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ABOUT CARMERA

MISSION:

- **The world's most robust street intelligence platform** for mobility and autonomy.

PRODUCTS:

- **Autonomous Map:** full-stack **HD maps** and navigation-critical data for **autonomous vehicle customers**
- **Fleet Monitoring**: data collection via **telematics** & video monitoring service for high coverage **professional fleets**
- **Site Intelligence**: data exhaust in the form of **planning analytics** for **government** and other key AV stakeholders

LOCATIONS::

- HQs in **New York** and **Seattle**; satellites in **San Francisco, Detroit**, **Tokyo**, **Seoul**

TEAM:

- Team: **Maps** @ Amazon, Apple, Microsoft; **3D/Vision** @ Google, MakerBot; **Geo/Data** @ Inrix, Snap
- Investors: Recent **Series B** venture backing from **Google Ventures, Matrix Partners** and others

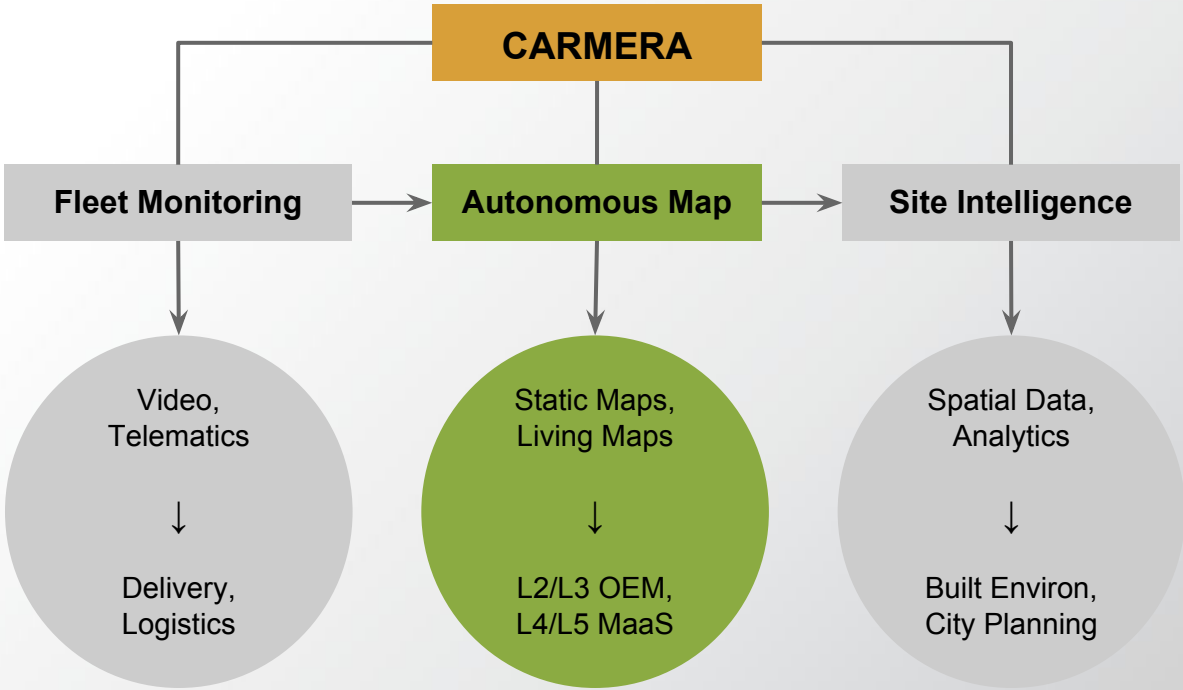
TECHNOLOGY OF THE YEAR

NYC REAL ESTATE TECH WEEK 2017 AWARDS

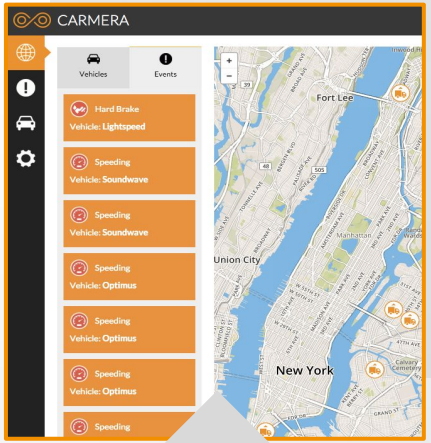
BEST IN SHOW | STARTUP OF THE YEAR

NORTH AMERICAN INTERNATIONAL AUTO SHOW

CHEAP DATA COLLECTION → LIVING AV MAPS → VALUE-ADD DATA EXHAUST

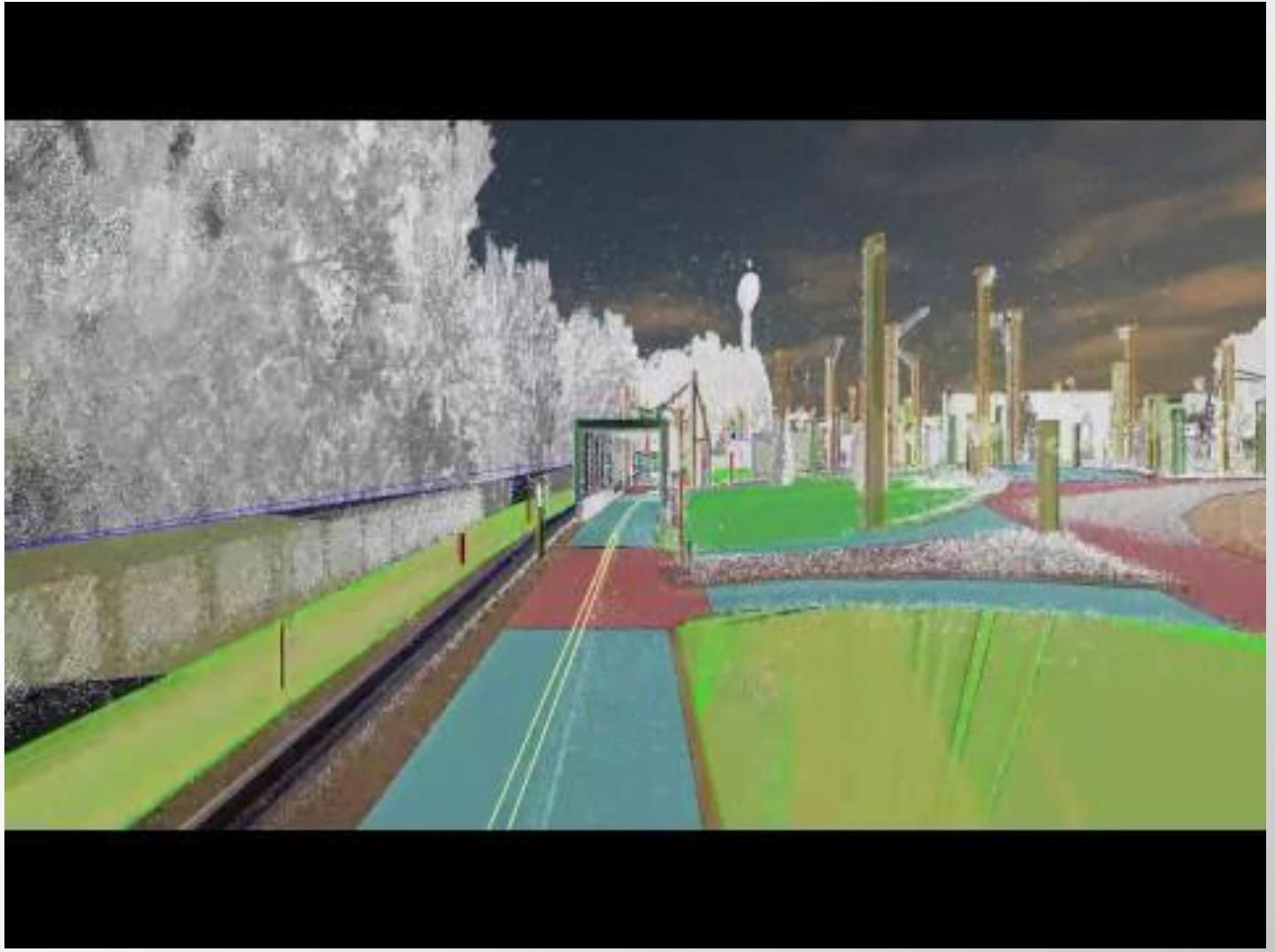


We create dense, < 20 cm accurate base maps via customer or third party LiDAR / RGB scan data



