Group 9 - Deliverable C

#	Interpreted Needs
1	Must have a degree of autonomous function
2	Must use RossDash Board
3	Must be easy to understand and use
4	Must be within budget
5	Must be inexpensive and simple to replicate
6	Must be easy to modify (i,e. useful if changes are made to the CEED facility)

Priority	Design Criteria (Functional/Non-Functional)	Interpreted Need it's Based On
1	Assists/replaces CEED worker	1
2	Understandable by user	2/3
3	Useable by user	2/3
4	Assembled easily	5
5	Easy to upgrade or modify	6/5

Constraints	Relation	Value	Units
Cost	<=	100	$ (CAD)
Size	<=	10x15x4	cm

Benchmarking

An example of an autonomous platform that Uottawa already uses would be the Happy or not terminals, used in the cafeteria. They are able to interact with Students allowing them to rate their satisfaction of the food served that day. The terminals are extremely easy to use, using smiling faces to depict the level of satisfaction, as well as large buttons. Corresponding to (Needs 3). The terminals are an easy, effective and autonomous way for the University to collect data on their customer satisfaction (Needs 1). The only downside would be the cost, at $59/month, this system is quite costly to run over a long period of time, especially when employing multiple terminals (Needs 4).

Another example would be the ‘sign in’ boxes used in the CEED facility. The box is inexpensive (Needs 4) employing a raspberry pi ($50), a pi-hat sensor ($20-60), and a simple

wooden box ($5 or less). These boxes allow students to sign in to each facility by tapping their student IDs instead of interacting with a CEED employee. The downsides to the box is the lack of instructions, causing newer students to be confused on whether or not the box has sensed that they have signed in or out, or if the system has failed. This makes the box not always easy to use, conflicting with Needs 3. This system is within our budget of < $100 (Needs 4) , as well as autonomizing the CEED facility (Needs 1).