GREENWAY

What is success?: Using success criteria to make your device better

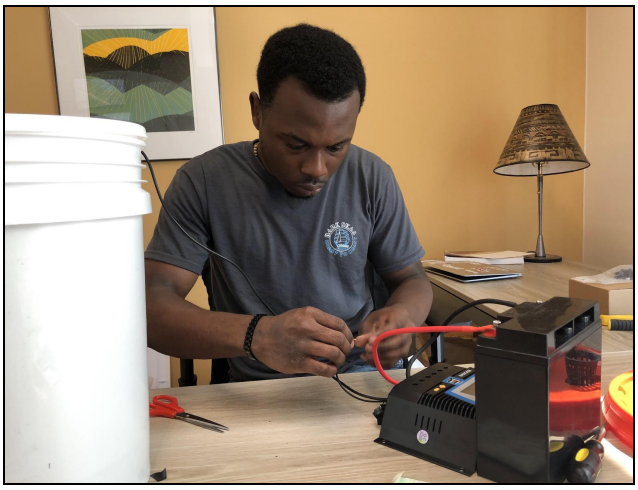
What do you want your project to achieve? Who do you want it to help? How will you know if you succeed?

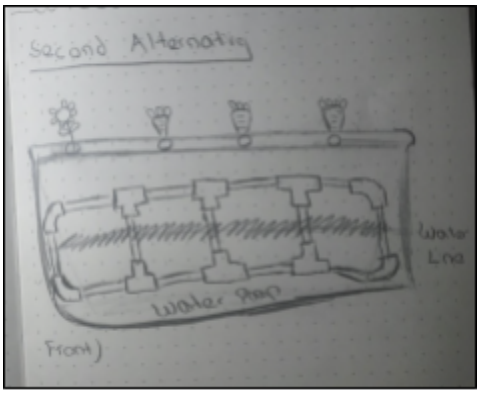
If you have clear goals, you can use these goals to decide what and how to build. **These goals are your "success criteria"-- or the criteria you will use to plan your project or determine if your device is a success.**

The more your prototype is the best answer to your goals, the more successful you are. If not, you need to change your design to better address your criteria

Here's an example:

Rashad was trying to build an invention that helped people living in the city grow food in their apartments. He wanted everyone to have access to fresh vegetables. He knew they would not have a lot of space, cash to buy his device, or time to maintain it.

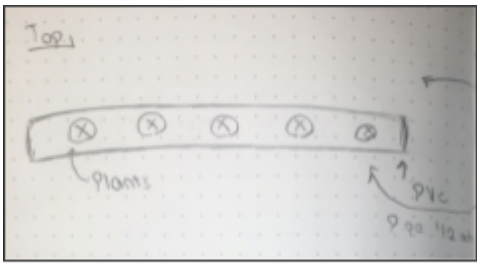




Tub System

Rashad chose **4 Success Criteria**
He wanted his design to be:

1. **Small**
2. **Cheap to build**
3. **Easy to use, and fix**
4. **Better for the planet**



PVC Pipe System

Using these criteria he drew up a few designs of different types of aeroponic growing systems: a **tub system**, a **PVC system**, and a **5-gallon bucket system**,

Then Rashad evaluated his proposed designs by comparing them to his success criteria. For each of his goals (size, cost, ease of use, better for the planet), **he scored each design as a 1 if he thought it meets the criteria 0, if it partially met the criteria, and -1 if it definitely didn't meet the criteria.** He added up the points for each design to decide which to build.[1] (see below)

	PVC system	Tub	5-Gallon Bucket
Success Criteria			
Small Size	0	0	1
Cheap to create and use	-1	1	1
Easy to use	1	-1	0
Better for the planet	0	0	0
Total Points	0	1	2

As the 5-gallon bucket design had the most potential, Rashad built a prototype. However, it didn't quite work as he had hoped. So, he went back to his "success criteria" to figure out what to do differently.

While the design was both small and cheap, It had no on or off switch or no timer, so it's not easy to use and is not energy efficient.

Rashad can then put those items into the prototype to get the design closer to meeting all of his criteria, or he can try a different option, like the tub aeroponics system.

That is how you use success criteria to plan and improve your design.
Your criteria may be very different from Rashad's, based on your project.
You can change your success criteria throughout your project if you think you left one out, or you want one to be more specific.

Here are some other resources if you want more information
Pugh analysis charts
Overview of success criteria
A slightly different way to organize success criteria in a chart'

[1] Engineers call this kind of analysis a "Pugh Analysis."