

# Project Deliverable B: **Need Identification and Problem Statement**

## GNG 1103 – Engineering Design

Faculty of Engineering – University of Ottawa

### **Objective:**

Empathize with your client and truly understand their problems, limitations, frustrations, desires, and needs. Translate their statements into a list of interpreted needs. Then, organize and prioritize their needs and formulate a problem statement. Reflect this information as a team to determine whether you are actually “solving the right problem”.

### **Instructions:**

Teams will put together a briefing (**2-page max**) regarding their **clients’ needs**. This will be based on their first meeting with the clients.

1. This briefing should contain many **needs**, which will be identified by **empathizing with the clients**. Feel free to speak to other potential clients related to the project on your own and to look at other similar products on the market. This will help strengthen your results.
2. It is important to take the time to convert what the client is saying and/or doing into properly **interpreted need statements**.
3. Once a list of needs has been identified, organize these needs into similar **groups and prioritize them**, justifying what you do as you go along.
4. Once you are confident that your team has identified all of your clients’ needs, use them to formulate a **problem statement**, including all important aspects, while ensuring that it remains **short, specific and sexy**.
5. Remember to also **benchmark user perceptions** of similar products (i.e. user benchmarking) to make sure that you have a thorough understanding of the problem and related needs of the eventual and for other potential users.
  1. **Remember:** your client may not know or be able to put into words all the things that they want or need.
6. There may also be unknown information that needs to be clarified or defined (i.e. issues or questions that were not addressed in the initial client meeting). There may also be new issues or needs that are identified *after* that meeting too. These all need to be documented here and in the next deliverable, depending on when they are identified.

**Submission:** Each team (**only one person from each team**) must submit a PDF copy of this deliverable by uploading the file as an attachment into BrightSpace.

**Due Date:** See BrightSpace.

### ***Brainstorm from Client Meeting:***

- Instill a sense of worry
- Build an immersive environment that depicts the change by killer robots
- Not necessarily a bad environment, but a dangerous environment
- Show warning signs to the public that a given system is in use
- Autonomous weapons being banned preemptively
- Audience to feel a sense of fear, concern, hope, and motivation
- They want us to demonstrate the downstream effects of killer robots.
- Make it close to home
- 30 seconds to a minute
- Don't show the robot, let the mind create the fear
- Unique
- Interesting

### ***Benchmarking:***

- <https://www.stopkillerrobots.org/stop-killer-robots/facts-about-autonomous-weapons/#:~:text=Autonomy%20in%20weapons%20systems%20is,red%20ucing%20us%20to%20data%20points.>  
(Website)
- [https://www.youtube.com/watch?v=xUU8YHa\\_Cjg](https://www.youtube.com/watch?v=xUU8YHa_Cjg)  
(Documentary)

| Client Needs |          |   |  |
|--------------|----------|---|--|
| Question     | Priority | Client statements   | Interpreted Needs  |
| The use      | 2        | Instill a sense of worry and fear to motivate decision makers.      | Make it close to home                                    |
|              | 2        | Change weapons manufacturers and defense/security theorists minds.  | Predict and show the downstream effects of killer robots |
| The product  | 1        | Show the environment and how we adapt to killer robots.             | Build an immersive environment that captivates users     |
|              | 3        | Want to be memorable, create an impact on decision makers minds.    | Optimize the length of the video                         |
| Improvements | 1        | Make the video easy to follow and remember.                         | Keep it simple   |
|              | 2        | Let the viewer's mind imagine the problem to have a lasting effect. | Don't include the killer robots or show violence         |

**Priority Numbers:**

1. High importance
2. Medium importance
3. Least important

**Problem Statement:**

To produce a video that will captivate the attention of decision makers and governments, depicting the possible fallouts caused by autonomous killer robots in modern society.