In return we mount affordable sensors on their vehicles for free high-frequency change detection

In addition, we partner with high coverage fleets, providing free video monitoring and safety analytics



Localization
Front Camera
MICHIGAN STATE
UNIVERSITY
Autonomous Driving in Winter Conditions
Spartan Village, East Lansing, MI

Construction
Event Detected
Construction Detected - Conf = 0.61
CARMERA Fleet Monitoring video

FIRST PUBLICLY ANNOUNCED PRODUCTION DEPLOYMENT

- Voyage Self-Driving Taxi Service, The Villages, FL
- Largest announced passenger robotaxi service; > 750 miles, > 10k proj daily riders
- Large-scale static mapping followed by **real-time/living map updates**

HOW WE PLAN FOR CONNECTIVITY:
ASSUME THE WORST, EXPECT OKAY, HOPE FOR THE BEST

- **The Worst**: Network deserts / extended outages
  - Robust in-vehicle modules, caching
  - Proactive warnings for data staleness

- **The Okay**: Status quo cellular in field and broadband at homebase
  - Mobile payloads within a typical consumer LTE plan
  - Nightly wifi transfers for any larger or batch updates

- **The Best**: 5G / DSRC / Ethernet-via-Charger / ? …
  - If/when at scale, hooray! → shift more and more to cloud/fog
  - But <u>don't</u> **ASSUME** ("makes an **ASS** out of **U** and **M**obile **E**ngineers" ;)

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