

TRACK SPLIT

AUTOMATED TRACK PRACTICE
TIMING SYSTEM.



DESIGN BRIEF

PRODUCT DEFINITION

THE PROBLEM

In a group practice setting it can be difficult to accurately time everyone. Timing is important because it is the best way to track progress over time.

GOAL

The goal of this project is to create a product that automatically times and documents a group of people practicing on the track.

PRICE

The target price point is under \$100 for the complete system. Making reasonable for even casual runners,



COMPETATIVE ANYLISIS



Free Lap

Skilz

VALD

My Laps

JAWKU

Phone

Price	\$2,469.00	\$129.99	\$2000/yr	\$8,787.00	\$200	Free
Multi User	Yes	No	No	Yes	No	No
Technology	BLE	Laser	Laser	RFID	10-15lbs	Camera
Primary Market	Sprinters	Sprinters	Sprinters	Race Events	Agility	Sprinters
App	Yes	No	Yes	No	Yes	No

Notes

- Free Lap:** Leader in the market. Aimed towards sprinters. Also do systems for bikes and other sports.
- Skilz:** Cheapest option, but only allows for one user at a time and is only practical for sprints.
- VALD:** Very pricey, subscription based service. More aimed at agility drills.
- My Laps:** Very expensive, but offers a lot of good ideas. Very modular system.
- JAWKU:** Multiple users, small amount of hardware. Gets bad reviews.
- Phone:** Camera used to record, and than splits taken from there

THE TECHNOLOGY USED

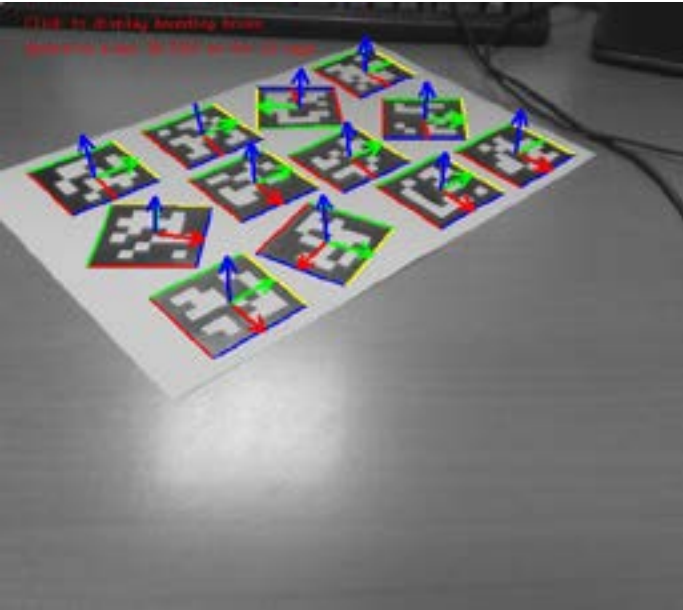
EXISTING SOLUTIONS ARE EXPENSIVE



Range	3 - 5 m per reader	5 - 50 m per reader
Reader Range	1 - 5 ft	20 ft
Reader Cost	\$1500 - \$2000	\$10 - \$70
Tag Cost	\$0.10	\$20
Phone Compatibility	No	Yes
Battery life	Longer than our life	2 - 5 years
Ideal for	High starting cost but cheaper to add more users. Large events.	Cheaper starting cost, but adding more users is more expensive than RFID.

