

Bloom Automation Inc.

Robotics for the Cannabis Industry

2

THE PROBLEM & CURRENT SOLUTIONS

prim·i·tive

/ˈprimədɪv/ **adjective**

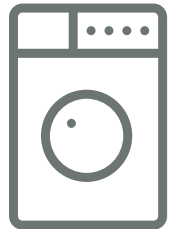
1. relating to, denoting, or preserving the character of an early stage in the evolutionary or historical development of something.



Trimming cannabis manually is the predominant method of defoliating cannabis plants after harvest.

\$150

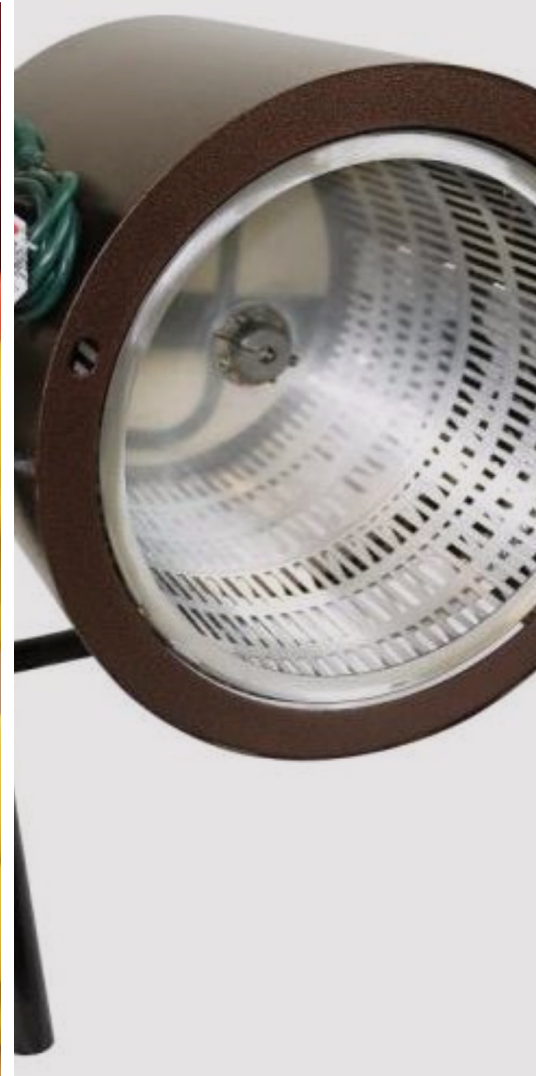
Average cost per pound to hand-trim.



Current 'Machine Trimmers' are no more sophisticated than washing machines. They operate by roughly tumbling cannabis flowers repeatedly.

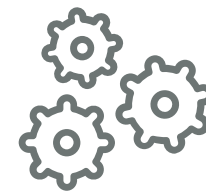
30%

Conservative estimate at product loss due to machine inaccuracy.



3

ROBOTIC TRIMMING

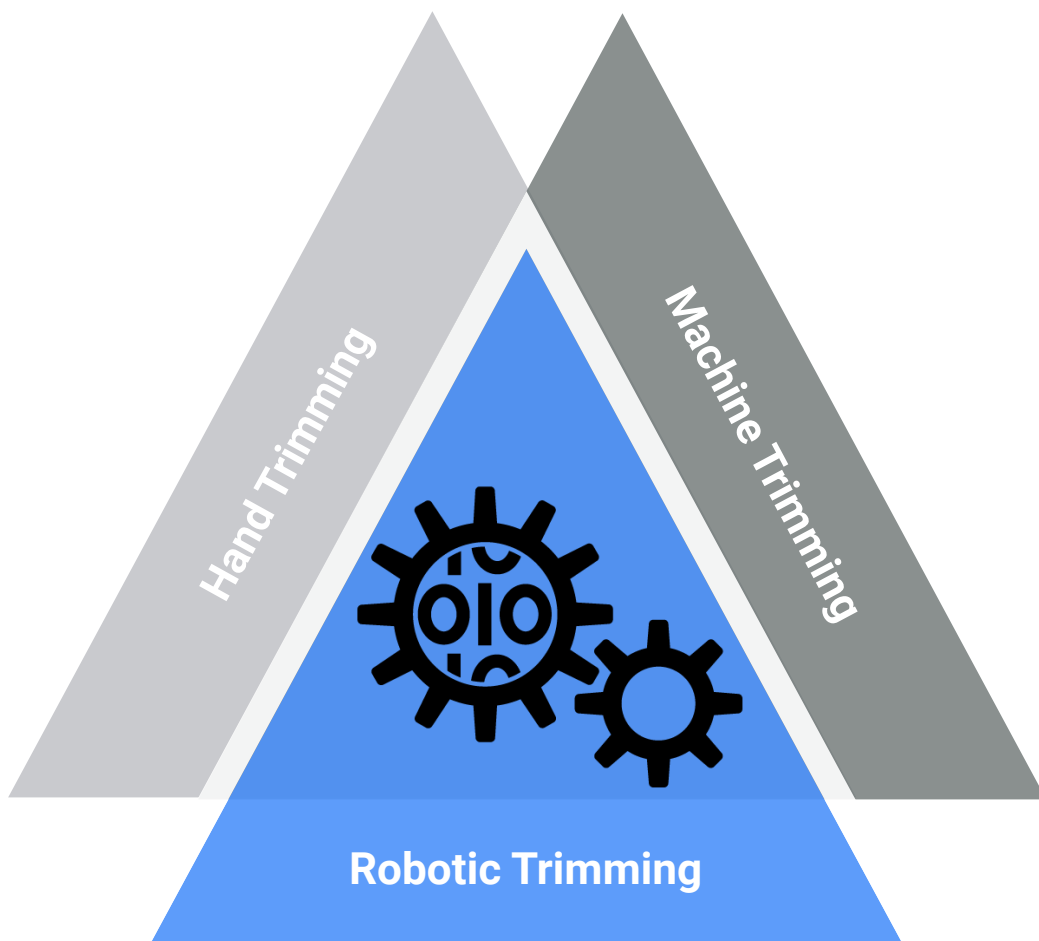


Hand Trimming*

- ⊕ Accurate, Close Trim
- ⊕ End-to-end Solution
- ⊖ Expensive
- ⊖ Labor Intensive

Machine Trimming*

- ⊕ Quick Trimming
- ⊕ Reduced Labor
- ⊖ Destructive to Product
- ⊖ Not Fully Automated
- ⊖ Inaccurate Trimming



Robotic Trimming

- ⊕ **Extremely Accurate, Close Trim**
- ⊕ **Fully Automated System**
- ⊕ **Quick Trimming**
- ⊕ **Minimal Labor Required**

*Hand trimming and machine trimming are the only current options on the market.



