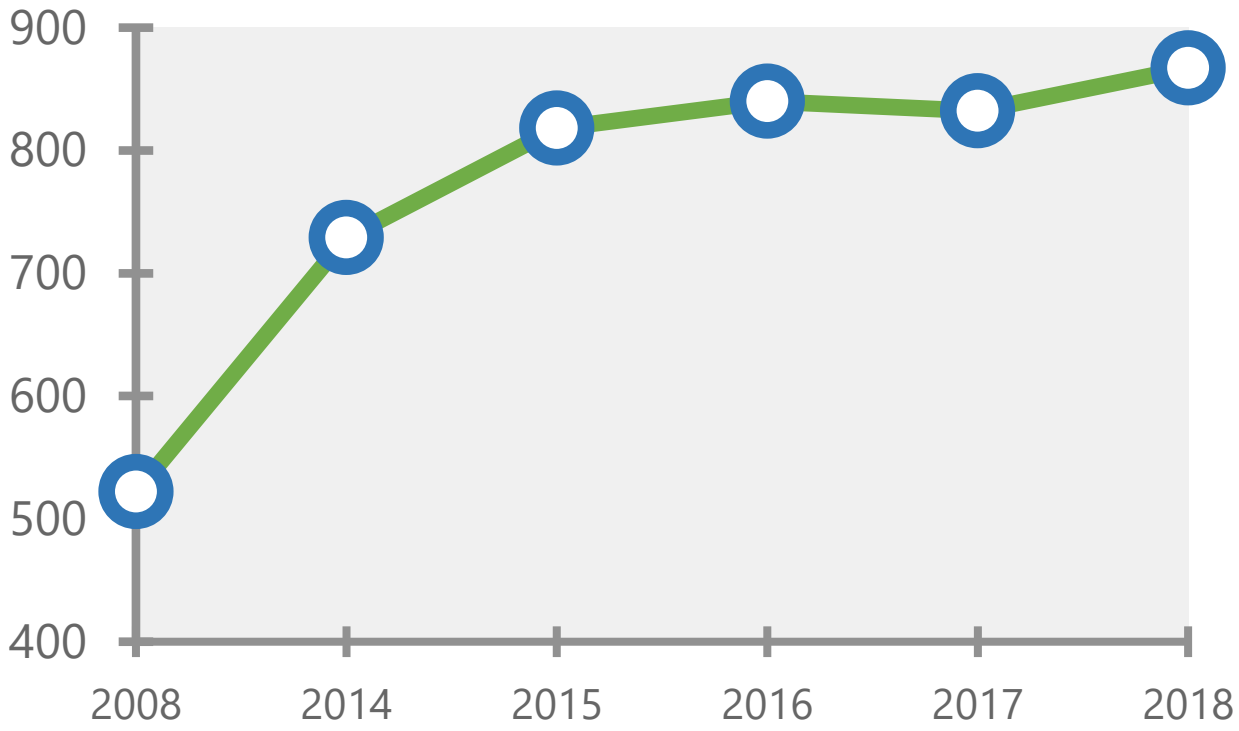
SAFESENSE

Bicycle Safety Beyond The Helmet

www.safesense.xyz

Bicycle Fatalities Across The US



NYC has one of the most bicycle friendly road infrastructures

Despite that, NYC accounted for **26 deaths** and **4,805 injuries**… That's **400 bicycle accidents every month!**

https://www.nhtsa.gov/road-safety/bicycle-safety
https://www1.nyc.gov/html/dot/downloads/pdf/bicycle-crash-data-report-2017.pdf

The New York Times

Deadliest Year for Pedestrians and Cyclists in U.S. Since 1990

On average, 17 pedestrians and two cyclists were killed each day in traffic crashes in 2018. Distracted drivers and bigger vehicles may be the culprits, experts say.

https://www.nytimes.com/2019/10/22/us/pedestrian-cyclist-deaths-traffic.html

the **BIG** problem?

