

*This document reviews the priorities and needs for the client regarding a cleaning unit for hydroponic boards. It is accompanied by a problem statement that includes all important aspects and is benchmarked against current methods of board cleaning.*

**The numbers situated on the right of the following needs serve as a method of ranking, the lower numbers being more important than the higher ones.**

### **TOP PRIORITY :**

- The product must ensure time efficiency for the client: it should be automated. (1)
- Easy to use (users don't have much experience) (2)
- Clean all areas of the board (borders + corners) (3)
- Fits in the designated area for practical reasons (4)

### **OTHER NEEDS:**

#### **Board cleanliness:**

- After cleaning process, the boards must be visually clean (1)
- The number of times of cleaning should be reduced (3)
- Can clean boards in between uses (6)
- Can be able to dry the boards (7)
- There is a budget, but the more the product is automated, the more the client is willing to pay (8)

#### **Plants safety:**

- Chemically safe for the plants for better growth (2)
- Can work in a remote area (lack of material/blackout): no exceptions (4)
- Chemicals affecting the pH of the water under the plants could be avoided for efficiency (5)

### **PROBLEM STATEMENT:**

An easy-to-use product that promotes less time-consuming automation and user friendliness, ensures visual cleanliness while maintaining proper safety measurements for the plants.

### **USER PERCEPTIONS OF SIMILAR PRODUCTS (BENCHMARKING)**

To our knowledge, the users have been using products that are time and effort consuming: brushes, pressurized water etc...

On that note, it is important to remember that our product will be (almost fully) automated, which won't require manual brushing like the products mentioned above. Some Growcer facilities use chemicals to clean their boards, while our design won't. Our needs include a visual clean board, similar to their current level of cleanliness (or better ;) ).

To empathize better with users, we researched products that had similar objectives (which is to clean a soiled material). To that end, we found that gas pressure washers such as the **Briggs & Stratton 3000 PSI Gas Pressure Washer** had great reviews, with the size, ease of use and power standing out as the best features, and the cost (approx. \$799) standing out as an attribute that could use improvement.