Increased Bottom Line for Cultivator

4

OUR TEAM



CEO | Director

Jon Gowa

Career in agricultural robotics and automation; patents issued for ag tech automation; contractor for **Boston Dynamics**.



CBO | Adam Gurwitz

Adam Gurwitz

20 Yrs experience in finance and financial products, start-up financing and marketing; managed funds from California to Brazil.



Senior Software Engineer

Paresh Bramhbhatt

A seasoned robotics engineer, experienced in advanced coding, **machine learning/AI and computer vision**.



Field Engineer

Sam Tordo

Experienced technician in **mechanical and electronic** assembly and service



Business Advisor

Mark Komanecy

Former **start-up executive** with hands on start-up leadership experience. Digital Lumens, simpleHome, Eragy



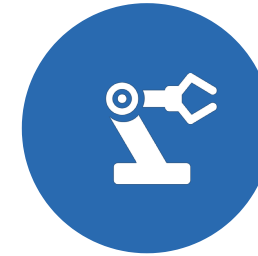
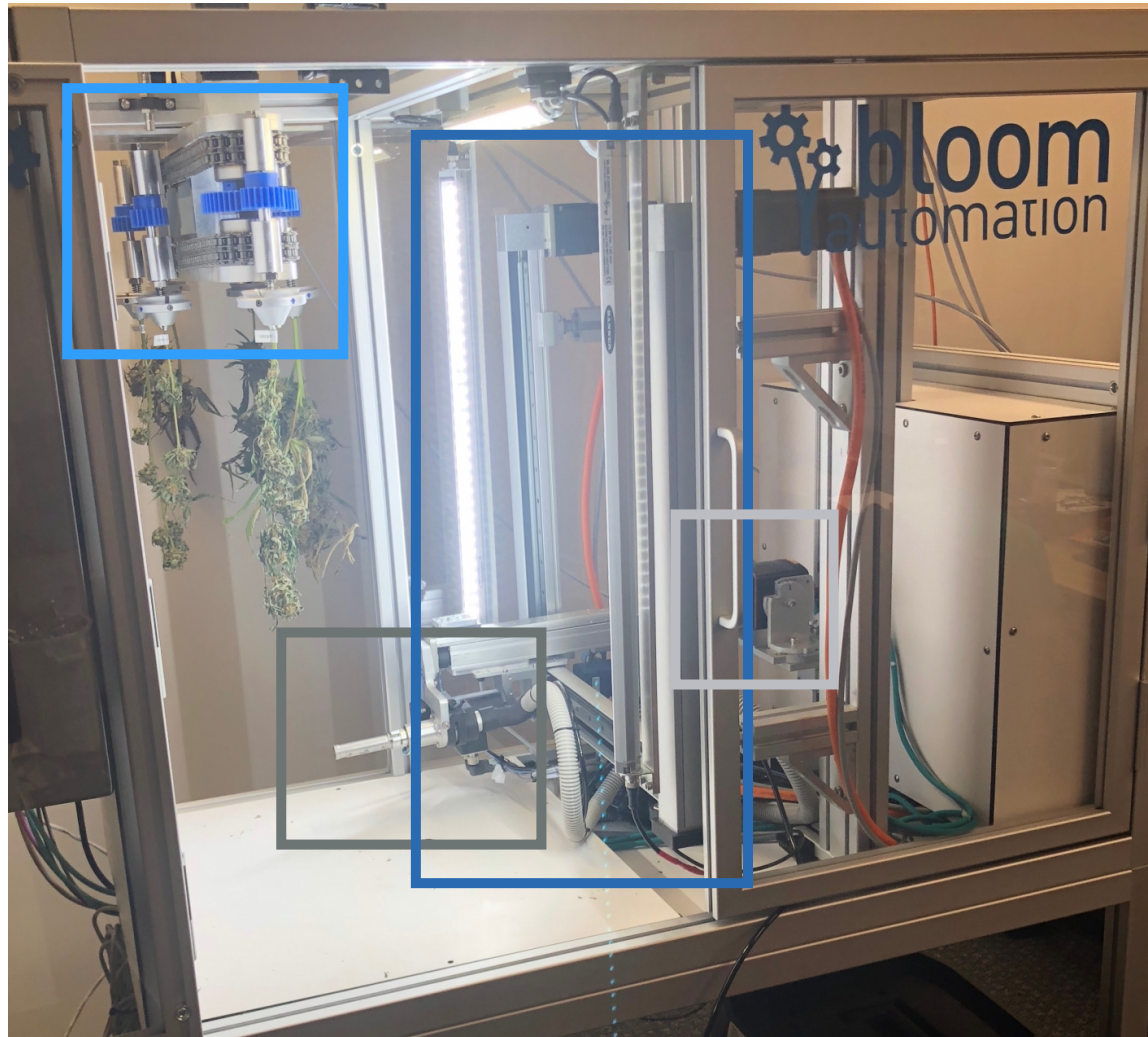
Technical Advisor

Markus Roggen

PhD in Chemistry and **career in cannabinoid research** and commercialization. CEO, Complex Biotech

5

OUR PRODUCT



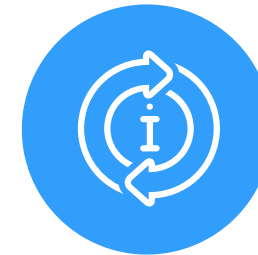
2x human
ROBOT SPEED

The robot will be capable of trimming approx 1lbs/hr of freshly harvested cannabis.



