

	Identifying & Selecting Problem PSP 1	Analyzing Problem PSP 2	Generating Potential Solutions PSP 3	Selecting & Planning Solution PSP 4	Implementing Solution PSP 5	Evaluating Solution PSP 6
Rating	R1	R2	R3	Y4	Y5	G6
CRITICAL	Funding	Unforeseen cost issues, lack of communication with CR CEO caused Mechanical BOM order to be cancelled.	Budget cuts: -Redesign Mechanical systems to optimize cost -Manufacture some parts in-house -Speak with Dr. DeBartolo about RIT financing some of the project	All three solutions will be used to mitigate this problem	Spoke to Dr. DeBartolo and was able to acquire partial funding from RIT Costs cutting was implemented in the mechanical design	The most cost reduction came from the two things stated in PSP 5 and we were able to acquire all of the funds needed for the project
	Extended Lead Time	Due to the cancelled parts lead times have been extended.	Contact multiple distributors and manufactures and -Manufacture some parts in-house	Both solutions in R3 will be necessary to mitigating the effects of extended lead time	contacted multiple distros and obtained quotes from them	We went with the cheapest and most reliable of the bidders. The one we went with was not only cheap but ISO 3001 certified
	Malfunctioning Motor Controllers	Upon function inspection of the motor controllers they were found to be faulty	Try to fix motor controller Buy new motor controller (see Table 1.1 for pros and cons)	Research alternate controllers that are easier to integrate than the current controller and still meets our power supply range. Debug the TI Stellaris board	Buying a new controller is the most logical option. Therefore, buy new controllers	The new controllers were a bit of a pain to get going but once the learning curve was overcome they worked great
	Motor delivery delay	Shipping errors caused delayed delivery to gear box manufacturer	Drive to gear box manufacturer to minimize shipping time Wait until the motor comes in and is shipped from gearbox manufacturer Show proof of concept on one side and wait for the other motor assembly	Show proof of motor control on one track and then transfer over parameters to the other side	Work on proof of concept on one side of the track so we are ready for the other motor when it comes in	Because we were able to get one side of the track fully functional, when the other motor came in it was a plug-n-play situation as we thought.
MAJOR	ROS	Upon experimentation w/ the ROS environment it was found that ROS is particular as to which Linux environment it is loaded on.	*Try different Linux environments that are more suitable for ROS	Research alternate Linux distros that may work.	Through experimenting with different Linux distros it was found that Ubuntu allows ROS to ne installed on the machine	The solution led to the successful installation of the ROS core
ORDINARY	Motor Performance	Insufficient motor specs. for meeting speed and payload requirements.	Research motor alternatives	Use Cole Morgan Motor	use Cole Morgan motor	The motors were able to meet our engineering specifications
	Time Constraints for testing	mechanical parts might not come in on time	test everything we can that isn't mechanical keep on top of motor supplier	both will need to be done	we did everything we could to get the motors in on time but still had limited testing time	limited testing time

	Screws too long on motor assembly cover	The screws we are currently using are too long and cant be screwed all the way in. Thus the motor rattles because it is not secured properly	Order new screws	order screws	ordered screws	noise and instability from using the wrong screws was completely eliminated
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