- Bicycle accidents increased by **12% between 2017-2018**
- Almost **900** cyclists died, and **467,000** got injured
- **$10 Billion** lost in productivity and medical costs

Listening to music, navigating, & using smartphones are common distractions leading to accidents, AND lack of awareness

There is **no** non-distractive SMART solution yet

https://www.statista.com/topics/1686/cycling/
http://www.cdc.gov/motorvehiclesafety/bicycle/index.html

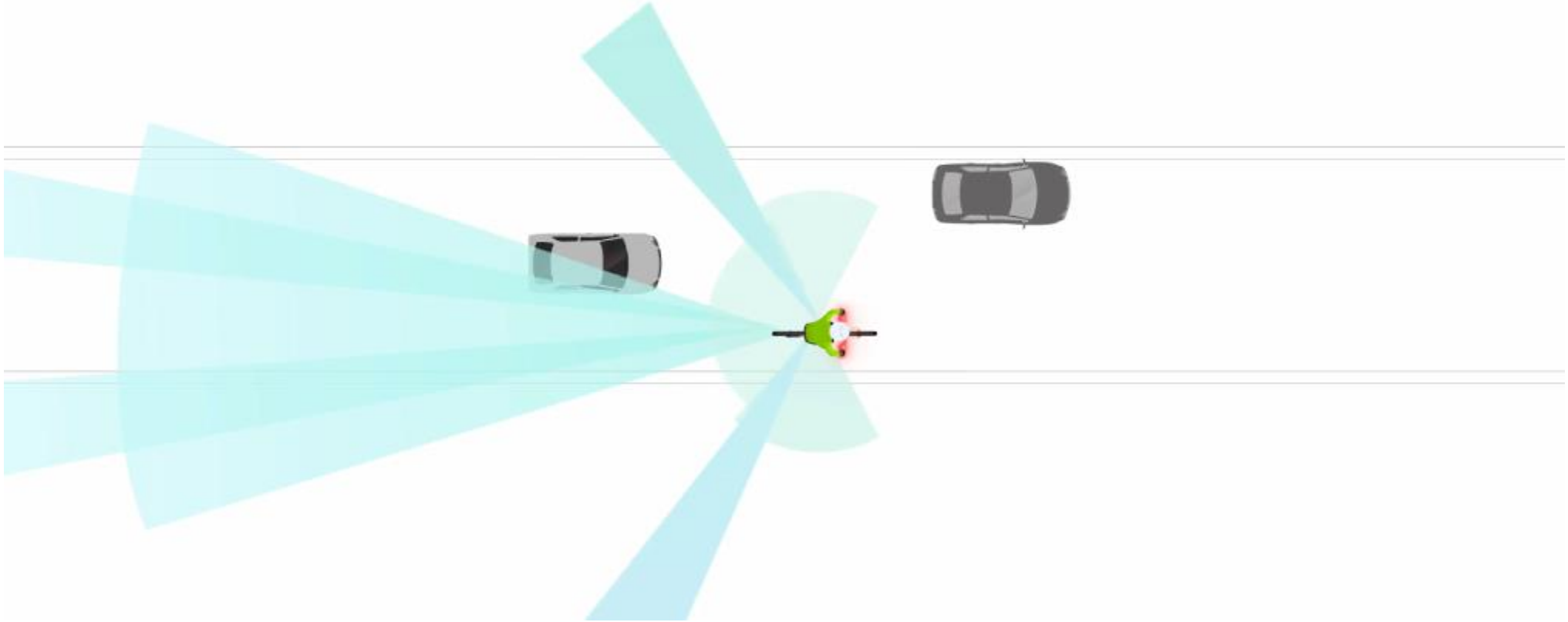
our **solution**

Smart handlebar **grips that light up** when a vehicle behind a cyclist is detected

The grips **flash, beep** and **vibrate** when a collision path or “close-call” is detected.

