**BEEF UP** the Problem Statement:

What is the problem or need (controls classes/research?)

Who has the problem or need

Why is it important to solve

What is the method used to address the problem

FUNDING – Plexus Presentation, grant, fluid power

Robot Requirements:

* Pneumatic
* 4 legs, walk and possibly turn
* carry the weight of the pneumatic cylinders/valves/controller
* safely turn off if power lost
* emergency stop button
* weight/size requirements – light enough to easily move
* easy to maintain controls system
* leg path gains should be modifiable by user with limit
* separate power supply for controller
* control main air supply to robot
* Easy to read signals to/from pneumatic parts
* Control robot speed
* Walk on a flat surface
* Should be able to recover from small disturbances
* Run time of the robot (battery life)
* Fuses to avoid electrical failure
* Onboard batteries for electronics
* Wires organized, labelled, and protected
* Carry extra weight (for eventual compressor, air tank, etc)
* Motion forward and backward