Team: P20652 Engineer: Chad tenPas

What were the outcomes of the prior phase?

1. **What did I plan to do?**
    a. Lead Concrete mix testing - test several different mix ratios of quikrete to establish baseline.(This morning[9/21/19], 2-3hr)
    b. Support team members as best as possible.(All the time, All the team mates
    c. Meet with ME team (Nick & Amiee) prior to meetings so the ME team has better grasp during meetings(~1hr prior to each meeting, with Amiee and Nick)
    d. Review purchaser's responsibility to ensure acquisition of supplies/materials are viable (30-60min, 9/22 or 9/23, I'm all alone on this one)
    e. Research additives to reduce the amount water density and cement density stratification during extrusion (1-2 hours, week of 23rd, w/ Nick-Amiee-Alexander Pegot Oglier).

2. **What did I actually do?**

    a. Performed concrete mix. Found that research is needed.
    b. Tried to support other team mates – I don't feel I can measure this
    c. Met once with ME team before hand – should do more frequently
    d. Reviewed purchaser's guidelines.
    e. Researched mixture ratios - found 2 different mixtures to try.
    f. Sourced possible donor for admixtures and aggregate
    g. Acquired 5 test cylinder molds
    h. Opened dialogue with Lois Furioso at DOT for potential vendor sources and mixture aid.

3. **What did I learn? How were plan and reality different?**

    I ended up doing several things (mixture related) that I did not plan for.

Getting people to respond to me has proven difficult. Our main source of concrete is a Donor from Manitou Concrete.

I had less planned then needed done.

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. Start designing different nozzles to be 3D printed.
   b. Chase down leads on supply donations (Manitou & Lois @ DOT)
   c. Investigate Biochar as a replacement for fly ash (already asked Lois)
   d. Order 5 buckets w/ lids
   e. Order dust masks
   f. Order gloves
   g. Order mortar mix
   h. Find another source for concrete and admixtures
   i. Source potential augers that we could design extruder head out of.
   j. Generate test plan for developing mixture.
   k. Bill of Materials (initialize)

1. **When will each task take place? Does sequencing matter?**
   IDEAL: k → b / g → j / h → a / c / d / e / f / i

1. **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 – 4 hours
   b. 30 minutes per phone call & group update. (estimate needing to make 5 phone calls) – 2.5 hours
   c. ~ 1 hour
   d. 0.5 hours
   e. 0.5 hours
   f. 0.5 hours
   g. 0.5 hours
   h. 1 – 2 hours
   i. 1 – 1.5 hours
   j. 0.5 – 2 hours
   k. 0.5 – 1 hours

1. **How do other team member tasks impact my task completion, and vice-versa?**
   a. Collaborate with other ME's & Alex P.
   b. Recruit help from team communicator
   c. Recruit Mixture members
   d. N/A
   e. N/A

f. N/A
g. N/A
h. Anyone want to help?
i. Mechanical team & Alex P.
j. Project managers, Other's working on test plans.
k. I need people to send me parts/items that are needed to fulfill this.

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

Time constraints, team unity, points of contact, purchasing hurdles – such as RIT not supporting the purchase (EBAY)