Sentient VOCMS

# Initial Business Case

## Cost Analysis

This section will cover the hardware costs for each monitor, the cost in man hours to develop the software, the cost in upkeep for monitors, and the purchasing plan for users.

#### Hardware costs

|  |  |  |  |
| --- | --- | --- | --- |
| Item | Description | Link | Cost |
| Arduino Kit | [Arduino Uno w/Atmega328](http://www.adafruit.com/products/50)  3’ USB Cable  Breadboard  9v Battery case w/ switch and plug  MISC Parts | http://goo.gl/4eTUJI | $33.99 |
| gas sensor | 1x organic compound sensor |  | $100.00 |
| Arduino SD Shield | SD Card Module for Arduino | http://goo.gl/C9oh6L | $10. |
| Potentiometer | 1k | http://goo.gl/qzMDYL | $.60 |
| Solar Power Source | A solar power shield with battery for the arduino | <http://solarpocketfactory.com/collections/solar-panels/products/solar-pocket-shield-for-arduino> | $35.00 |
| SD Card | 8gb | http://goo.gl/qSkrf2 | $11.59 |

The hardware for each VOC monitor will cost approximately $191 dollars.

#### Man Hours

The estimated man hours for this project is about 1440. This figure is derived from 4 people working about 10 hours a week (each), for 9 months. At $25 an hour (intern wages), this comes to $36,000 dollars.

#### Purchasing Plan

We plan to have customers purchase the rights to use the VOC Monitor for $20 a month (per monitor), as well as a one-time $60 fee up front to have the VOC Monitor(s) installed and then registered on the master website. This would place the ROI on the monitors to just under a year.

#### Maintenance

We expect maintenance to be divided up into two sections, hardware and software. The Hardware maintience should only be needed every 2 years for things such as replacing solar panels or SD card failures. We also anticipate the unexplained and inevitable software problems, requiring a reboot to the Arduino.