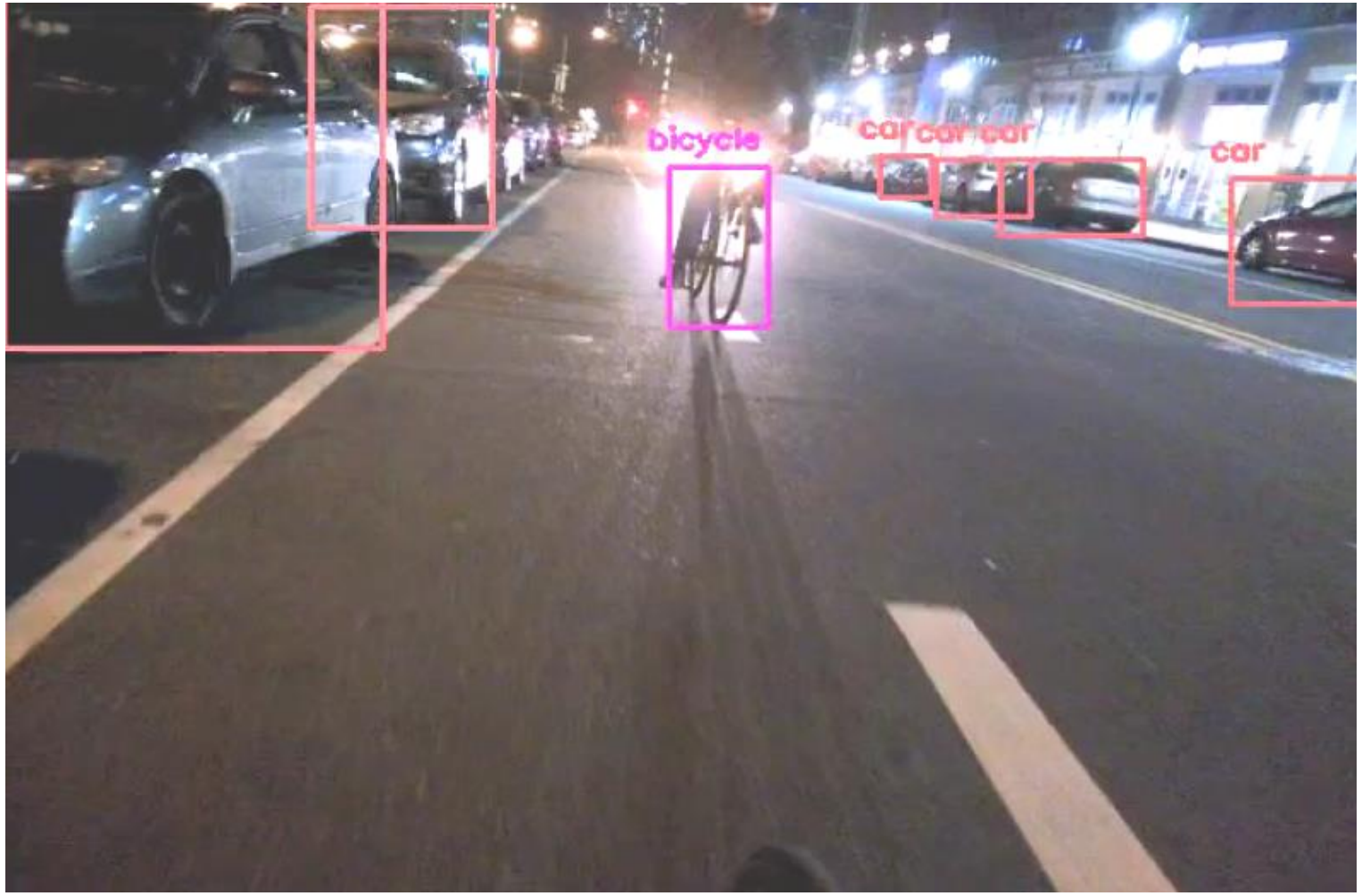
how do we **detect vehicles?**

The SafeSense sensor is a combination of sonars, mic-array, and a camera that can monitor traffic behind a cyclist



how do we **detect vehicles?**

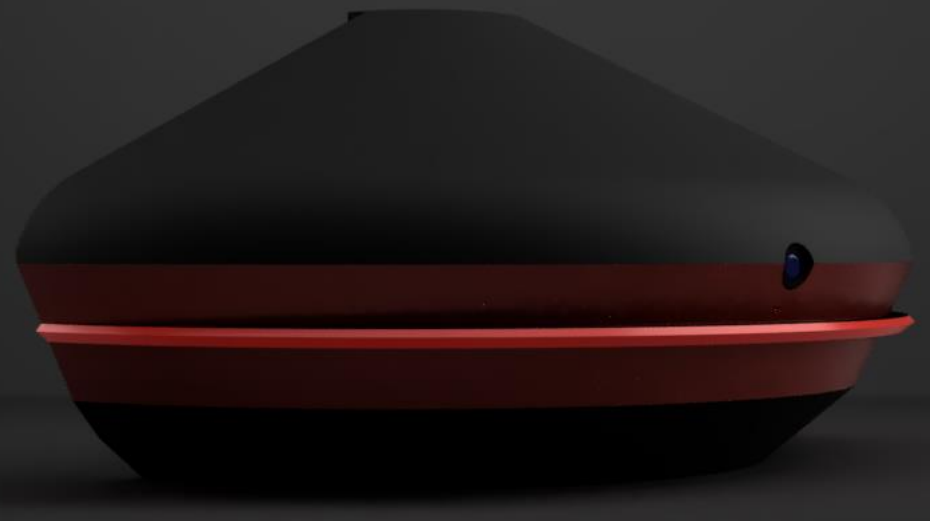
Artificially intelligent camera which can **identify**, **monitor**, and **track vehicles**.
Its like having eyes in the back of your bicycle…