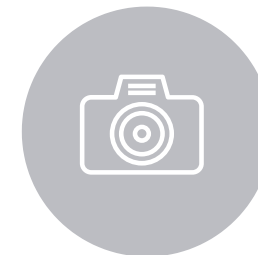
100 lbs
BLADE LIFE

Each proprietary 'reel' cutting blade will last a producer up to 100lbs before requiring replacement.



10 Branches
CONVEYOR
CAPACITY

Up to 10 branches may be loaded on a single conveyor at a time, freeing the operator for other work.



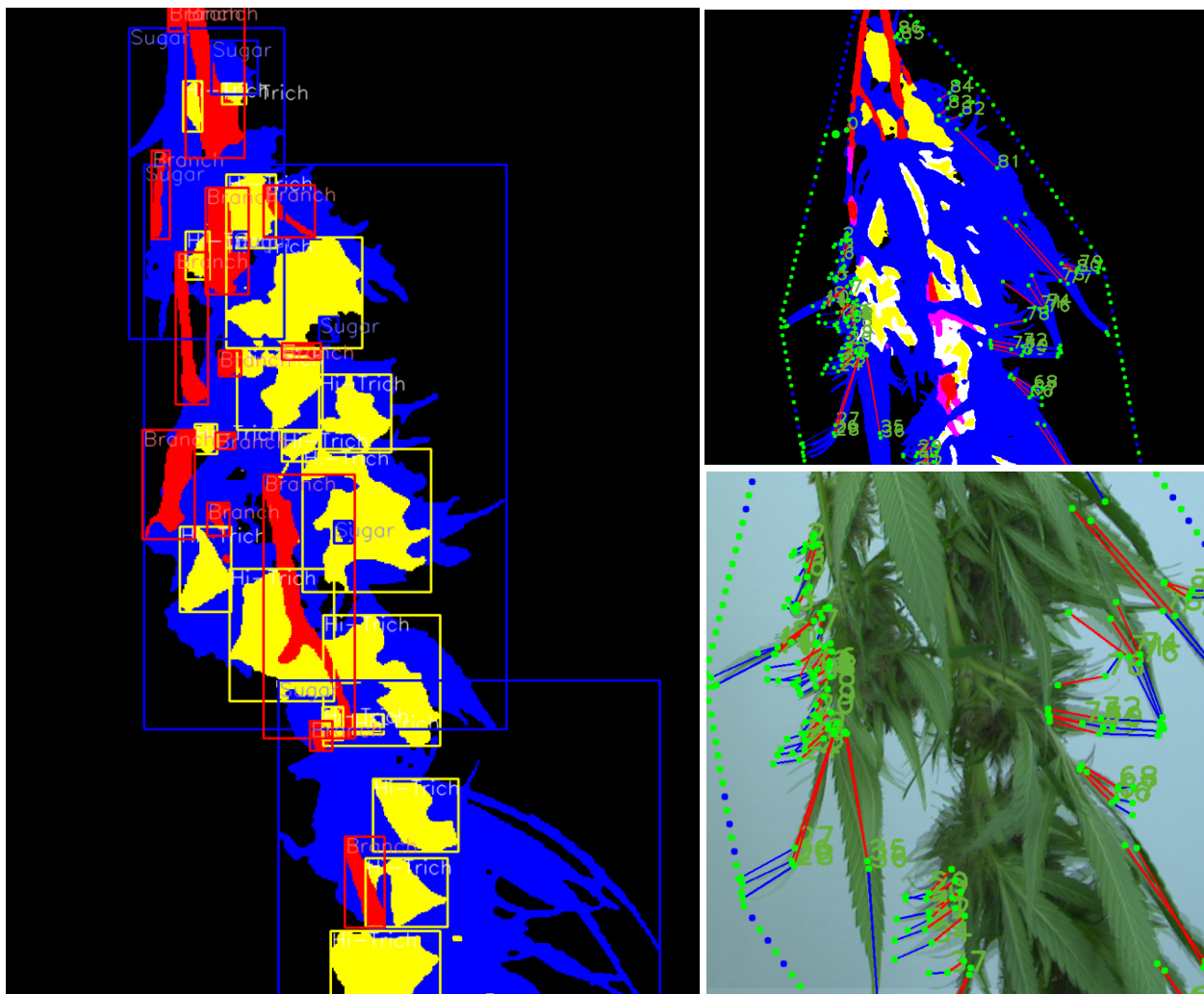
3D
CAMERA

A 3-dimensional 'depth sensor' is combined with a high resolution machine-vision camera.

The Bloom automated trimming system.

6

THE ALGORITHM

**Sugar Leaf**

Any leaf that has been detected is colored blue.

Flower

Flower and trichome-dense areas are plotted in yellow.

Branch

Detected branches and stems are outlined in red.

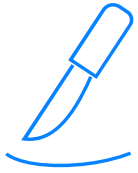
Vector Map

The end-result of the segmentation algorithm is a vector map, allowing the robot to precisely navigate the plant.





REVENUE STREAMS



Blade Replacement

Each blade cartridge lasts approximately 100lbs before necessitating a **\$200** replacement.



Unit Sales

The robot would be primarily utilized as a pay-per-pound service after the conclusion of Beta Testing.



Service

Any service outside of routine maintenance, or service for a customer out of warranty will be a la carte.

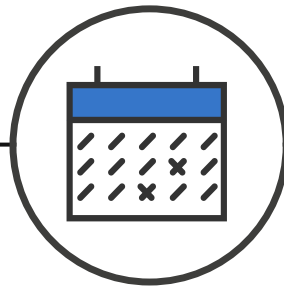


Updates

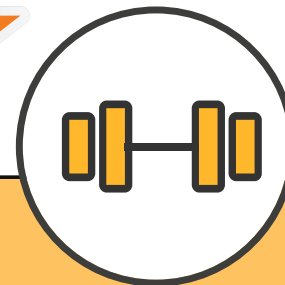
Software updates that are outside of the service window, or outside of the warranty window ranges from **\$50 - \$150** per robot.