THE TECHNOLOGY

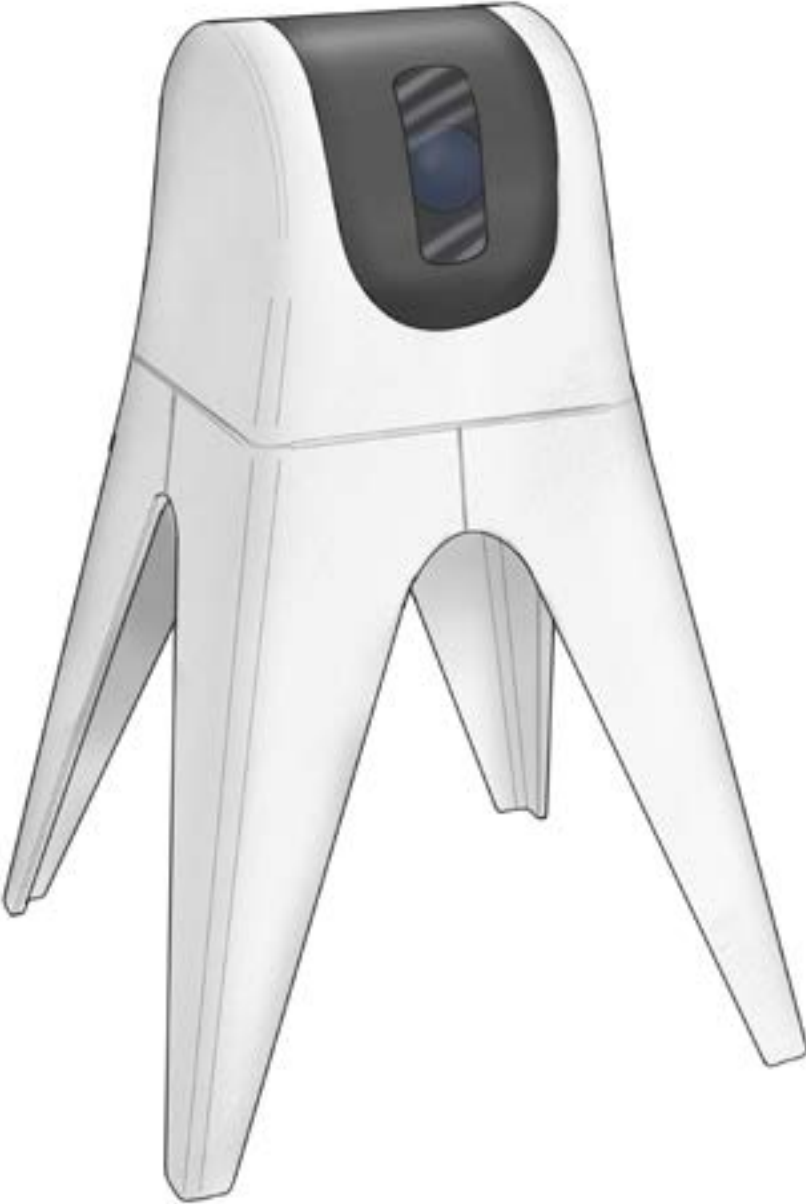
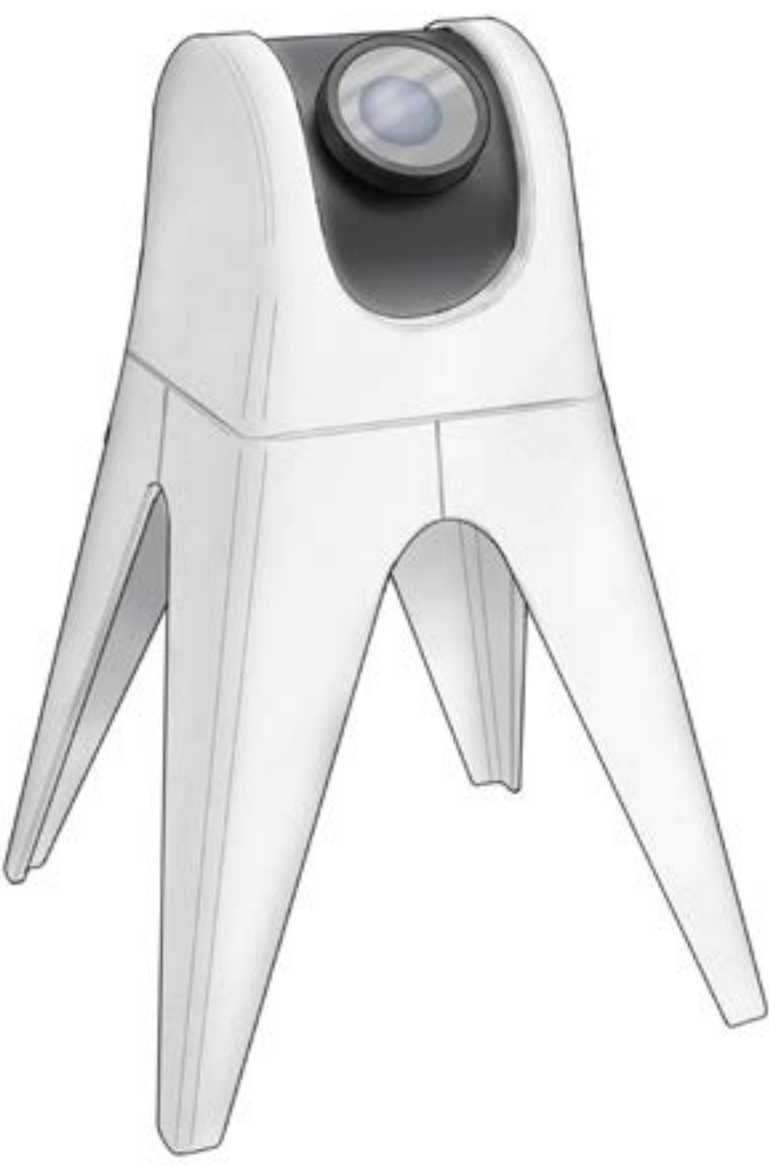
