

Question	Customer Statement	Interpreted Need
What is this product being used for?	For a resource in their industrial manufacturing maintenance course.	A training tool to be used by the students in that program
What functions does this system need to have?	Sort products based on the size and material, using the conveyor in the AMTC. Also for the instructor to have the ability to cause errors with the system for troubleshooting scenarios	Setup the conveyor to be operational for sorting objects based on size and material. Also have error overrides controlled by a professor to cause problems that students would see in a real manufacturing conveyor system.
What is the budget for this project?	\$1,000	The costs of the project cant exceed \$1000
How would you like for us to purchase materials? Through someone at this College, or ourselves and get reimbursed?	Notify me of what you need and we can get it for you.	Allow Dylan and the AMTC to purchase and provide to us the materials that we need.
When is your preferred deadline for this system to be finished?	By the end of the Spring semester.	Follow the deadlines set by this course, and we will meet the customers deadline
Would you like us to completely redesign and re-manufacture this system or try to fix what was done by the previous group?	Try to build off of what the previous group had done. But this is your project so if you would like to re-design it that is fine.	Consider the materials that the previous group purchased when choosing our design but if we can come up with a better design using different materials, then that is an option.

<p>Does the current design meet any of your needs?</p>	<p>The design ideas would have accomplished what we wanted but they did not actually get to finish building their design therefore we were unable to use it</p>	<p>The AMTC wants a fully functioning system at the end of the project.</p>
<p>Do you have a course rubric that you would like for us to design this system based on?</p>	<p>No, we will figure out how to use it in a course after we learn the features of it</p>	<p>They will be building a course rubric around the features of our design.</p>
<p>How many objects will be sorted at one time?</p>	<p>Whatever the system is capable of. But one is fine</p>	<p>Sort one object at a time. More than one object at a time is a bonus.</p>
<p>How will objects be placed on the conveyor?</p>	<p>Manually.</p>	<p>A person will be placing the objects on the conveyor.</p>
<p>Do you have any of the objects that the system will be sorting or any specifications of them?</p>	<p>No, but I would suggest various sized cubes of different materials.</p>	<p>Use cubes or other basic shapes in various sizes and materials.</p>
<p>Will the objects be similar in size for small and large? What will the range of size of the objects be?</p>	<p>We can use whatever y'all would like. I would suggest nothing smaller than a 1 inch cube, and then as large as the system can handle.</p>	<p>Determine several different options for objects in various sizes and materials with nothing being smaller than a 1 inch cube and nothing larger than the system can rationally handle.</p>

<p>Do you have a PLC on-hand, or a specific model that you would like us to use? Do you have the required software for programming it?</p>	<p>Yes we have the PLC on hand. I think I still have the software, but if not I will get it for you.</p>	<p>We are to use their PLC and software</p>
<p>Do you have a workspace with the necessary resources here on campus that we can get access to or will we need to construct the system at the COE Lab?</p>	<p>Yes, you are welcome to work on the system here and we would like you to keep everything here if possible</p>	<p>We will work on the system at the AMTC and not take anything from their facility without permission.</p>
<p>Should the device be portable?</p>	<p>Yes</p>	<p>The device needs to be portable</p>
<p>Are there any size requirements for the system overall?</p>	<p>No.</p>	<p>As long as the system meets the portability requirement then the size is irrelevant</p>
<p>What kind of errors would you like the system to have?</p>	<p>Sensor errors Short in a wire Loose wire</p>	<p>Hardware errors that would be common in a manufacturing facility.. Nothing in the programming logic.</p>
<p>How would you like to interface with the PLC? A computer? A touchscreen? Both?</p>	<p>Computer. I can get you a laptop to use for this project.</p>	<p>We are to use the AMTC's laptop to control the system.</p>

Our group gathered this information by going to meet with our sponsor, Dylan Sutton, at the Tallahassee AMTC. We were able to walk with Dylan throughout the center and physically see the equipment and workspace we will be using for this project while asking questions about it. Dylan was very knowledgeable about our project, and the resources available to us. Dylan showed us the two conveyor belts, as well as the sensors and PLC that the previous group purchased for their design. He made it clear that while the AMTC had invested quite a bit of money in the equipment for the previous groups design, but he would allow us to redesign and use other equipment as long as we stay in the \$1000 budget. Dylan told us that the college did not yet have a course rubric that involved using this system yet, but he said their idea was to use it as a troubleshoot training device where the students had to analyze errors in the system and then determine what was wrong and fix it. Dylan was very clear in his expectations of what he wants the system to accomplish, but gave us a good bit of freedom on how we are to go about accomplishing his expectations.