our **sensor**

Sensor houses the battery, machine-vision camera, and other hardware

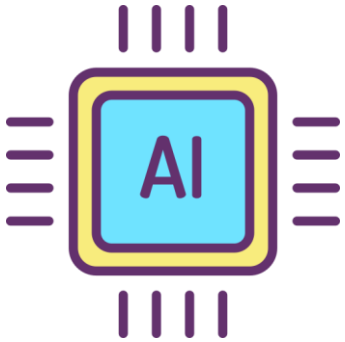
Utility patent pending for sensor and grips



This sensor is mounted to a bicycle seat post

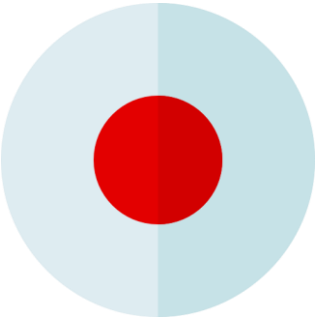
200°	150 ft	14.2 hrs
Rear and side angle coverage	Monitoring range	Battery life*

additional **features**



No False Alerts

- The sensor can adapt to changing environments
- It can detect if you are in a city or in a suburb, and adjust the alerts accordingly
- AI allows SafeSense to learn from a cyclist's riding style and calibrate alerts accordingly



Smart Ride Recording

- As soon as a dangerous trajectory by a vehicle is detected, the camera begins recording
- Smart ride recording allows to save battery and only record instances that need recording

product **capability**

Over-air-updates give you new features and fixes on the go

Grips and tapes available for all types of handlebars

Handlebar lights are always visible, even on bright sunny days

Extended grip length will allow you to see the grip light up while holding it

Theft-proof hardware ensures that your sensor is always safe and secure

Grips and sensor are 100% weather proof

competition

Varia™ by Garmin

- Radar based (slower + interference + LOTS of false positives)
- Screen based – (**distractive & unsafe**)
- Vehicle oriented, does not warn cyclist
- Lots of customer complaints
- Overpriced @ $450
- Not adaptive/intelligent

product **differentiator**

	SafeSense	Garmin Varia
Price	**$299.99**	**$149 + $199**
Sensor	**Smart Vision Sensor**	**Radar Sensor**
Artificially Intelligent	✔	
Non-Distractive	✔	
Fewer False Positives	✔	
Adaptive	✔	
Wide-Angle Coverage	✔	
Accident Detection	✔	
Over-the-Air Updates	✔	

primary market **(B2B)**

There are over **150,000** bicycles in bike share programs in the US.

