**Technical Engineer’s progress report: \*\*\***

To: Alisha Chan

From: \*\*\*, Technical Engineer of Sany

Date: Oct 4, 2020

Subject: Progress Report the need for floor-cleaning robots to reduce the workload of housekeeping

**Overview**

On Sep 4, 2020 our group chose to tackle the benefit of having floor-cleaning robots at home to reduce Hongkongers’ workload of housekeeping in the upcoming presentation scheduled for 11 of October. Our work is divided into five phases1 and it is expected to finish before 11 of October.

**Work completed**

**Phase 1: Preparatory work**

**Communications setup (Sep 4)**

In order to communicate smoothly and conveniently with my groupmates, we have decided to choose Discord and WhatsApp for real time communication and scheduling group meetings. Lastly, we have set up a shared Google Document for editing the documents simultaneously.

**Topic research and choice (Sep 5 to Sep 8)**

Looking at the current situation in Hong Kong, the average work hour per week is about 44.3 hours (Research Office Information Services Division Legislative Council Secretariat,2019) 2. People would like to take a break after working for the whole day, instead of housekeeping as it would consume time and energy. It will be beneficial if we made a robot to reduce their housekeeping workload.

**Workload Allocation (Sep 10)**

After discussions, we have chosen our most familiar and suitable positions by our own.

**Phase 2: Background research** **on the limitations of the technology**

After finishing the background research, I noticed this technology has many technical difficulties such as the robot would have difficulties on cleaning stairs (Hindy, 2020)3, the battery life of the robot was not long enough (Hitchings, 2009)4, the robot failed to return to its initial position. We will try to overcome those problems with other information and data we searched.

**Work in progress**

**Phase 3: Regular group meeting (Sep 11 - Sep 30)**

We usually have at least one meeting per week which is on Saturday via Discord. During the meeting, we brainstormed the ideas together, allocated the work and discussed the category of information for each member to search for.

The expected date of finishing all the meetings is by Sep 30.

**Phase 4: Preparatory for the presentation and the Q&A section (Sep 25 - Oct 9)**

We will have a presentation with the audiences on the 11 October with each member presenting for five minutes. I will present the technical difficulties of the floor-cleaning robots, and how we overcome it. I will also present how we ideate and improve our initial design.

After that, there will be a Q&A section. I will try to answer the questions from the audiences with information we researched.

The expected date of finishing the preparation is by Oct 9.

**Future tasks**

**Phase 5: Final Rehearsal for the presentation (Oct 9 - Oct 11)**

We expected all work will be done on time with no issues. Oct 9 to Oct 11 will be the period for us to have the final rehearsal via Discord.

**Conclusion**

The tasks we have done so far have no issues and delays. If there are no accidents, we expect the presentation can be held as scheduled.

**Appendix**

1The summary of our work and their status:

|  |  |  |  |
| --- | --- | --- | --- |
| Phase | Work summary | Status | Timelines |
| 1 | Preparatory work | Work Completed | 4 Sep 2020-  11 Sep 2020 |
| 2 | Background research | Work Completed | 12 Sep 2020-  23 Sep 2020 |
| 3 | Regular group meeting | Work in progress | 11 Sep 2020-  30 Sep 2020\* |
| 4 | Preparatory for the presentation and the Q&A section | Work in progress | 25 Sep 2020\* -  9 Oct 2020\* |
| 5 | Rehearsal | Work to be done in the future | 9 Oct 2020\* -  11 Oct 2020\* |

\*expected date

2Research Office Information Services Division Legislative Council Secretariat. (2019, November 8). Working hours in Hong Kong. Legislative Council Secretariat Statistical Highlights. <https://www.legco.gov.hk/research-publications/english/1920issh06-working-hours-in-hong-kong-20191108-e.pdf>

3Hindy, J. (2020, June 1). Robot vacuum cleaners — what are they and which should you buy? Android Authority. <https://www.androidauthority.com/robot-vacuum-cleaners-980033/>

4Hitchings, T. (2009, September 27). Disadvantages of a Robot Cleaner. EzineArticles.Com. <https://ezinearticles.com/?Disadvantages-of-a-Robot-Cleaner&id=2992952>