

Technical/Product FAQs

- How much does it cost?
 - **Targeting a cost competitive with hand trimming, with an end cost of just \$20-\$30 per pound**
- When will it be ready?
 - **In Q4 2019 for production**
- How fast can it trim?
 - Compared to human
 - **Currently 1 times a human.**
 - **Production goal: 2x-3x human**
 - Compared to a tumbler machine
 - **This is like comparing apples to oranges because a machine trimmer requires additional labor before and after the trim due to it's semi-manual nature. Thus, we only compare apples to apples, such as hand trimming.**
- There is no way it is better than hand trimming- this sucks!
 - **We believe our solution is currently 90% as accurate as a human, with the potential of 97% accuracy as a result of the parent algorithm's current level.**
- How does it work?
 - **Machine learning-- specifically, supervised machine learning. 6,000 images of cannabis plants were programmed into the dataset to train the algorithm.**
- Why has it taken so long?
 - **The complex nature of robotics, and the development time of cutting edge machine-learning algorithms. Our product requires a significant development cycle. Additionally, we want to accomplish the task with as high of an efficiency and accuracy as possible when the robot is released to production.**
- Where are you in the process?
 - **We are currently beta-testing, with our first client scheduled to receive a unit in December.**
- Are there any similar products or competition?
 - **In parallel industries, such as strawberry harvesting, there are robotic solutions available. Currently, the only other solution, which is not fully automated like ours, are tumblers such as the 'Twister' and the 'GreenBroz'.**
- Is this in operation anywhere? If so, how is it doing?
 - **We are currently deploying to Revolutionary Clinics in Massachusetts. Operation is expected to begin in December.**
- What do growers have to say?
 - **Current reviewers of the trimmed product can rarely discern the difference between hand-trimmed and robot-trimmed flower.**
- What do consumers have to say?

- See above.
- How long have you been working on this project?
 - **Bloom was incorporated in April, 2016. The idea has been in progress since late 2015.**
- How many people you need to operate the ~~machine~~ **ROBOT**?
 - **One individual can operate up to 6 robots at a time.**
- Will you rent or lease this?
 - **Yes we do plan to rent and lease the equipment. Current pricing is not yet established.**
- We want one- how do I buy or lease one?
 - See above.
- Is this as fast as it will go?
 - **No-- we are expecting to increase speeds 2-3 times as fast as current testing.**
- How much can you load in?
 - **Currently, we expect the equipment to handle conveyors with 8-12 branch capacities.**
- Do you need special training to work it?
 - **Training for the Bloom system is minimal -- approximately 2-3 days of training is necessary to become a 'robot operator'**
- What happens if we buy it and it breaks?
 - **The system comes with a one-year warranty. Afterward, a service plan is available to keep the robots running 24 hours a day.**
- Will someone come to train staff and fix it it breaks?
 - **Yes, Bloom Automation has technicians available to make site-visits.**
- How long will one machine last?
 - **Each robot is built to last at least 5-8 years with appropriate maintenance.**
- What is our return on investment and how quick will we see it?
 - **Given a 6-robot team and one human operator, customer can expect to see a return on investment in under 12 months**
- What was the hardest part?
 - **Developing a proficient and instantaneous algorithm to segment and identify each part of the plant.**
- Do you have a patent?
 - **Yes, we are patent pending currently.**