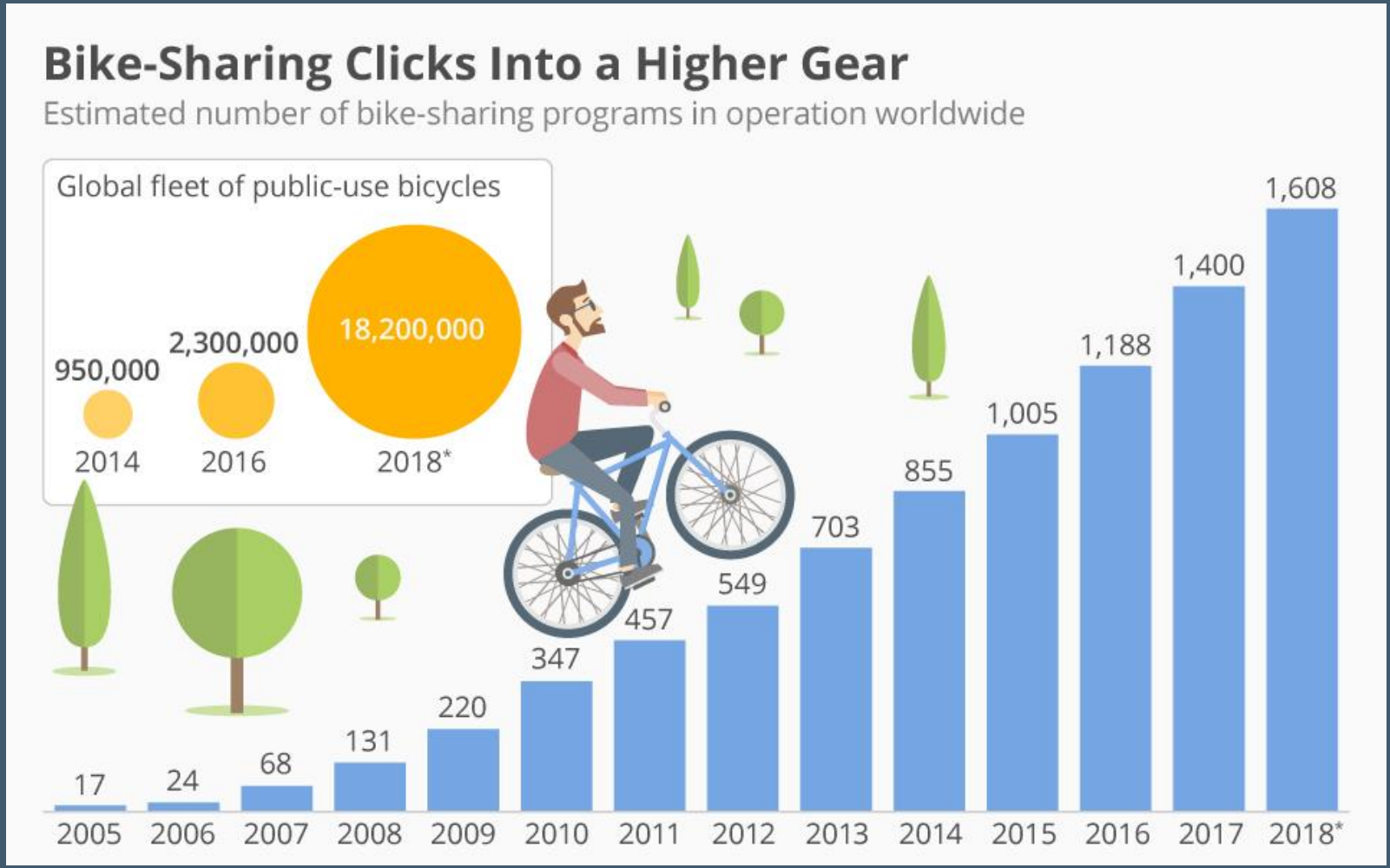
Our **target**:

- Bike share operators and their insurance providers.

Our **aim**:

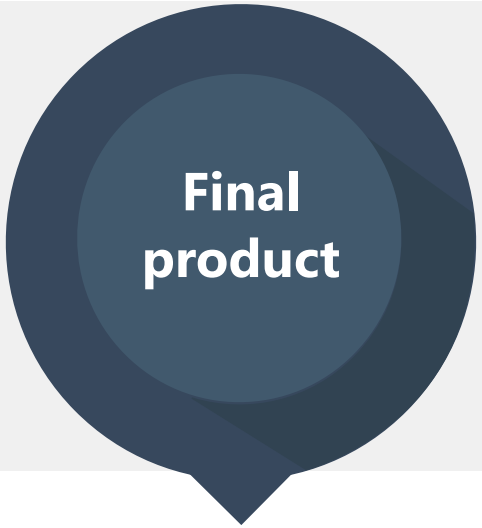
- SafeSense can record rides and reduce an operator's accident liability, and reduce insurance costs by providing an additional layer of safety

