

TrafficGenius

Solving a city's traffic problems

Seed Round

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U.S. Loses **\$87 Billion a Year** in Productivity

The Problem:

We've all waited at traffic signals while **no traffic moves on the cross street** and been caught on congested streets



We focus on Infrastructure

TrafficGenius uses Machine Learning to optimize the timing of traffic signals along the path of greatest traffic volume



The Time is **Now**

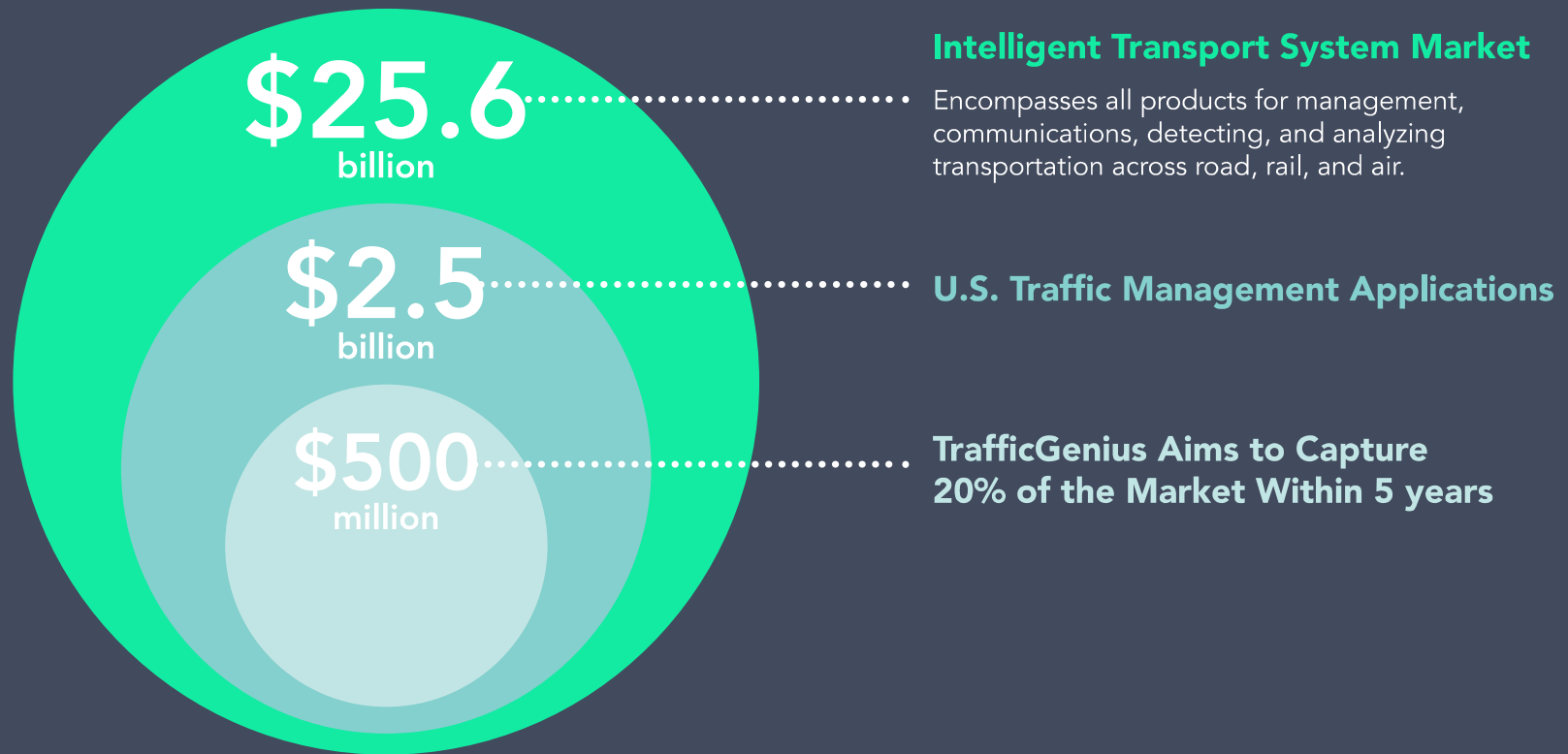


Advancement in technology using
Machine Learning has been
wide-spread in the private sector



Smart Cities initiatives are increasing
as cities focus on greater efficiencies of
their resources to reduce emissions

Market



Competition

The logo for surtrac, featuring the word "surtrac" in a blue, lowercase, sans-serif font. The letter "a" is replaced by a green car icon with yellow headlights.

Surtrac by Rapid Flow

- Spun out of Carnegie Mellon
- Looks at real-time traffic data from sensors and optimized in local grids, or neighborhoods

The logo for In|Sync, featuring the text "In|Sync" in a green, sans-serif font. The vertical bar between "In" and "Sync" is a green pipe symbol. Below it, the text "THE TRAFFIC BOT" is written in a smaller, black, uppercase, sans-serif font.