Direct Sale
\$60,000



Leasing
\$2,000

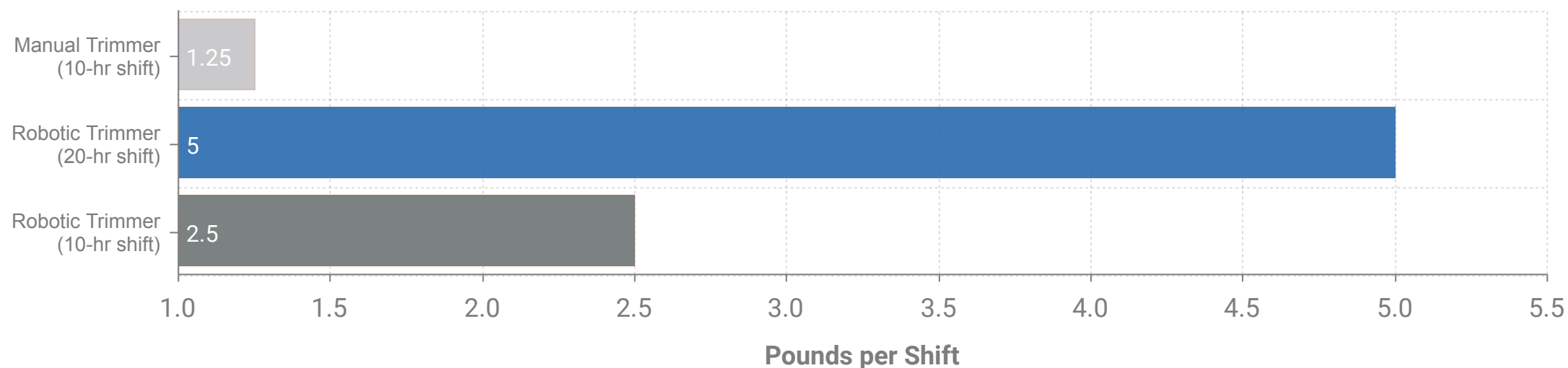


Pay Per Pound
\$75



Trim as a Service
\$100

PRIMITIVE VS. ROBOTIC TRIMMING



Premium Quality

Robotic trimming delivers the same premium quality, closely-trimmed product as does manual trimming.



Continuous Trimming

All Bloom Automation equipment is designed with a 99% up-time goal, and an MTBM (mean time between maintenance) of 650 hours.



Rapid ROI

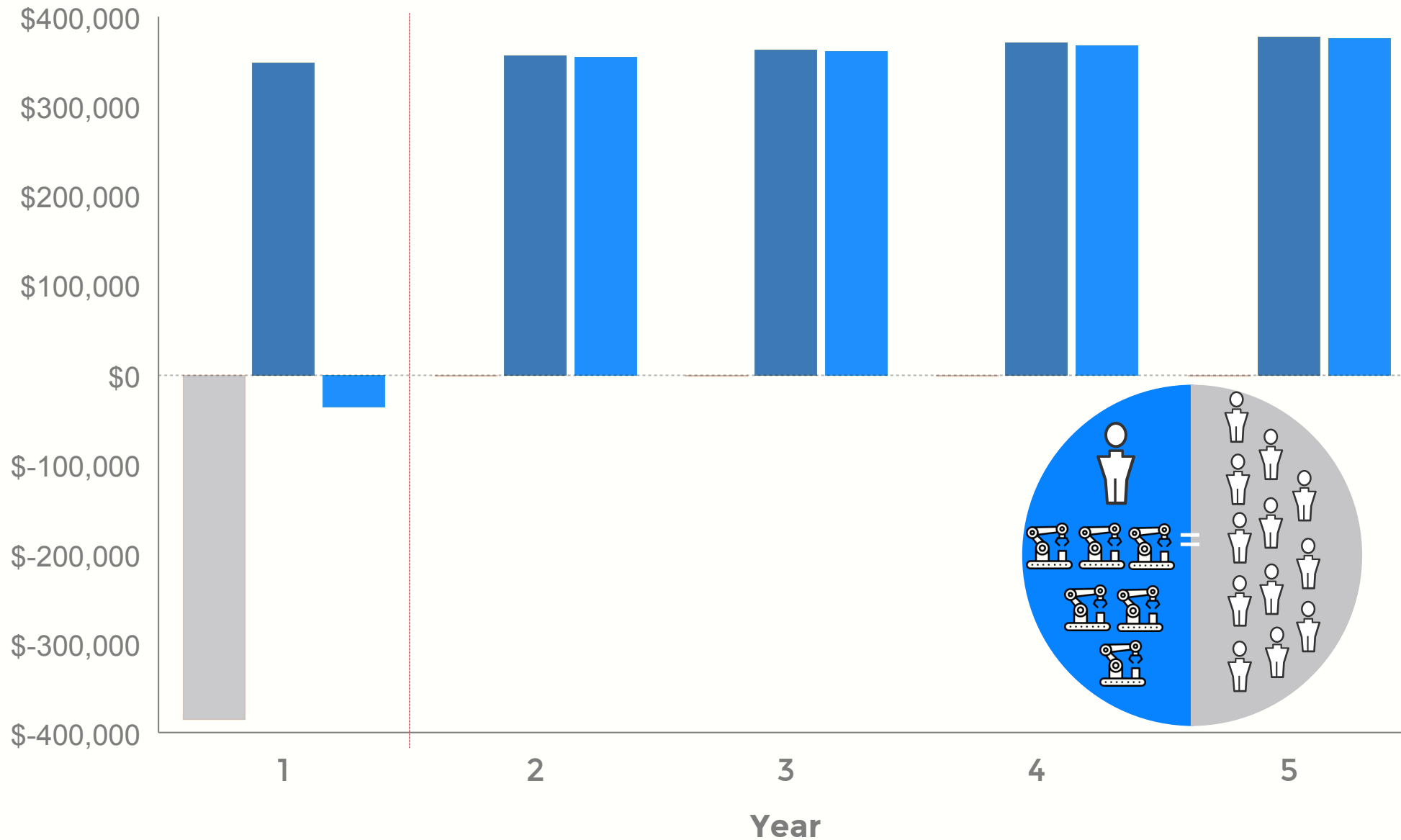
Increased efficiency and around-the-clock trimming allows for a rapid return after the deployment of Bloom equipment.