primary market **(B2B)**



Source: Statista

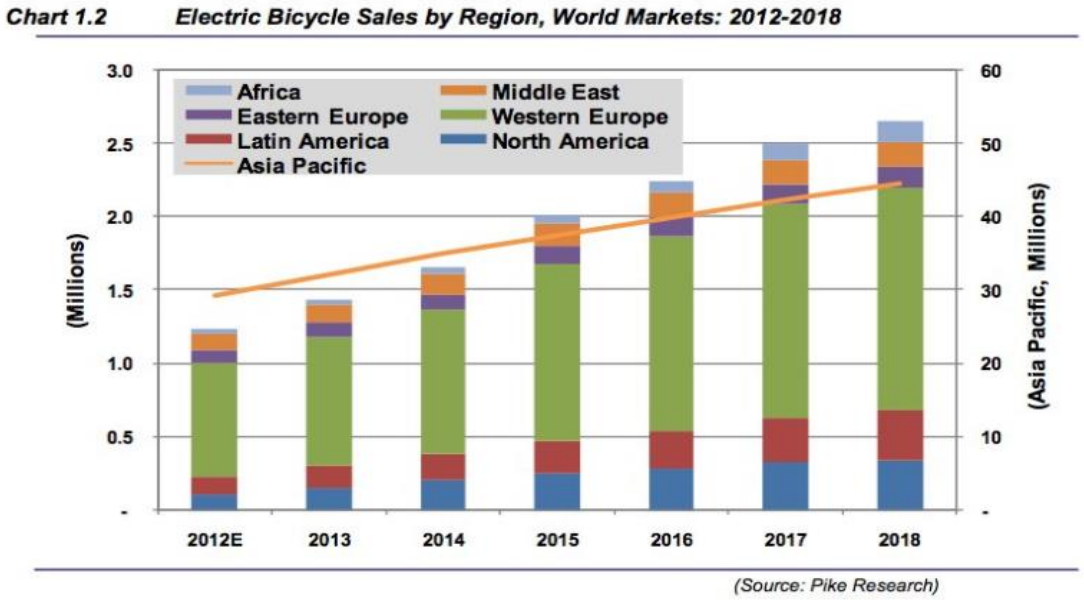
estimated cost & pricing



Initial estimated cost: ~**$166** (including parts, labor, assembly and shipping)

Initial estimated price: **$299**

price-point



2015 – 350,000 E-Bikes sold in the US

2018 – 720,000 E-Bikes sold in the US

- 2016 Cruisers ebikes: Average cost of about $3,050, ranging from roughly $1,500 to $7,900.
- 2016 Mountain ebikes: Average cost of about $4,150, ranging from roughly $1,200 to $9,000.
- 2016 Road ebikes: Average cost of about $4,750, ranging from roughly $1,900 to $8,000.

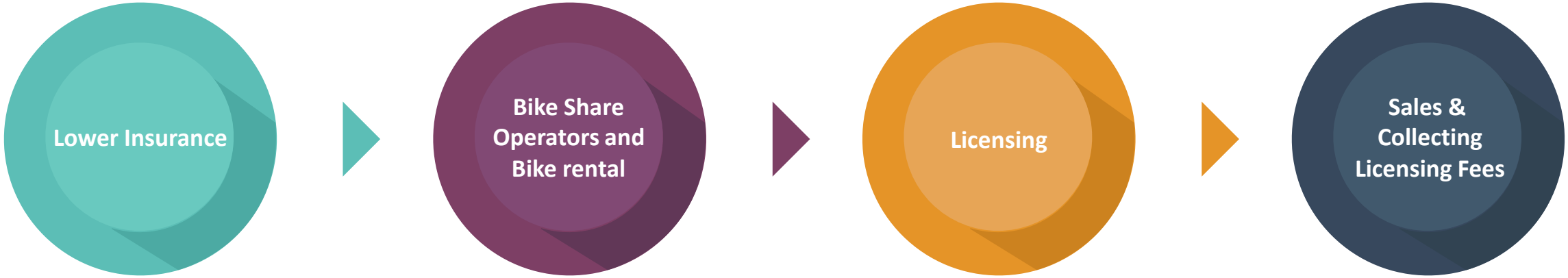
Global Electric Bikes Market Size and Forecast:

E-bike market was valued at **$16.21 Billion**

E-bike market is projected to reach **$23.7 billion** by **2025**

B2B revenue streams

- License to bicycle manufacturers, or bicycle accessories manufacturers.



entering the B2B market

Zagster designs, builds, and operates bike sharing programs for cities, colleges, and small communities.

- Interested in the application of SafeSense on electric scooters
- Insurance premiums went up 5x in the past year due to increasing accidents and claims
- Introduced us to insurance underwriters for bike-share programs
- Introduced us to a bike-share manufacturer in Europe to explore possibilities of pre-installing SafeSense for bikes
- Will potentially launch a pilot with Zagster in the future to collect data for insurance premium reduction

secondary market **(B2C)**

In the past decade, the number of bicycles increased because cities & roads are becoming bicycle friendly.

