

**What were the outcomes of the prior phase?**

1. What did I plan to do?
  - Continue benchmarking current robotic art drawing devices and current accessible art devices.
  - Research different input devices and create a decision matrix.
  - Determine power requirements and can create battery/power management block diagram.
  - Update risk assessment based on chosen concepts.
  - Identify potential components, such as microcontroller, motors, and input devices.
2. What did I actually do?
  - I benchmarked robotic drawing devices and added them to a table on confluence.
  - Took the purchasing quiz and gained access to PICS.
  - Benchmarked different input devices including easy touch buttons, joysticks.
  - Started looking at specific buttons and vendors for assistive inputs.
  - Created some concept ideas.
  - Combined all the team ideas into a morphological chart and concept selection chart.
  - Began looking at power requirements and what is needed to estimate the power our device will consume.
3. What did I learn? How were plan and reality different?
  - I learned the importance of splitting up tasks and keeping a good schedule. This phase was less structured than the first phase and it's now up to the team to schedule what work needs to be done and who is responsible for it.
  - We were able to complete a lot of benchmarking by assigning different topics among the team, so work was not duplicated.
  - In my plan for the last phase, I included some tasks such as determining the power requirement and identifying potential components such as microcontrollers and motors. These tasks were slightly out of scope for the last phase, we need to narrow in the design before these could be completed.
  - I also mentioned I would update the risk management. I ended up working more on the documentation for the morphological chart and concept selection chart. Someone else took ownership of the risk management documentation.

**Team level goal for next phase**

- Preliminary bill of materials
- Prototypes of paper securing system, gripper, and belt system.
- Test plans written.

- Subsystem drawings
- Subsystem flowcharts
- Well written documentation, up-to-date Gantt chart and risk management.

**What do I plan on doing to ensure that my team has a successful review at the end of the next phase?**

1. Create preliminary BOM template (2 hours, 3/23)
2. Determine ordering procedure with the team – how will team let me know what should get ordered through PICS (2 hours, 3/25)
3. Determine power requirements and create battery/power management block diagram. Can be estimated and generic block diagram can be created. Final calculations cannot be completed until components are sourced (3 hours, 3/30)
4. Determine which schematic and PCB software we will use as a team (2 hours, 3/25) with Dylan, Andrew, and David
5. Design power distribution schematic (4 hours, 4/1)
6. Identify potential components, such as microcontrollers, motors, and input devices with Dylan, Andrew, and David. Cannot be completed until prototyping is completed (4 hours, 3/30)

**What is standing in my way of meeting my next phase goals?**

We need to fine tune some of the systems, such as the belt system to move the marker from location to location and the gripper action to hold the tool. This will allow us to be able to source electrical components. Then I can complete power calculations and schematics.