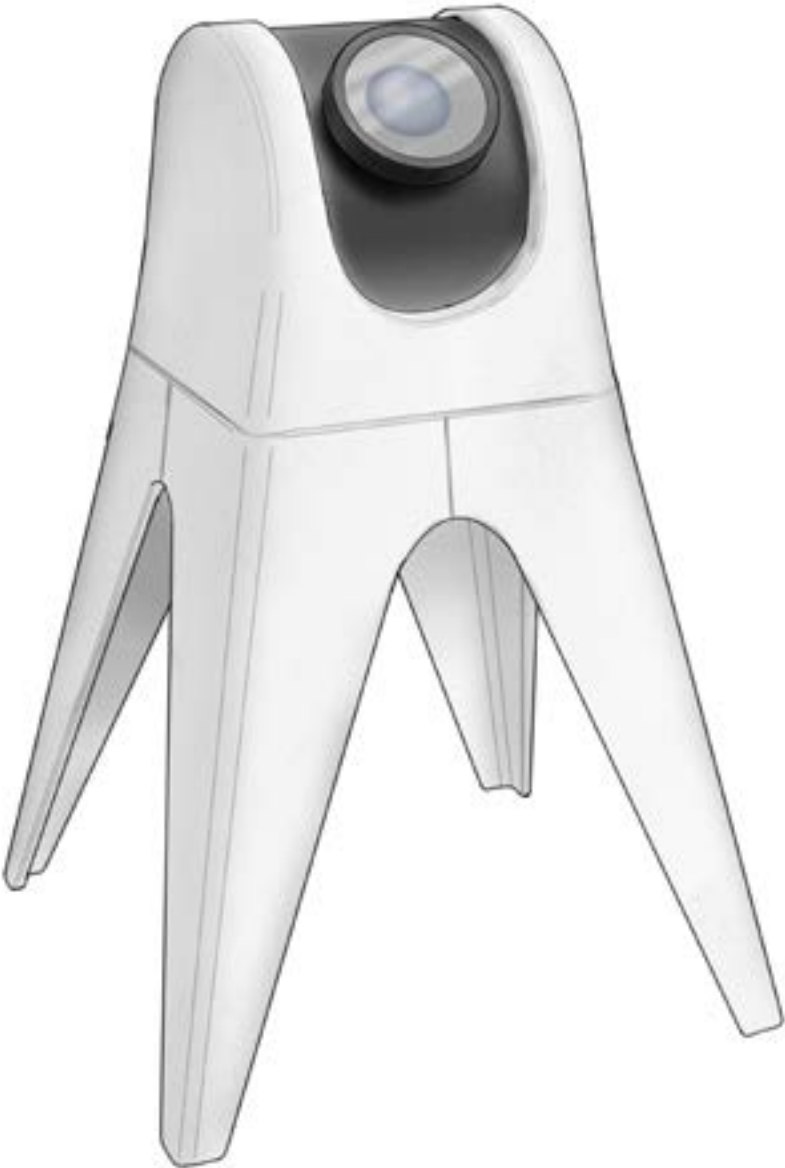
A CHEAPER OPTION