$3.2 Billion
spent on bicycle accessories in US

103 Million
cyclists in US

106%
growth in US

4.5 billion
bicycle trips in 2018 (US)

900 Million +
bicycles globally

http://www.pedbikeinfo.org/data/factsheet_general.cfm

revenue projection **(B2C)**

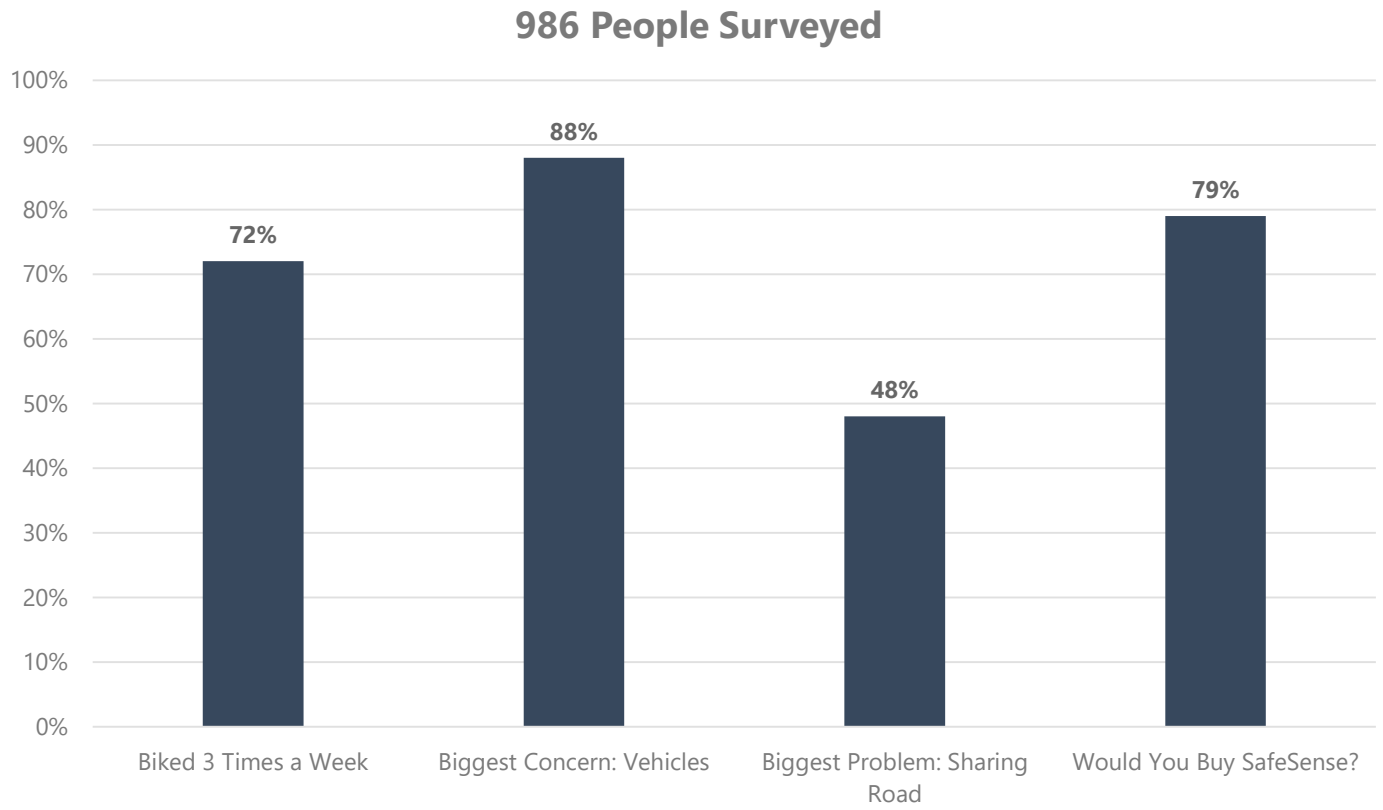
Detailed projection available

REVENUE PROJECTION (2021-2025) - B2C				
1	US - Bicycle Customers		106,000,000	
2	Percentage Captured		0.10%	
3	Potential Customers		106,000	
4	Monthly Customer Acquisition		2,208	Target
5	Standard Price	$	299.99	
6	Projected Monthly Income	$	662,478	Pre-Tax Income
7	Yearly Revenue	$	7,949,735	

customer **survey (B2C)**

986 cyclists surveyed:

- Online (social media, and Reddit bicycle forums)
- In-person (bike-shop owners and customers)



team SafeSense

Jibran Nabeel
CEO & Co-Founder

Robert Decker
COO & Co-Founder

Su Hnin Pwint
UI/UX App Design

Toan Huynh
Lead Hardware
Developer

Josh Shelley
Lead Software
Developer

Lorenzo Sostre
Lead Graphics &
Communication

advisor

Garrett Gillin

Principal at 215 Marketing. Garrett is advising us on business and marketing strategies.

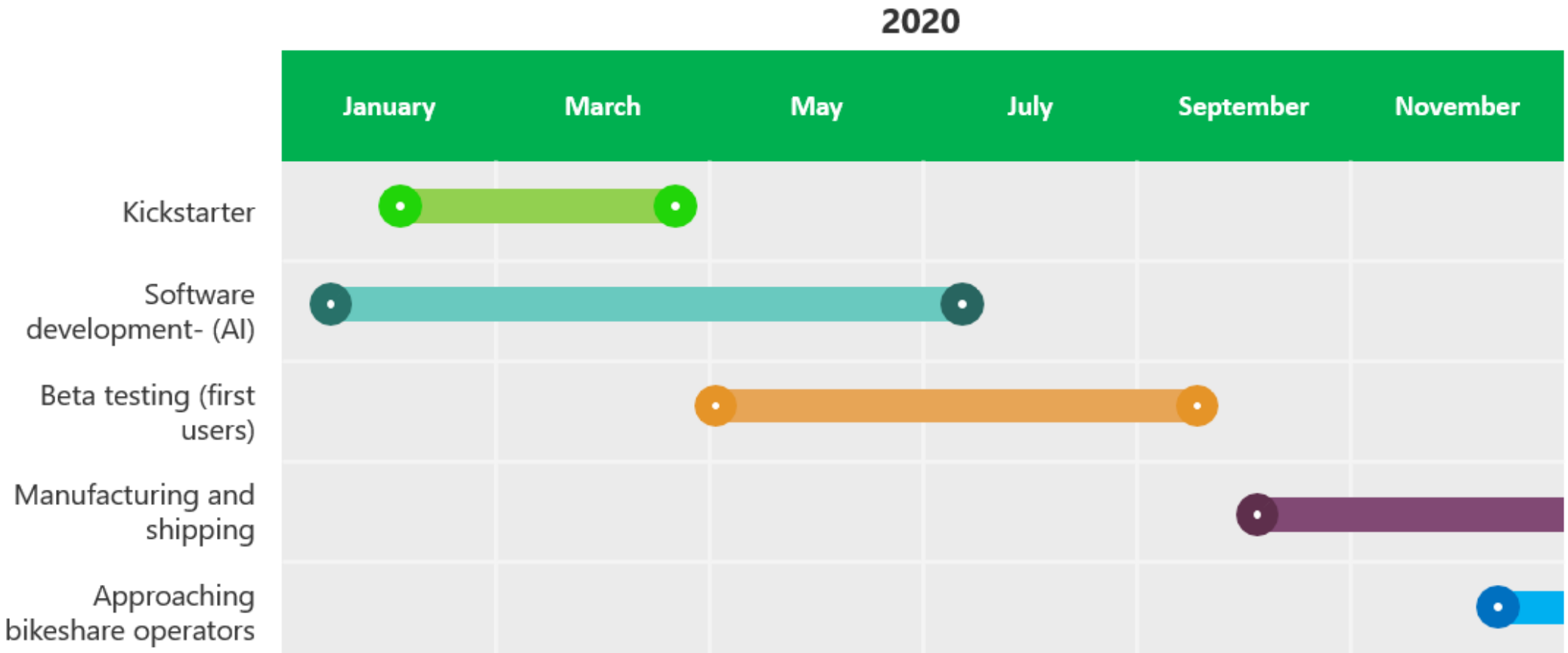
market **validation**

KICKSTARTER

Crowdfunding for market validation

Limited production run, ~200-300 units. (Beta users)

near-future **plans**



SAFESENSE

Our mission is to prevent accidents and change the way people think about bicycle safety.

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