Compliance

Increased compliance with state and federal labor laws and regulations by reducing the dependence on illegal labor.

11 CLIENT EXPECTED ROI



Robot System Cost

Total cost of team of robots (approx. \$360,000).

Yearly Savings

Annual savings as a result of the utilization of automated trimmers.

Yearly Cash Flow

Total cash flows during and after robotic investment.



13

Months to Full Reimbursement

1.5

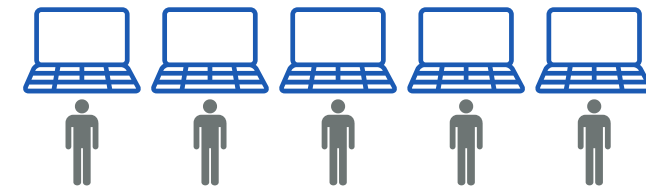
Cumulative Savings, Per 6-Robot Team (\$M USD)

Addressable Market

2018

\$300MAddressable US Trimming Market as of 2018¹10% of Addressable
Market Automated

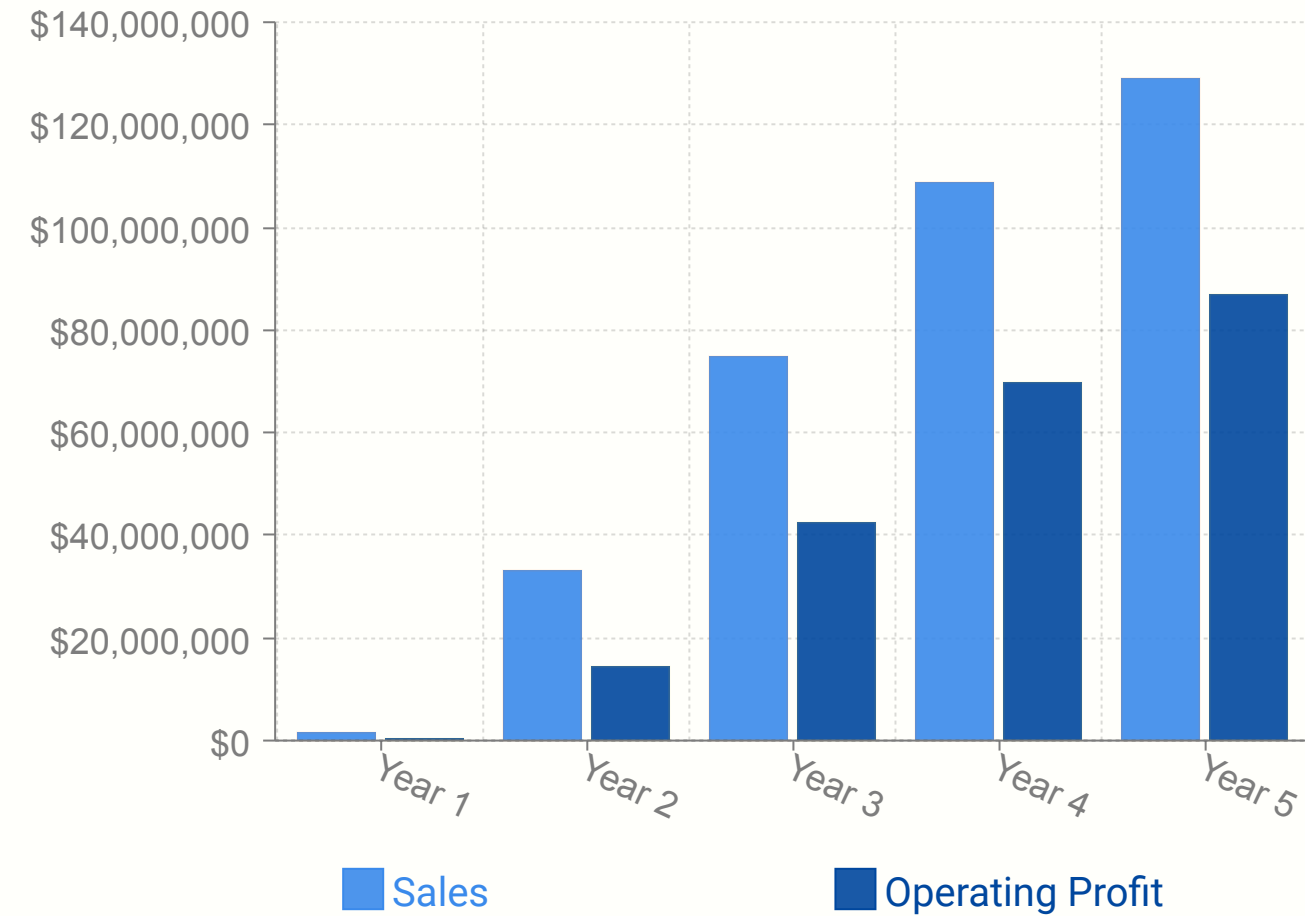
2022E

\$805MEstimated Total Addressable US Trimming
Market by 2022¹50% of Addressable
Market Automated

