

Project Deliverable C: **Design Criteria and Target Specifications**

GNG 1103 – Engineering Design

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October 8, 2023

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1. Introduction

In this document we will firstly define a list of prioritized design criteria for our project with Mines Action Canada. This identifies functional and nonfunctional restraints, to ensure we are focusing on what is truly important to the client. Using this list we will then perform technical benchmarking to find comparable products and experiences that already somewhat fit our criteria. By identifying similar products to ours we can pull ideas we like out and ideate much faster. We will also make any necessary changes to our user benchmarking as needed.

Following up, we will discuss and determine target specifications that we can use to measure not only the success of the design but also to ensure we have metrics by which we can know we are heading in the right direction with our process. These target specifications will be numerical specifications and aim to be clear and concise when it comes time to evaluate overall success. Lastly we will reflect on how the meeting with the client impacted our development of the design and what updates we needed to make to our initial proposal from deliverable B.

2. List Of Prioritized Design Criteria

With our list of needs we created in Deliverable B, the table below will specify whether each need is functional or non-functional, importance, and constraints they apply to the final product.

Ranking of importance	Specific Need	Functional/Non Functional	Design Criteria
1	Must be realistic to desired situation	Non-functional Constraint	Showcases cityscape adapted to autonomous weapons
2	Has important message	Functional	Showcase project theme- immorality of AI weapons
3	Must immerse user in the story	Non-functional	Showcase project theme- immorality of AI weapons
4	Must be accessible to large audience	Functional Constraint	Maximum area of use (m ²) Handicap friendly Easy to use
5	Must be non-violent	Non-functional Constraint	Violence prohibited Safety and mental

			health awareness
6	Must be interactive	Functional	Unique situations
7	Must be created using Unity	Functional	Viewing medium (VR) and software
8	Must be 30-60s long	Non-functional Constraint	Duration of project (sec)
9	Experience is first person POV	Functional Constraint	Video design
10	Must not showcase robots	Functional	Design and Imagery

3. Technical & User Benchmarking

Specifications	Importance	Product 1	Product 2	Product 3
Product Name	N/A	Name 1	Name 2	Name 3
Company	N/A	Name 1	Name 2	Name 3
Cost	3	Free	Free	Free
Duration	4	60 seconds	45 seconds	60 seconds
Graphics	4	Simplistic	Simple	Stylized
Camera Perspective (degrees)	3	180	360	360
Camera Movement	3	Rotating Camera	Follows Player	Dynamic
Time Perception	4	120 fps	60 fps	60 fps

4. Target Specifications

Metric	Value	Units	Verification Method
Experience time	60	Seconds	Testing
Set up time	2	min	Testing
File size	1	GB	Testing
Video Resolution	1080p	Pixels	Testing
Cost	\$50	Dollars	Recording
Movement Space	5	m ²	Testing
Number of buttons	5	#	Testing

5. Reflection On Client Meeting Impact Of Development

The meeting with the client proved to be very insightful and helpful to the overall direction to our design criteria and specification. The client managed to concisely outline exactly what they were looking for and add their own pointers for where they would like to see ideas expanded upon. They specifically provided great input on what the overall impression the user should be left with is, through that we were able to alter our initial needs from deliverable B. The meeting certainly shifted certain priorities and new ideas came about from it.

The one that had the most change was setting and shock factor, where we learned that the setting is not as important as we initially thought and that they are not looking for a gruesome display of violence but rather a more grounded view on what everyday life would look like. Our initial thought was that ranking the importance of setting lower than other items may be a mistake, however after further clarification with the client and asking questions we understood that they are not looking for a horror piece but something that is easily digestible and still gets the point across when shown to legislators and politicians.

6. Conclusion

All in all, the clear specifications given by our detailed list of needs and concerns are completed and ready to become the building blocks for the next stage of our process. We want to produce a detailed VR product for our client, and the specific needs that are important to them were showcased above, ensuring they are included and clearly highlighted in our final product. We are excited to meet with our client for a second time to clear up any lingering questions we may have.