# **GNG1103**

University of Ottawa: Faculty of Engineering

**Project Deliverable E: Project Plan and Cost Estimate** 

Sunday, February 28, 2021

**Group 4** 

Daniel Deiros Hernandez (300166389)

**Kayla Bariteau (300172515)** 

**Ammar Shakir (300173683)** 

Sydney Vanderburg (300185690)

#### Abstract

In the previous deliverable, the group created a design, and a combination of our plans was chosen. In this deliverable, team members devised a project plan to implement our strategy. Team members are to aid in the accomplishment of the deliverables listed in the project plan table. Also, risk assessment and contingency plans were created such that issues that may arise will be addressed quickly and effectively. A bill of materials was established, and it was determined that the final cost is free, or \$0.00 CAD.

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#### Introduction

The group members individually designed their AR application concepts in the previous deliverable, sorting recyclable materials. Using these designs, the group collaborated to create an ideal application that would appease every member. Designs were made according to the design criteria, and the group design was benchmarked against other competitors to ensure it would be a contender on the market. The purpose of this deliverable is to devise a plan of attack for the remainder of the project. This project schedule will be followed to ensure the completion of the application. The group will perform a risk assessment and contingency plans to avoid any issues that may arise. Furthermore, a bill of materials will be created and assessed to ensure that the project is under budget.

## **Project Plan and Schedule**

Tasks were assigned with enough time dependencies to make up for any issues during the functions. Dependencies for tasks were chosen based on previous tasks that may affect other tasks' starting or completion. The deliverable owner is the person/people responsible for working and submitting the deliverable.

| Number | Task  | Dependencies | Owner    | Duration  | <b>Due Date</b>   |
|--------|---|--------------|----------|-----------|-------------------|
| 1      | Deliverable E:<br>Project Schedule<br>and Cost                      | None         | Everyone | Milestone | Feb 28, 2021      |
| 2      | Research and<br>Development of<br>Unity                             | None         | Everyone | 7 days    | March 7,<br>2021  |
| 3      | Deliverable F:<br>Prototype 1 and<br>Customer Feedback              | None         | Everyone | 7 days    | March 7,<br>2021  |
| 4      | Client Meeting 3  | #2 and #3    | Everyone | 12 days   | March 12,<br>2021 |
| 5      | Client Feedback<br>and Iterative<br>Prototyping for<br>Prototype II | None         | Everyone | 14 days   | March 14,<br>2021 |
| 6      | Deliverable G:<br>Prototype II and<br>Customer Feedback             | None         | Everyone | 14 days   | March 14,<br>2021 |

| 7  | Iterative<br>Prototyping for<br>Prototype III            | #6   | Everyone | 28 days | March 28,<br>2021 |
|----|--|------|----------|---------|-------------------|
| 8  | Deliverable H:<br>Prototype III and<br>Customer Feedback | None | Everyone | 28 days | March 28,<br>2021 |
| 9  | Deliverable I:<br>Design Day                             | None | Everyone | 38 days | April 8, 2021     |
| 10 | Deliverable J:<br>Project<br>Presentations               | None | Everyone | 38 days | April 8, 2021     |
| 11 | Deliverable K: User<br>Guide                             | None | Everyone | 41 days | April 11,<br>2021 |

∝ Shared 🖹 ···

Table (1) Project Plan and Schedule

14-20 21-27 Conclusion • Kayla B. +1 Client Presentation • Daniel D. +3 Bill of Materials • Sydney V. Conclusion • Kayla B. Introduction • Daniel D. Project Plan and Schedule • Kayla B. +1 Risk Assessment and Contingency Plans • Ammar S. Prototype I and Customer Feedback • Sydney V. +3 Research and Development of Unity • Kayla B. +3 Individual Research ch • Daniel D. +3 Build Prototype • Kayla B. +3 Client Meeting 3 • Kayla B. +3 → J: Final Project Presentation • Daniel D. +3 K: Archive/ User Manual • Kayla B. +3 H: Prototype III and Customer Feedback • Sydn l: Design Day • Kayla

Figure 1.1. Gantt Chart for Project Deliverables



*Figure 1.2.* List of Project Deliverables

### **Risk Assessment and Contingency Plans**

This section of the document will talk about all the main risks that can affect the project. The table also considers the probability as well as the impact of each risk. The probability and result will be in the range of very high - the most significant impact or the highest probability - to very low - the lowest chance of happening or the least impact. There is a contingency plan for every risk that will be used if any of these risks occur.

| Risks   | Probability | Impact    | Contingency Plan  |
|---|-------------|-----------|---|
| Issues with Code not working/not compiling                  | Very High   | Moderate  | Use online resources and ask people with experience to help the team correct the errors   |
| Losing All<br>Data/Progress                                 | Low         | Very High | 1 of the team members will back up files locally  |
| Schedule conflicts of<br>team members -<br>University-Based | High        | High      | Team Members will have to plan their schedules carefully, and any large conflicts such as a midterm should be brought up to all team members. |
| Internal Group<br>Conflicts                                 | Very Low    | Very High | The team will use the conflict solving procedure learned in class to resolve disputes and work together.                                      |

| Members Not finishing tasks                                | Low | High      | Team members will be reminded of their responsibilities, and if they are still not doing the correct work, action will be taken against them, and the work will be divided among the other team members. |
|--|-----|-----------|--|
| Issues With code IDE                                       | Low | Very High | Have a backup IDE  |
| Restriction in Meetings caused by virtual meeting software | Low | Very High | Have other means of communication and coordinate different ways of having team meetings  |

Table (2) Risk Assessment and Contingencies

### **Bill of Materials**

| Part # | Part<br>Name | Description   | Quantity | Unit Cost | Cost (USD) | Cost (CAD) |
|--------|--------------|---|----------|-----------|------------|------------|
| 1      | Unity        | Software development platform                                 | 1        | Free      | Free       | Free       |
| 2      | Vuforia      | Augmented reality software development kit for mobile devices | 1        | Free      | Free       | Free       |
|        | Total        |   |          |           | \$0.00 USD | \$0.00 CAD |

Table (3) Bill of materials and costs

#### Conclusion

In this deliverable, the project plan and schedule were widely discussed among team members and organized for the project's remainder. Risk assessment and contingency planning were also discussed and planned for. A bill of materials was also created to estimate the project cost, currently at \$0.00 CAD. Currently, the project is planned out, and with all things considered, will be completed for the assignment due date.