IDEATION



IDEATION



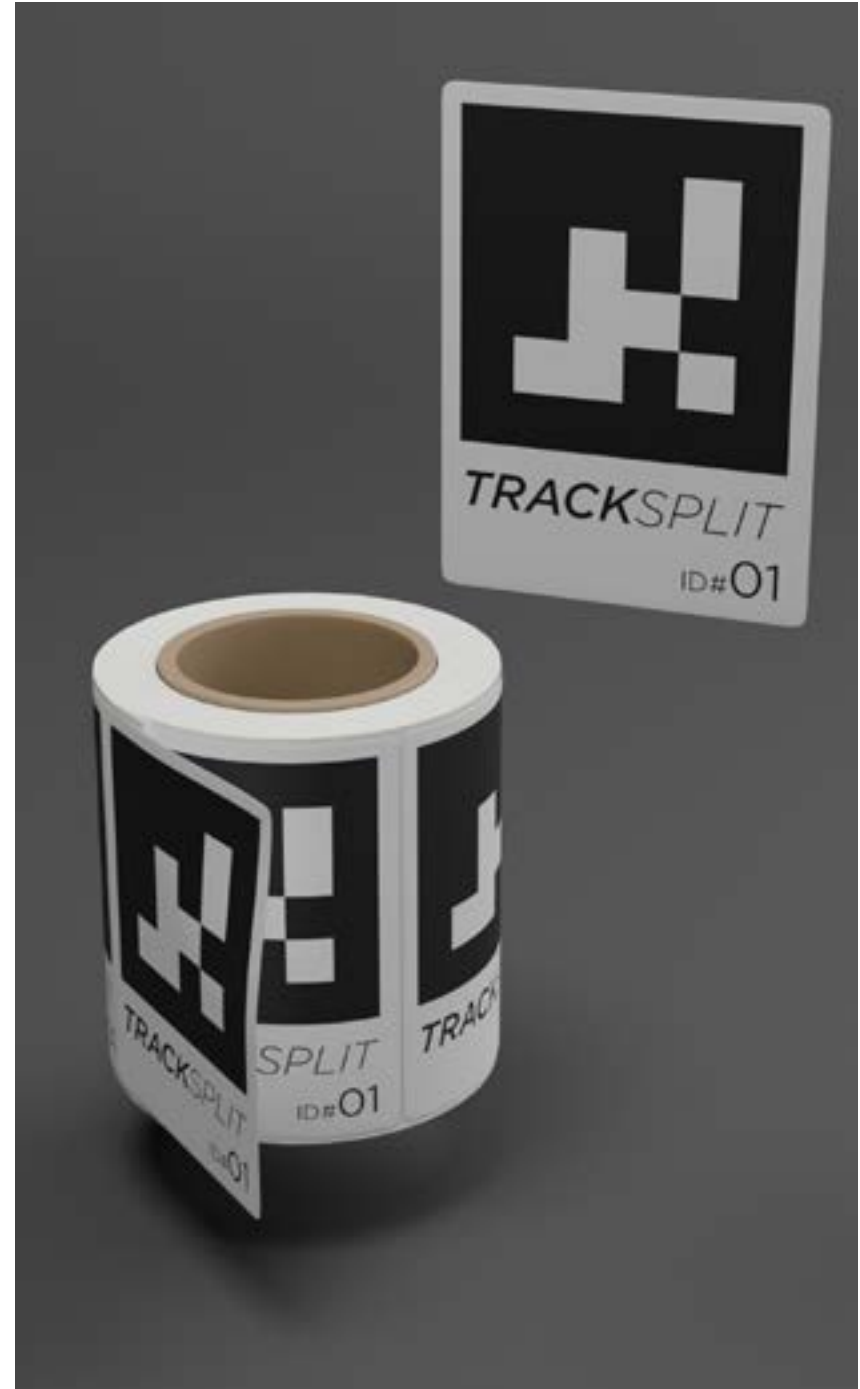
PROTOTYPING



