
<td>Satisfaction</td>
<td>Total</td>
<td>Satisfaction</td>
</tr>
<tr>
<td>1 Quick drying</td>
<td>5</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>2 Applicator</td>
<td>3</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>3 Clean up</td>
<td>4</td>
<td>4</td>
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<td>Total</td>
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<table>
<thead>
<tr>
<th>Cost Components</th>
<th>User need</th>
<th>Elmers</th>
<th>Our solution</th>
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</thead>
<tbody>
<tr>
<td>Importance</td>
<td>Expense</td>
<td>Total</td>
<td>Expense</td>
</tr>
<tr>
<td>1 Per application</td>
<td>2</td>
<td>$2</td>
<td>$2</td>
</tr>
<tr>
<td>2 Storage lifetime</td>
<td>3</td>
<td>$3</td>
<td>$6</td>
</tr>
<tr>
<td>3 Removing extra glue</td>
<td>5</td>
<td>$5</td>
<td>$10</td>
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<tr>
<td>Total</td>
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<td></td>
<td>43</td>
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</table>

WPI Value-Creation Initiative

Innovation and Entrepreneurship

Worcester Polytechnic Institute

Worcester, Massachusetts

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## Innovation for Impact: i4i

### Action Plans (NABC)

**Hook**
- What is the purpose and focus of your initiative?
- Briefly, what is the situation in the ecosystem that gets attention?

**Need**
- What is the important unmet stakeholder problem/opportunity?
- What do they wish they could do but can’t today – their actual need?
- Remember to quantify – no bigger, better, faster, cheaper

**Approach**
- How do you plan on addressing the stakeholder’s actual need?
- What do you have or can do that is special and sustainable?
- What are your risks or limitations and how will you mitigate them?
- How do you plan on providing your solution to the stakeholders?
- Do you have a development plan with milestones?

**Benefits/costs (value)**
- How will the different stakeholders gain from your solution?
- Remember to quantify

**Competition, current solutions, and alternatives**
- Can you name them, now and in the future?
- Have you conducted a Value Factor Analysis?

**Action**
- What are the next key steps to move your project forward?
- What is required to take these next steps?

### Value-Creation Forums – Feedback & Iteration

**Format**
- Presenter gives a 3 to 5-minute NABC Action Plan presentation to multidisciplinary peers
- Peers give 1-2-minute feedback and iterations
- Presenter listens to feedback without responding

**Feedback**
- Always respectful and helpful – the goal is improvement
- Multiple perspectives – what was good, improvements, and eyes of the end-user, sponsor, and other stakeholders
- Presenter uses the feedback to improve their NABC Action Plan

**Intense iteration** with teammates, sponsors, end-users, & others