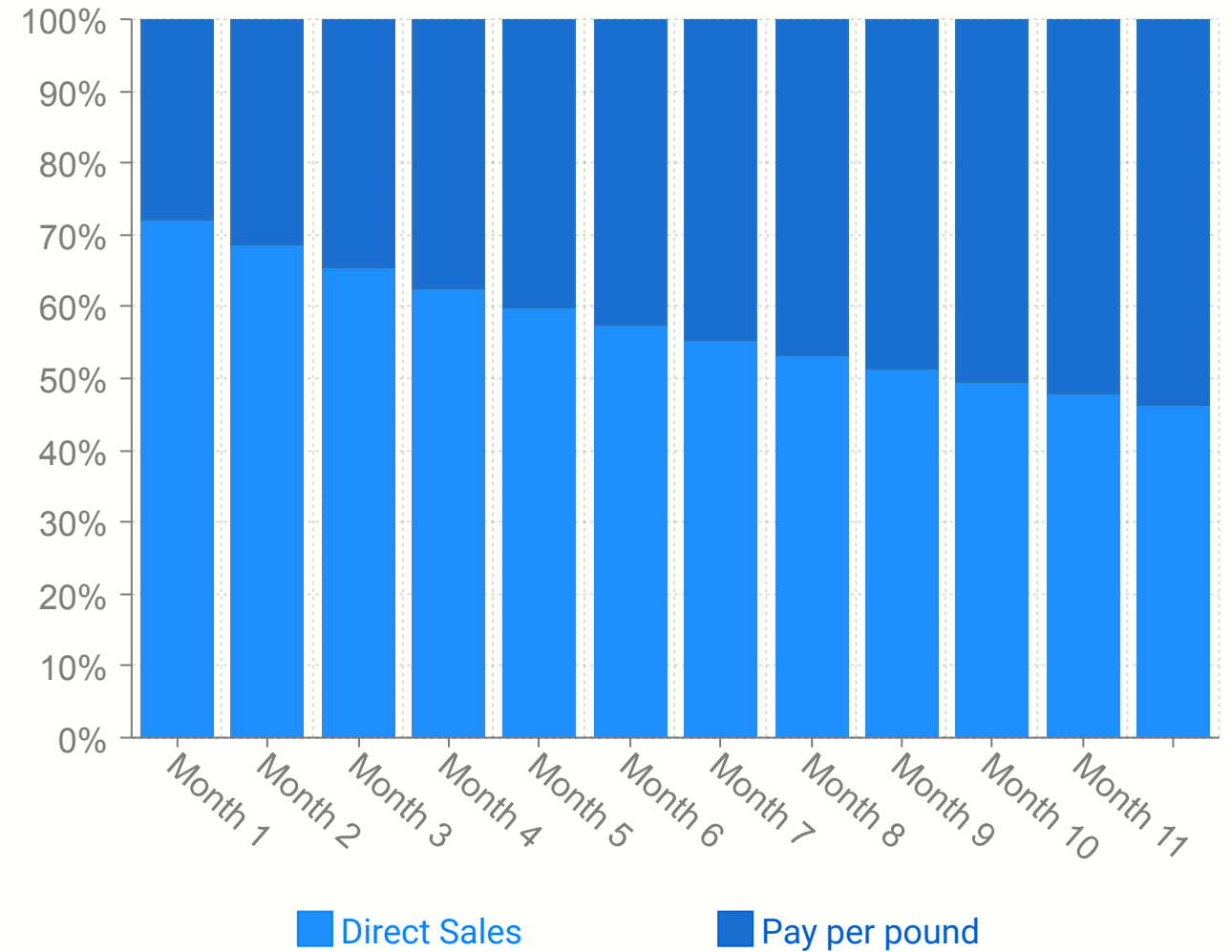
13

REVENUE

5-Year Revenue Projection



Revenue by Source



14

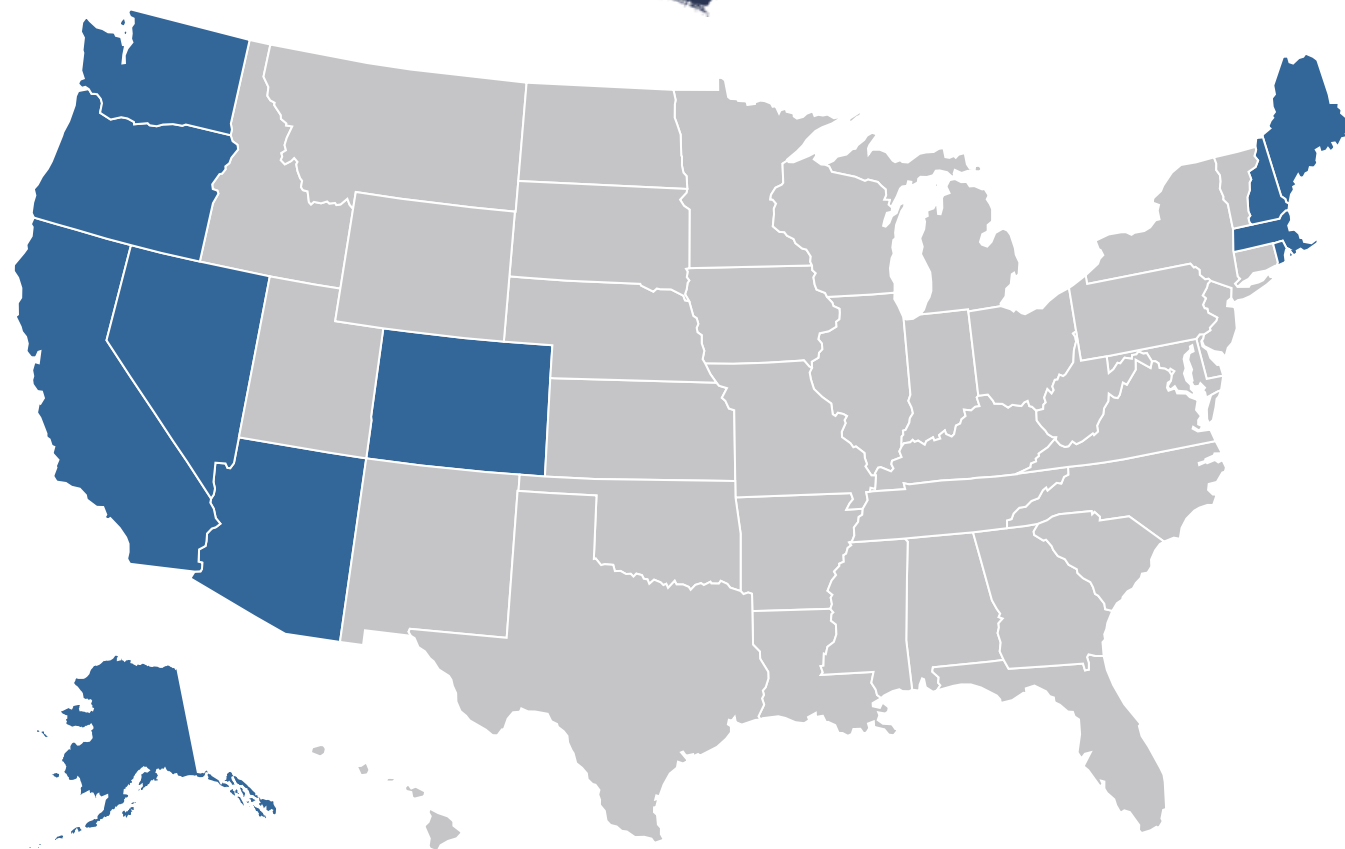
NORTH AMERICA BETA TESTING



REVOLUTIONARY
CLINICS

10+

Executed LOI
Agreements



HIBUDDY
ORGANICS

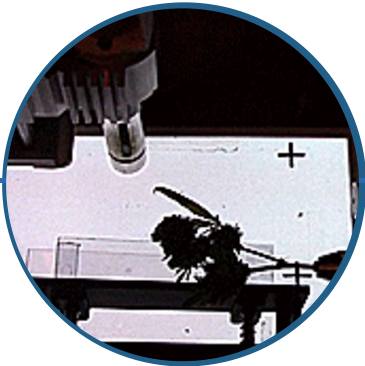
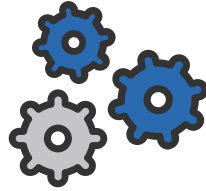


CORPORATE TIMELINE

2016

The idea for robotic trimming was born in late 2015, with a prototype sprouting in 2016.

Bloom Automation is incorporated in April, 2016.



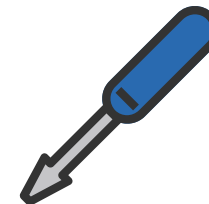
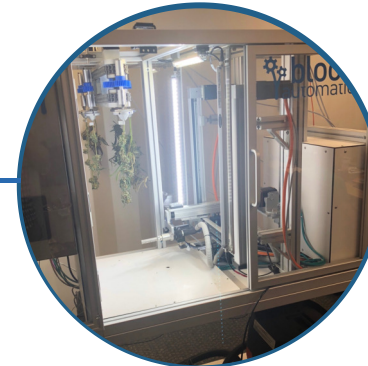
2017

Bloom raises its seed round and opens offices outside Boston, Mass. The algorithm is advanced to a machine learning scheme.



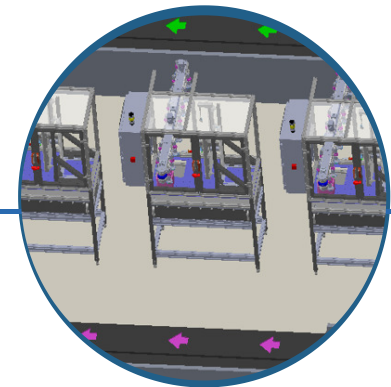
2018

Bloom completes the first client-bound unit, known as Beta #1. The system is fully industrialized and ready for cultivation use.



2019

The Beta unit is **field-tested at Revolutionary Clinics** and iterated until industrialized. The equipment is field tested at Revolutionary Clinics. Manufacturing and volume production beginning in 2020.



A LOOK BACK

Since presenting at Canna Angels in October, 2017, Bloom has grown in leaps and bounds.



Technology

There has been no greater leap than our advancement in the core technology, increasing in accuracy from 30% to **97%.**



Fundraising

We have raised an additional **\$2.0M** since first presenting at Canna Angels.



Clients

We have increased our client pipeline orders of magnitude, and have **10 signed LOIs** and counting.

