

# Customer Needs

## Introduction

Today, it is impossible to build a building no matter if it is a house, a school, an office or a hospital without having a proper air conditioning system. Having a proper air conditioning system is important for the overall well being of the people that use it the building daily, weekly or less frequently. As the weather and the temperature changes, it is important to have an air conditioning system that can accommodate those changes. When hot outside, you want to be able to be colder inside or being able to be warmer inside when feeling cold outside. The air conditioning helps people to stay healthy while giving them a better comfort. Even having a proper conditioning system does not satisfy everyone using the same building because people have different metabolism. Some people feel colder or warmer than other people at the same room temperature. The age, sex, body and medical conditions are all factors of why people feel either colder or warmer at the same room temperature. It is also fair to say that even an air conditioner displays 75 degrees for a room temperature, the room is not 75 degrees at every angle of that room. That explains also how people can feel differently while being in the same room.

In the research of trying to find issues that people usually encounter with the current AC system of the College of Engineering. We have interviewed two people that use the college of engineering A/C system on a daily basis. We interviewed a male and a female but we are not going to introduce them because they wanted their names to be confidential.

## Customer Needs and Interpretation

Question/Prompt	Customer Statement	Interpreted Need
Interview 1		
Daily Routine Issues	I frequently have to stick with the temperature that the person that has control over the thermostat has set up or ask him to either reduce it or increase it depending on how I feel.	Allow everyone to have their satisfying temperature and air flow.

Current troubleshooting solution	Call in maintenance department to send someone to, hopefully, regulate the airflow into the office and effectively change the temperature.	To cut out the need for maintenance
Current situation likes (what do you like about the current system?)	The AC system is efficient as it gives the real temperature and works properly.	Keep the overall system in place just improve the possibility for everyone to set their preferences
Current situation dislikes and frustrations	Users has to go through multiple steps to adjust their room temperature	Allow customer to directly regulate their own temperature.
How do you want this issue to be resolved?	For present issues, have a control device that allows the user to tell the system whether is too cold or hot for the current comfort.	Create a device to control the temperature for better comfort

Interview 2

What is your most important need that you would like to see fixed?	Have the ability to regulate the A/C temperature based on personal preferences of multiple people.	Allow multiple people to set up their temperature preferences.
--------------------------------------------------------------------	----------------------------------------------------------------------------------------------------	----------------------------------------------------------------

<p>How do you handle that situation daily?</p>	<p>There is not a fixed solution. Generally the person in charge of the thermostat sets the temperature for everyone else; only that person is capable of changing it and there must be a majority, so a new temperature can be set (which generally is not optimize for every preference)</p>	<p>Redistribute to everyone their freedom of choice about the temperature.</p>
<p>What improvements would you make to the current technologies?</p>	<p>Controlling the airflow within the users' room. Ultimately resulting in either a warmer or cooler space</p>	<p>Allow user to manage their own room temperature</p>
<p>How do you want the new technology to operate?</p>	<p>Use a control device that accepts user input to tell if the environment is either too cold or hot for the time of the day/year</p>	<p>Use an algorithm to determine what times the user is too hot or too cold. From there the unit will autonomously control the room temperature</p>
<p>Does the new technology need to be integrated to current</p>	<p>Preferably the new tech should be integrated to new systems while a smaller version could work to be sent</p>	<p>Product to be modular for different systems.</p>

systems or does need to be part of the new ones?	out as a temporary fix for current issues.	
--------------------------------------------------	--------------------------------------------	--

**Analysis:**

Based upon the two interviews that were conducted, a few general takeaways were the following. First, users mostly wanted to be able to set their preferences instead of having to stick to someone else's preferences. Second, they want to be able to execute the change as fast as possible without having to go through many steps to change their room temperature. Also, they both share the presence of a device that would allow everyone to set their preferences would be very convenient as it is harder to work when there is a comfort problem. In addition, they said it was going to be very helpful if the device was automatically recording data and setting up the perfect temperature when they were entering their room or depending on the time of the day so they were no need to manually enter it everytime.

From the two interviews, we can say that the two customers mainly wanted to be able to control the temperature and to have an autonomous device that will automatically set up the temperature, air flow and humidity based on their preferences.

**Conclusion:**

In conclusion, the interviews have helped to identify key features and specifications that are important to the needs of the target audience. At the end of those interviews, we were able to recognize what are the main needs of the customers. Those needs were helpful as we were able to better define the features and characteristics of our A/C troubleshooting device.