

Target Summary

The targets of a project allow the designers to have a goal to pursue. It makes them look to the future a bit and plan ahead as to see how the final product would look like. Making targets helps in constructing how the different components of the project will interact with each other and also gives benchmark to which the product can be tested against. In this case, Table 1 showcases the present targets of the project. Of course, not all targets can be measured equally, some of them will have higher priority over others. For this project, it has been defined that the user satisfaction is a top priority of the project; if the desires/needs of the user are met then the device did not work as intended. But, in order to reach that possibility some other critical points need to be completed or else the device will simply not do what it's intended which are; control and sense the ambient temperature, collect inputs from the user and predict future inputs. If these targets are met then user satisfaction should be more than possible to be obtained. Most of the validations of the targets will be held during the testing phase and all corrections will be made during this time if the targets are missed or if the feedback is undesirable.

Table 1 shows the different functions from the flow chart from section 1.3.1. It also adds some more functions that are considered to be important to consider when building the device.

The most critical functions are indicated with an asterisk next to its name (*).

Table 1
Function targets and metrics

Function	Target	Metric
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Sense Environmental Variables*	0 - 110°F -17 - 43°C 20 - 90%	Temperature (°F) Temperature (°C) Relative Humidity (%)
Energy	Battery life longer than 1 year	Electric Charge (mAh)
Collect User Input*	Allow only human inputs	User Feedback
Store Data	Be able to store the user input data to about 500GB	Storage Capacity(GB)
Predict Future User Input*	Set a temperature from user based on past behavior	User Feedback
Connectivity	Achieve a short connection timeout. Less than 50 ms	Time (ms)
Control Temperature*	59 - 85°F 15 - 30°C	Temperature (°F) Temperature (°C)
Control Volume *	Size of an average room	Volume (m3)
Control Humidity*	30 to 70% (ideally 50 to 60%)	Relative Humidity (%)
Setup Time (Temperature)	Reach optimize temperature within 1-20 min	Time (min)
Maneuverability of the system	Device size less than 0.2m3	Volume (m3)
Easy to use	User friendly device for all ages	User Feedback
Satisfaction*	Have the user be satisfied with the temperature	User Feedback