Funding

Version 2.0

CS410 Red Team


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Phase 0
The cost of phase 0 is zero dollars because our group members will be unpaid interns for that phase. Old Dominion University will supply us with the resources that are needed in this initial phase of the RED AI project. It encompasses the fall semester of CS410.

Phase 1
We will apply for funding to back the RED AI project from the National Science Foundation SBIR grant program. $100,000 is the maximum amount available for phase 1 of the project, in which we will develop a lab prototype. The total anticipated cost of our phase 1 activities is $76,510 (See Figure below). See the Resource Plans for itemized budgets.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Overhead (40%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard</td>
<td>$8,650</td>
<td>N/A</td>
<td>$8,650</td>
</tr>
<tr>
<td>Staff</td>
<td>$48,470</td>
<td>$19,390</td>
<td>$67,860</td>
</tr>
</tbody>
</table>

![Pie chart showing costs]

NSF
NSF plays a key role in supporting small business research with a clear goal of innovation that can benefit society through commercialization. SBIR programs at NSF are exclusively for the small business community to leverage federal funds to undertake high-risk science and engineering research that could lead to further investment from the investment community.
Phase 2
When the RED AI prototype is successfully completed, we will request an additional amount up to $750,000 from the NSF's SBIR for phase 2. The total anticipated cost of our phase 2 activities is $307,120 (See Figure below). See the Staffing and Resource Plans for itemized budgets.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Overhead (40%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard</td>
<td>$0</td>
<td>N/A</td>
<td>$0</td>
</tr>
<tr>
<td>Staff</td>
<td>$219,370</td>
<td>$87,750</td>
<td>$307,120</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>$307,120</strong></td>
</tr>
</tbody>
</table>

- Infrastructure
- Marketing Research
- Testing
- Potential Investors
Phase 3
In Phase 3, we will no longer receive money from the SBIR program. We will focus on production and commercialization in this phase. We will pursue funding through venture capital investment and Angel Investors, and we will apply for a small business loan if necessary. We expect to be self-sufficient based upon product sales within approximately 24 months. See Figures below for break-even analysis. The total anticipated cost of our phase 3 activities is $178,415.34 (See Figure below). See the Resource Plans for itemized budgets.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
<th>Overhead (40%)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hard</td>
<td>$3,600</td>
<td>N/A</td>
<td>$3,600</td>
</tr>
<tr>
<td>Staff</td>
<td>$124,900</td>
<td>$49,950</td>
<td>$174,850</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>Total</strong> $178,450</td>
</tr>
</tbody>
</table>

Angel investors
They are an important and growing source of financing for the start-up and initial growth phases of technology ventures. Many of these angels invest in first time entrepreneurs before the entrepreneurs secure venture capital financing. Besides earning a strong return on their investment, these experienced angels are motivated to “give back” to the community, which helped make them successful.

The motivations and operations of experienced angel investors are typically different from those of early stage venture capitalists. First time entrepreneurs can benefit from approaching experienced angel investors, prior to meeting early stage venture capitalists, when seeking early stage funding.

An angel’s personal network of contacts is a key element in screening deals, conducting due diligence, negotiating terms, adding value after the investment, securing additional rounds of funding and executing the exit strategy. Angel groups are an important new development in
venture creation. These groups provide the fastest way for entrepreneurs to find angels and provide a way for angels to leverage their combined skills, time, expertise and networks.

Financial bootstrapping

Is a term used to cover different methods for avoiding using the financial resources of external investors. Bootstrapping can be defined as a collection of methods used to minimize the amount of outside debt and equity financing needed from banks and investors. The use of private credit cards is the most known form of bootstrapping, but wide varieties of methods are available for entrepreneurs. While bootstrapping involves a risk for the founders, the absence of any other stakeholder gives the founders more freedom to develop the company.

Summary

RED AI will be fully funded by the NSF for phase 1 and 2. Phase 3 we will seek out private options that will total $178,450. This will have to be paid back. We estimate (from the marketing plan) that it will take two years to recoup this investment.