In|Sync by Rhythm Engineering

- Collects data in real-time
- Processes locally at the intersection, not at the center controller

The logo for SCOOT, featuring the word "SCOOT" in a bold, dark blue, uppercase, sans-serif font.

Split Cycle Offset Optimization Technique

- Less advanced version of Surtrac, based in United Kingdom market

How We Differ

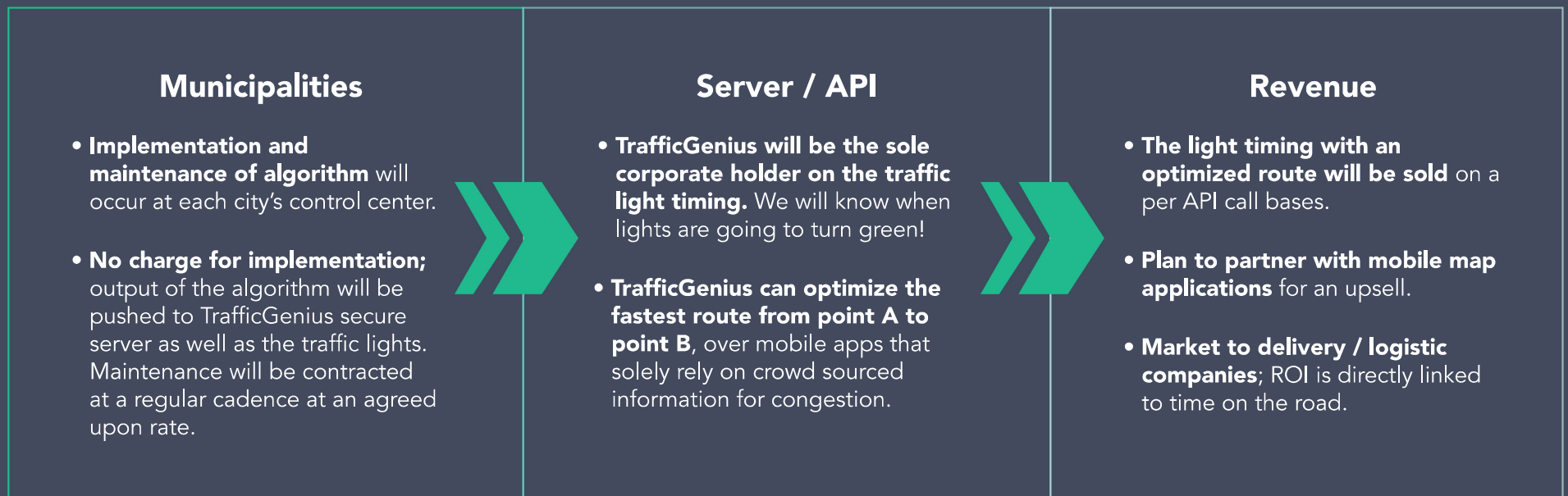
Focus on city-wide, global optimization

rather than a localized neighborhood
or corridor approach

Data driven, machine learning, approach

that uses historical traffic patterns and
real-time sensors to synchronize the traffic
lights timing to increase throughput

Business Model



Traction in Past 12 Months

- ✓ Brought on two advisors that have helped me understand the **depth and breadth of the traffic management and startup worlds**
- ✓ In-depth review of what **open-source traffic datasets are available**. (5 weeks)
- ✓ **Concluded Chicago has the most robust dataset with volume passing through 'segments'** on 10-minute average intervals through heavily congested parts of the city
- ✓ **Collected supplemental data by hand**, needed complete the dataset for modeling (2 months).
- ✓ **MVP algorithm - python** (3 months)



MVP

**Analyze
Chicago open
source data by
segment, hours
per day, and
days; determine
which has the
highest volume**



Highest Volume

- Hours: 7 - 9am, 3 - 6pm
- Days: Monday - Friday
- Segment: Michigan Ave. from Ohio St to Congress, North and South directions (4-data segments)
- To and From Segments: Look at the segments joining the main segment
- Giving a more complete view of traffic volume merging on to the segment



Connecting Data and Signals

- Connect geo coordinates of segments with geo coordinates of traffic signals (collected by hand)



Estimate Throughout

- Calculate rate of change in volume over time, approximately 10 minute intervals, for each segment
- Use traffic signal locations geo coordinates to determine the To and From Segments



Simulate Change in Light Timing

- Calculate differences in flow by increase / decrease light timing
- Done in iterative algorithm

Team



Scott Murdoch, Ph.D
Founder

- Ph.D. in Economics; Data Scientist with over 10 years of experience
- Ridiculously ambitious; built a data science division from the ground up



Frederick Schwartz
Advisor

- 40 years experience in transportation engineering
- Professional career in firm management and leadership
- Principal in at Rush Street Consulting



Ash Damle
Advisor

- A Healthcare and AI entrepreneur, investor, and advisor having helped raise over \$100M in funding
- MIT Grad



Exit Strategy

- ✓ Take TrafficGenius to the finish line: IPO within 5 years
- ✓ Acquisitions would likely come from a logistics or delivery company to separate themselves from competitors.
- ✓ Acquisition example: GreenOwl Mobile

Thank You



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