

**Project Deliverable B: Problem Statement, and Needs Identification**

*GNG1103 [D03] – Professor David Knox*

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**Need Prioritization**

## **1. Introduction**

Team 13 (*Oscar Black*), had its first client meeting with JAMZ, after compiling a list of client statements, they developed a list of needs and prioritized. Team 13 then developed a problem statement in order to create a focus for their project:

*Design a compact, safe, and inexpensive parasitic companion module to the JAMZ delivery drone containing one or more of the assigned subsystem(s) for the purposes of accurate data collection to be received by the drones raspberry-pi.*

Based on the identified needs and problem statement the Group will be able to develop metrics, specifications, and benchmark similar products in the following deliverables.

## **2. Needs Identification and Prioritization**

The order of priority of the project needs was constructed using information provided by JAMZ staff, specifically by recording their needs and the amount of emphasis they placed on each specific need. The order of priority descends from 5 to 1, with 5 representing an item necessary for any use of the device whatsoever, and 1 representing a concern which, while relevant, is unlikely to have a significant impact on the desirability of the product. The needs are also divided into categories based on the general project segment that they fall under.

Categories of Priority in Ascending Order **1.2.3.4.5.**

<b>Needs</b>	<b>Additional Notes</b>	<b>Priority</b>
Price	- Performance of the module is more important than small savings in price, up to a budget of \$50.	2
----- <b>Compatibility</b> -----		
Compatibility	- Must be compatible with flight systems and the pre-existing micro controller .	4
Mounting System	- The module must be easily and reliably mounted to the drone.	4
Power Consumption	- The module should connect to a 5-volt power supply.	2
----- <b>Environmental</b> -----		
Temperature Resistance	- The module should function in the range of -5 to 25 degrees celsius	3
Water Resistance	- The module should have some degree of water resistance inorder to account for unforeseen circumstances.	1
----- <b>Data Collection</b> -----		
Data Consistency	- Data accuracy is less important than data consistency as the sensor can be calibrated if necessary.	4
Update Frequency	- The module should update its outgoing information on a frequent basis.	3
Data Accuracy	- The accuracy of the produced values is not of substantial importance so long as the direction of error is consistent.	2
----- <b>User Experience</b> -----		
Safety	- Does not pose any form of fire or other hazard	5
Ease of Use	- The module should operate with minimal outside effort during deliveries.	3
Aesthetics	- Prioritize performance and price over aesthetics as this is a working vehicle.	1

**Table 1: Need Prioritization**

### **3. Conclusion**

Following the first meeting with JAMZ Team 13, compiled a list of client demands and needs, they then prioritized these needs based on client statements. They then developed a problem statement in order to guide them in future deliverables. The needs and problem statement will guide the team in future deliverables. The team continued to update their Wrike project plan in order to keep them organized and on track.