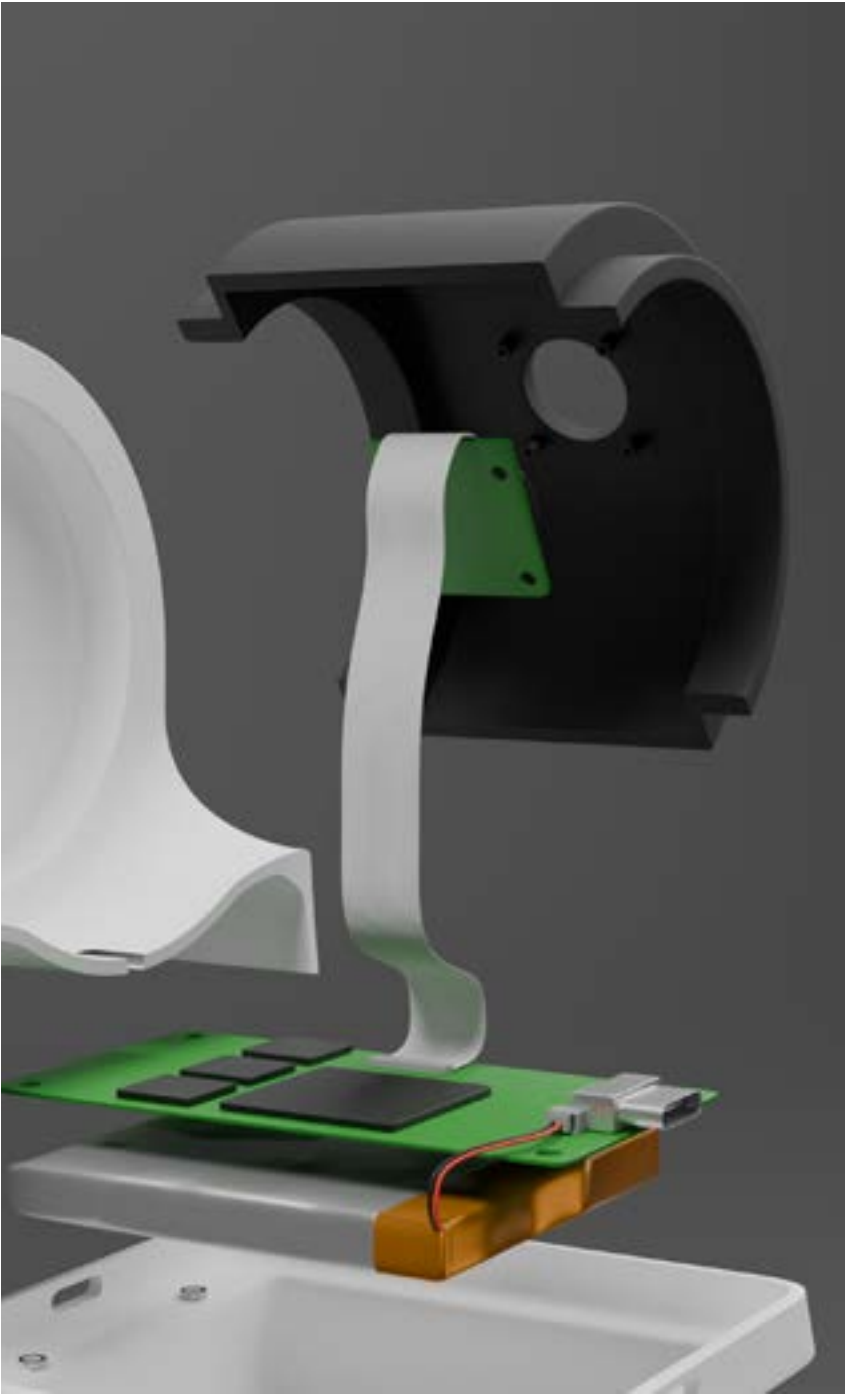
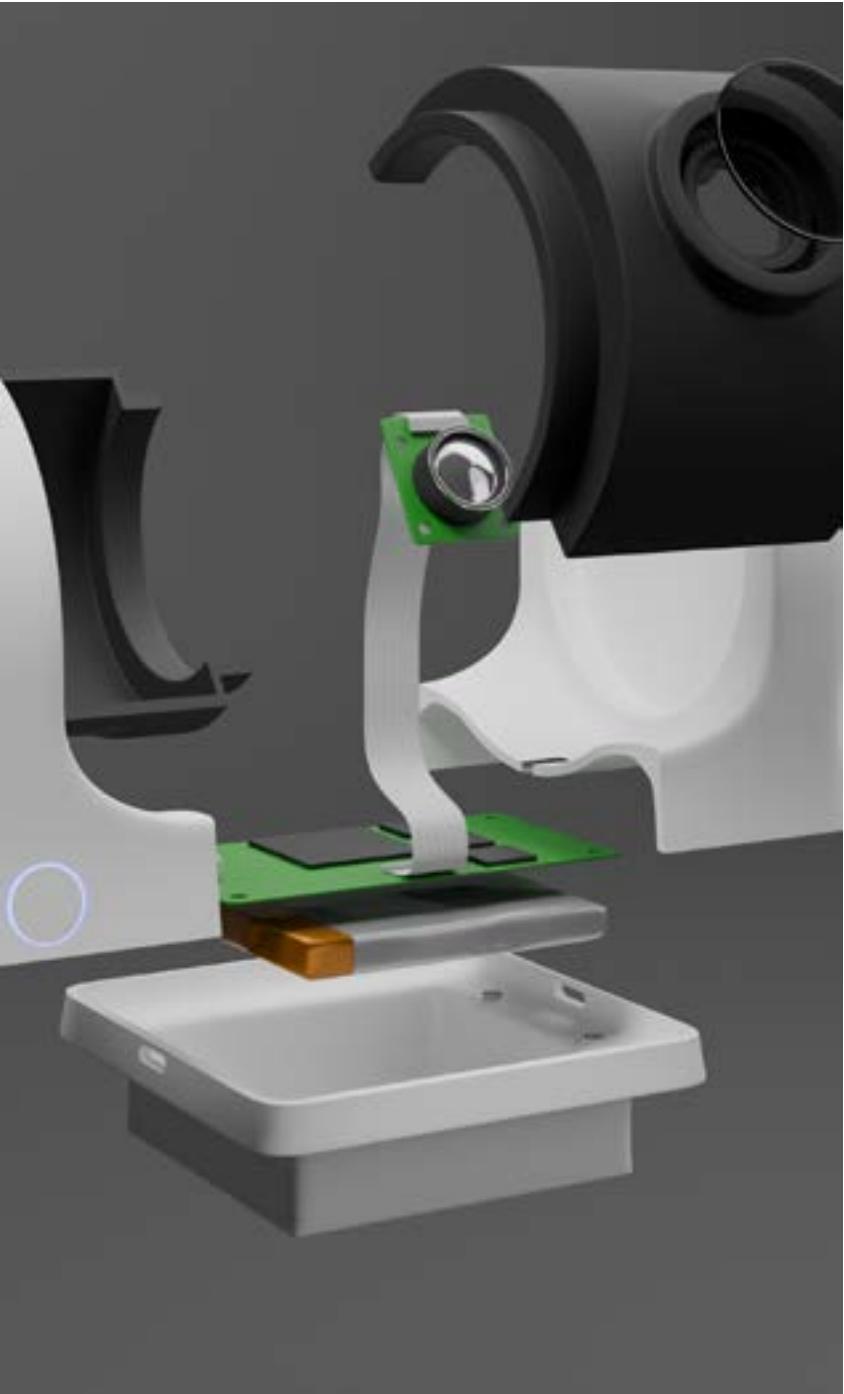
TAG MOUNT



3D MODELING



EXPLODED VIEW



PRODUCT IN USE



TRACK SPLIT

