

## MSD Project Risk Assessment Template

ID	Risk Item	Effect	Cause	Likelihood	Severity	Importance	Action to Minimize Risk	Owner
	<i>Describe the risk briefly</i>	<i>What is the effect on any or all of the project deliverables if the cause actually happens?</i>	<i>What are the possible cause(s) of this risk?</i>			$L * S$	<i>What action(s) will you take (and by when) to prevent, reduce the impact of, or transfer the risk of this occurring?</i>	<i>Who is responsible for following through on mitigation?</i>
1	Losing a team member	Work reallocated, knowledge lost, less man hours	Arrest (deportation), Leave of absence, Emergency, team conflict	1	3	3	Detect conflict and lack of integrity early on, use a third party mediator and personal counsel to mitigate. -dynamic	Team
2	International logistics (miscommunication)	Missed deadlines, misinterpretations Lack of communication Few overlapping work hours	Skype malfunction, e-mail malfunction, failure to inform others, physical distance, shipping time, customs, time zones	3	2.5	7.5	Skype meetings conducted on campus with meeting notes recorded in duplicate and e-mailed for validation. Agenda for each meeting sent out prior to meeting date for review. Staying on task to reduce confusion. Mondays	Team Leader (Sergey)
3	Miscalculations	Unacceptable deliverables, failure to produce working demo unit, hardware and safety issues, more time consumed	Sleep deprivation, unit conversion, negligence, rushing, invalid assumptions, invalid models	2	3	6	Have work checked by peer on team. Always work in metric units( and \$). Take your time. Validate models/ensure realistic results. Prioritize and plan to avoid rushed work. -Dynamic	Team
4	Over budget	Incomplete demo unit, increased man hours, system redesign	Expense of solar collector, oversized system, salt resistant components, consumables, outsourcing costs	1	3	3	Assign a treasurer position to be elected next meeting. Their tasks will include keeping a detailed budget as well as tracking and planning expenditures. -1-10-11	Treasurer
5	Under sizing system	Nonfunctioning demo unit, inefficient system	Miscalculations, over budget	1	3	3	Model system –MSD 2 Incorporate factor of safety	Team
6	Weather fluctuations	Demonstration limited/ineffective	Clouds, location, solar eclipse,	3	2	6	Review weather forecast, Multiple test dates , solar lamps if	Team

			seasons				necessary– demo day	
7	Limited demo usability	Project mothballed after completion, minimal student interaction	Lack of human interface, lack of explanation, under sizing, material choice(lack of transparent materials), transportability	2	2	4	Incorporate user friendly interface, dynamic data displays, short warm up time	RIT Dubai
8	System Integration malfunction	Demo unit fails, safety hazard, inaccurate data logging	Negligence, component incompatibility, tolerances, miscalibration	1	3	3	Test unit thoroughly prior to demo. Purchase compatible components. -MSD 2	Team
9	Availability of specific hardware	Increased man hours due to producing our own components, delays in delivered components	Location, technicality of project, material choices, vendor stock, cost	2	2	4	Use OEM components, order special items early on.	Team/Treasurer
10	Vendor lead time	Delays in delivered components, incomplete system	Cost, location, business hours, malfunctioning component	1	2	2	Use stock parts, order special items early on, test components on arrival.	Team
11	Component requires redesign	Delayed testing, man hours, material	Test Failure	3	2	6	Communication, units, good models, handle components with care	Team
12	Testing takes longer than expected	Missing deadlines, rushed work	Error source unclear, Repeated test failures, inconsistent outputs, complicated code	2	2	4	Efficiently schedule testing, attack problems quickly, be conscious of deadlines, allot enough time for testing.	Team
13	Models are not accurate	System design off, system redesign	Errors in sources, errors in code, misinterpretations, incorrect/overgeneralized assumptions	1.5	3	4.5	Check others work, annotate code, check sources, reality check, check assumptions.	Team

14	Poor lab procedures	Unable to complete lab, inaccurate & inconsistent results produced, safety hazard	Instruction missing, directions too complicated for users with limited knowledge, mislabeled unit, unorganized directions.	1	2	2	Do test run for run by the directions once system is working (can be performed by someone outside the group). Have group check over all instructions and labeling. Neatly labeled components.	Team
15	Fail to meet Imagine RIT deadline	Loss of test opportunity, loss of potential project publicity and networking.	Testing and building take longer than expected, delay in parts arriving	1.5	1	1.5	Organized and efficient testing early in the quarter.	Team
16	Poor training procedures	Nobody knows how to use the system, time wasted by people trying to re-learn how it works. It gets moth balled instead of used.	Poor or no training procedure leads to lack of knowledge about system after team graduates.	1	2	2	Clear detailed and succinct instructions for operators, instructors, and TAs.	Team

Likelihood scale	Severity scale
1 - This cause is unlikely to happen	1 - The impact on the project is very minor. We will still meet deliverables on time and within budget, but it will cause extra work
2 - This cause could conceivably happen	2 - The impact on the project is noticeable. We will deliver reduced functionality, go over budget, or fail to meet some of our Engineering Specifications.
3 - This cause is very likely to happen	3 - The impact on the project is severe. We will not be able to deliver, or what we deliver will not meet the customer's needs.

<b>"Importance Score" (Likelihood x Severity) – use this to guide your preference for a risk management strategy</b>	
Prevent	Action will be taken to prevent the cause(s) from occurring in the first place.
Reduce	Action will be taken to reduce the likelihood of the cause and/or the severity of the effect on the project, should the cause occur
Transfer	Action will be taken to transfer the risk to something else. Insurance is an example of this. You purchase an insurance policy that contractually binds an insurance company to pay for your loss in the event of accident. This transfers the financial consequences of the accident to someone else. Your car is still a wreck, of course.
Accept	Low importance risks may not justify any action at all. If they happen, you simply accept the consequences.

