

ID	Risk Item	Effect	Cause	Likelihood	Severity	Importance	Action to Minimize Risk	Owner	Issue Resolved-Open/Closed	Resolution	Comments
1	Project Scope too large	Due to large scope, deliverable list is too large and project is not completed on time	Team approves too many deliverables; poor resource planning; poor benchmarking and feasibility causes team to believe they have the resources to complete a task	3	3	9	Focus on main goals of project, discuss, research, and prove feasibility of optional functionality. Discuss goals of project with guide and experts to determine feasibility and likelihood of success. Drop dead date for deliverable list is at system design review (Friday Week 5)	Alissa Anderson, Kelly Murosky, Ronald Dries	Close	no longer an issue, project is complete	Meet with Guide on a weekly to Bi-weekly basis to discuss feasibility and design constraints
2	Processor fails to work due to lack of expertise in field	Hearing aid does not work	Trying to do too much without a lot of prior experience	2	3	6	Research DSP programming and possible microcontrollers to use. Discussing with experts about what they feel is appropriate for the project time constraints helps define solutions	Ronald Dries	closed	DSC was able to amplify signal. DSC not recommended for future projects	
3	Parts do not arrive on time	Do not have the parts required to assemble hearing aid	Parts not ordered in time, parts needed unknown, components/parts backordered	3	2	6	Determine parts critical to stay on schedule (critical path) as soon as possible. Identify possible long lead times- Customer service info. Order parts a few weeks in advance and budget for expediated shipping for worst case scenario.	Ali Anderson, Kelly Murosky, Ronald Dries, Eric Lew	Close	N/A	PCB order was delayed in week 5 (MSDII) but due to causes out of team's control
4	Design does not meet needs	Project failure, unhappy customers	Missed functionality, poor planning, run out of time to implement	2	2	4	Ensure all customer needs are defined and planned for. Make sure all needs and specs are in scope and feasible. Modify needs and specs where needed	Kelly Murosky, Ronald Dries, Yu Nanxi, Paula Garcia	close	needs met (see final review)	Focus groups/surveys helped define design/customer needs. Most customer needs were met
5	Difficulty getting electronics small enough for hearing aid	Prototype is larger than originally intended	Components chosen too large, not enough space left for electronics in main hearing aid shell. System integration not thought of before mechanical and electrical systems are built	3	3	9	Keep small form factor in mind when choosing technologies and functionality	Ronald Dries /Conor Murphy	Close	project complete, no issue	Future work for next iteration. Faced electronical size constraints and resources to fit inside ideal size.
6		Some functionality is dropped to be able to reach size requirement.		3	3	9	Design shell as small as possible while keeping electronics size in mind	Kelly Murosky	Close	project complete, no issue	Future work for next iteration. Faced electronical size constraints and resources to fit inside ideal size.
7		Unhappy customer and design team		3	3	9	Facilitate communication between ME, EE, EE and how systems will integrate	Alissa Anderson/Conor Murphy	Close	project complete, no issue	Future work for next iteration. Faced electronical size constraints and resources to fit inside ideal size.
8	Parts break during system integration	Schedule is pushed back; possibility of missing Imagine RIT deadline	Rushed engineering; poor materials; poor communication between electrical and mechanical teams	2	3	6	print multiple enclosures; order multiple electrical parts (if budget allows); start building far in advance	Conor Murphy	Close	met Imagine RIT deadline	Had enough materials/parts for system integration. Able to present at Imagine-RIT with a non-functional prototype.
9	Part do not assemble	Cannot assemble system; pushes schedule	Poor tolerance analysis / drawings, poor communication between electrical and mechanical teams	2	3	6	double check toleranced analysis; inspect in CAD before ordering	Kelly Murosky	Close	system was able to assemble (not with funtional parts)	Maintained CAD drawings to date and reviewed dimensions before sending out to Shapeways
10	Too Difficult to implement, Run out of time trying to learn new product	If chosen, could run out of time, not have a happy customer, potential product failure	No experience/expertise with ON Semi chip DSP Hybrid chip	3	3	9	Seek advice from experts at ON Semi, Plan for difficult implementation and put a large amount of scheduled time	Ronald Dries /Conor Murphy	Close	chip not used	
11	Dummy piece incomplete	Incomplete visual design	Low priority, difficulty designing connection	1	2	2	Design both parts (stationary module and dummy piece) simultaneously with same priority	Kelly Murosky	Close	design complete	
12	Transfer Module	Large size, problems with electrical interface	Difficulty designing connection and space constraints of electrical components	2	3	6	Design both parts (stationary module and dummy piece) simultaneously with same priority. Discuss design changes with ID students/ EE team	Nanxi Yu, Conor Murphy	Close	design complete	
13	Loss of team member (ex: last minute coop)	Team loses knowledge and creates more work for other team members.	Cause may be due to graduation requirements / personal class choices / personal emergency	2	3	6	Cross train between positions. Team manager should be aware of everyone's projects and responsibilities (in the event that one team member leaves, the team manager can help divide the extra work and reassign responsibilities) by checking edge for on a weekly basis to ensure each member updates their documentation. Prior to exit, exiting member should review with the team and transfer all knowledge (if possible).	Alissa Anderson	Close	Nanxi graduated early - responsibilities were transferred	Nanxi had to leave on co-op for Spring. She was able to document and update Paula before she left. team spent near the budgeted amount and accounted for all
14	Project exceeds budget allowance	Team can no longer financially continue with project	Team member other than "budget master" made unapproved purchase, parts	1	3	3	Track expenses and purchase items; Budget Master makes and recs all purchases	Eric Lew	Close	non issue	
15	Team member overloaded with work outside of MSD	Team loses support from stressed team member	(external to MSD)	2	3	6	team members should be constantly aware and proactive about academic schedules to foresee high stress work weeks, team members should vocalize stress / busy weeks to team and team manager so that their responsible MSD responsibilities can be reassigned or other team members can assist	Alissa Anderson, Kelly Murosky, Ronald Dries, Conor Murphy, Paula Gracia, Nanxi Yu, Eric Lew, Marbella Vidals	Close	project not completed to best quality (not functional), but met needs and requirements	
16	Team member feels overloaded with work from MSD	Team loses support and quality of work from stressed team member. team member loses motivation to work for the team	team member volunteers for too many projects; unbalances work assignments; team member is underqualified for assigned tasks and does not seek necessary support (or vocalize need for support)	3	3	9	team manager should monitor work loads of team members to help facilitate an equal distribution of work; individual team members should speak up (to manager or team) if they feel over loaded or that the work is not equally divided among qualified members. Review workloads at team meetings	Alissa Anderson, Kelly Murosky, Ronald Dries, Conor Murphy, Paula Gracia, Nanxi Yu, Eric Lew, Marbella Vidals	Close	project not completed to best quality (not functional), but met needs and requirements	

