Team: P20652   Engineer: Amiee Jackson

What were the outcomes of the prior phase?

1. What did I plan to do?
    a. Lead in-depth revision of CRs and ERs.
    b. Read collected research papers on related topics.
    c. Update/contribute to cement mix benchmarking.
    d. Talk to Chris Fisher and/or Mike Buffalin regarding space.
    e. Talk to Teresa Wilcott (CET lab) regarding testing.
    f. Research cement strength testing standards.
2. What did I actually do?
    a. Completed in-depth revision of CRs and ERs
    b. Did not read as in-depth as hoped
    c. Updated/contributed to cement mix benchmarking
    d. I didn't talk to people regarding space, but other team members did
    e. I didn't talk to Teresa, but other team members did
    f. Researched cement strength testing standards
    g. Contributed in original versions of morphological and Pugh charts
    h. Contributed in final version of functional decomposition
3. What did I learn? How were plan and reality different?
    a. I learned that it's easy to burn out on a task when re-doing it over and over again.
    b. It's also important to clearly communicate the different expectations/visions that people in a group have for the end result of a task, and standardize or compromise on what an acceptable outcome is.
    c. I found that my motives are more for using forms as a tool, i.e. something to use to generate value rather than something to refine and nitpick. However, others on the team saw the forms as the end product of the whole phase, and thus had more stamina in revising them multiple times.
    d. Originally I saw some tasks that needed done that fit better into other teammate's roles (i.e. communicator reached out to Teresa and Chris). Through this I learned that the point of a team is for each person to do their own role well and I ought not be so concerned with doing everyone else's role. Rather, if I see something that needs doing and fits well into someone else's role, it's likely appropriate to mention it to them.
    e. Overall I think the MSD standards are fairly subjective due to the impossibility of strictly standardizing for such a wide variety of projects. I found that anytime I ask for feedback or advice (specifically from guides), there is always advice given, although it may not be the most relevant to my specific project. Therefore I should not approach the guides with the expectation to ever get an "all good" response, and at some point the diminishing rate of return on my time and the

quality of work means that it's no longer valuable to continue spending time on some tasks.

Team level goal for next phase

Complete, document, and prototype subsystem design (rev 1). Further revisions are stretch goals. Design includes mechanical/electrical components, baseline mixture ratios and mixing procedures, software workflow, firmware and microcontroller selection.

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

1. Each team member should estimate 5-10 specific tasks that he or she will complete.
    a. Proof of concept for nozzle force generation mechanism
    b. Feasibility analysis for curing time of specimens
    c. Refine test plans for requirements
        i. Specifically refine concrete mix test plans→ tensile test
    d. Mis-use cases of system
    e. Reach out to Lund University for potential collaboration or help
    f. Investigate use of biochar instead of fly ash in concrete mix
2. When will each task take place? Does sequencing matter?
    a. Ideal sequence: e/f, b, c, a, d
3. Estimate the amount of time each task will take – ensure that you are not committing yourself to do 80 hours of critical-path work alone during the next three weeks.
    a. 3 hrs
    b. 4 hrs
    c. 3 hrs
    d. 2 hrs
    e. 15 min
    f. 1 hr
4. How do other team member tasks impact my task completion, and vice-versa?
    a. Maybe Nick would be a better person to reach out to Lund?
    b. Maybe Chad would be a better person to investigate biochar?
    c. Test plans are interdependent to the system

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

Time management, understanding personal and team expectations