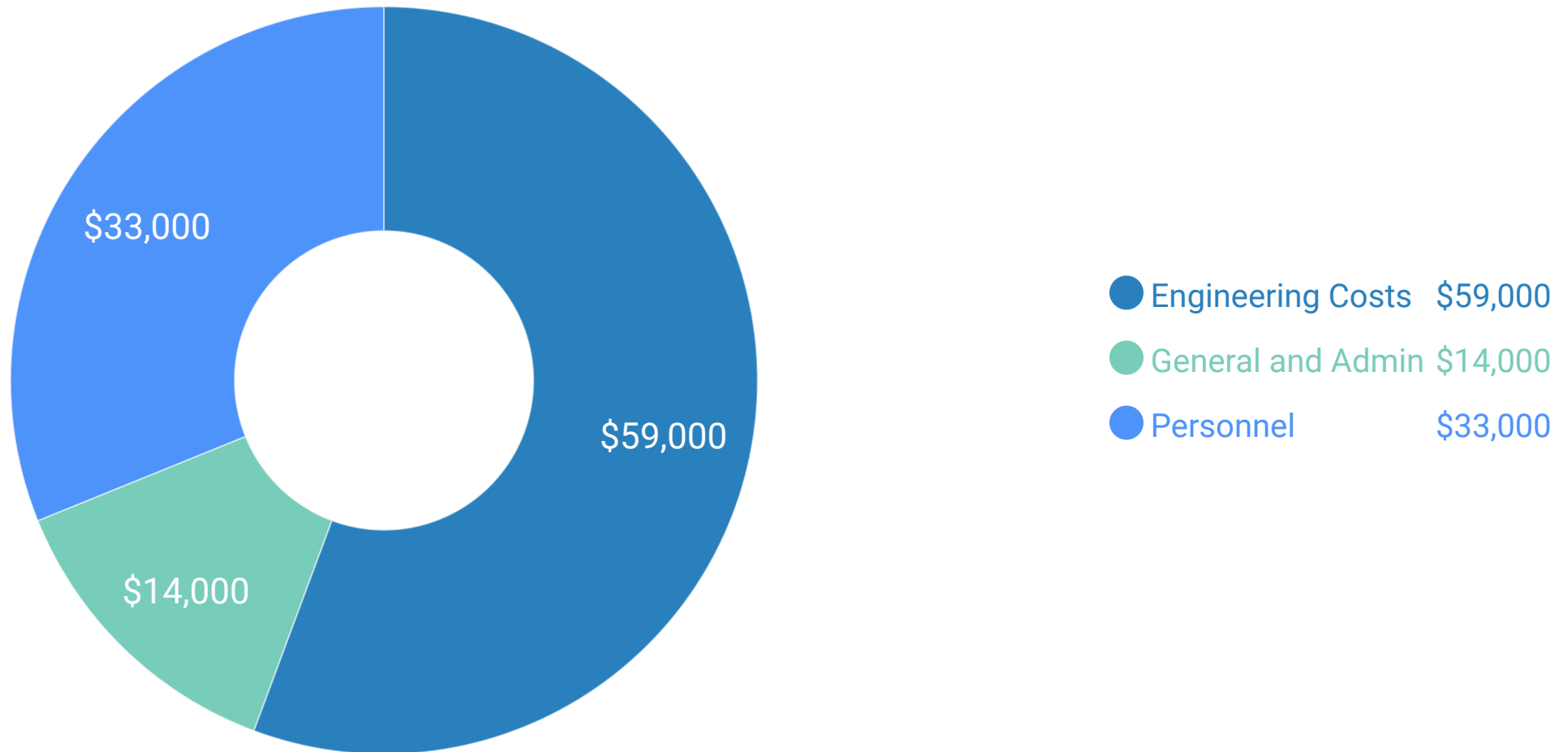


Headcount

The company has grown from 1 full-time employee to **5 employees.**

17

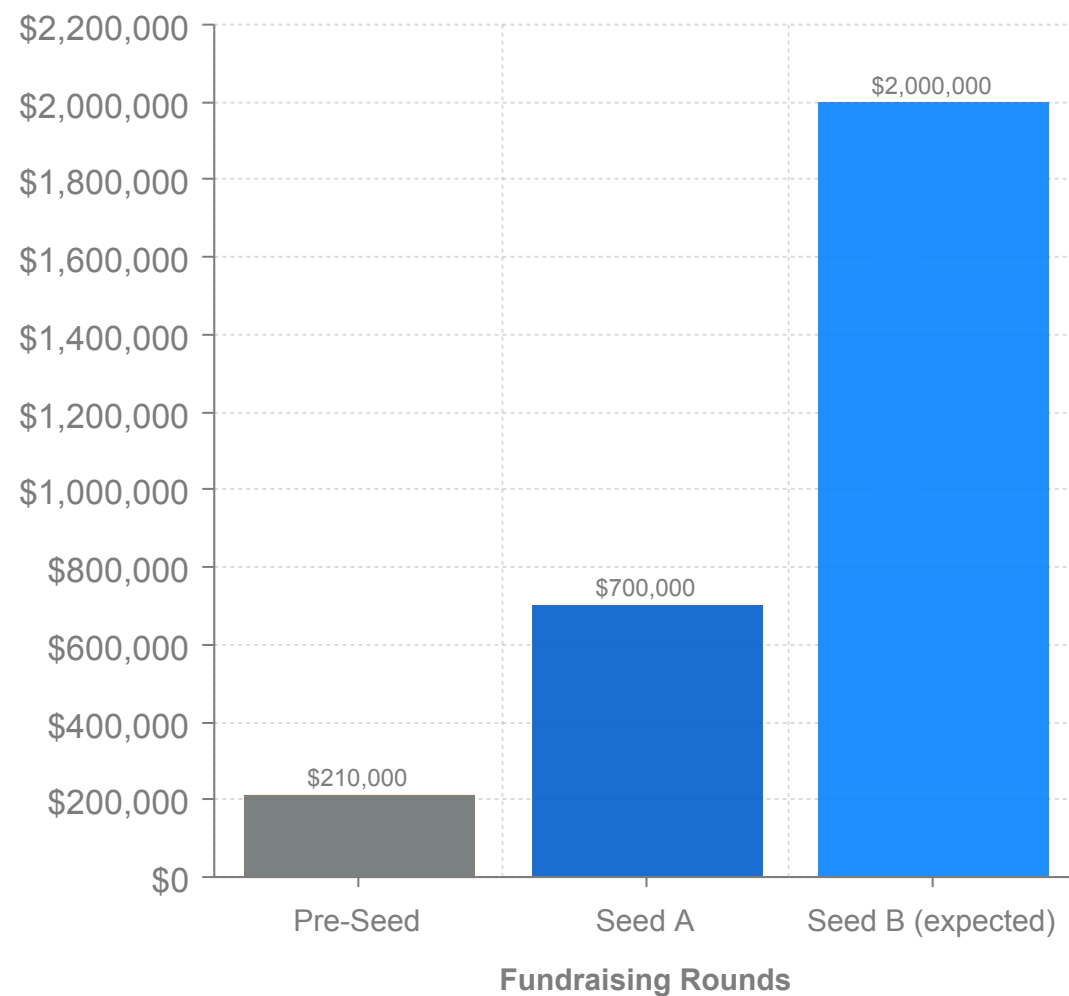
USE OF FUNDS



*July 2019 Exact Burn

18

SEED B RAISE



CONVERTIBLE NOTE

B

\$2M

Total Seed B Raise

\$7M

Valuation Cap

20%

Discount

5%

Interest

▼ 80%

Current Progress of Raise: \$1.6M