



Reinventing Smart Cities with Computer Vision

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CTO

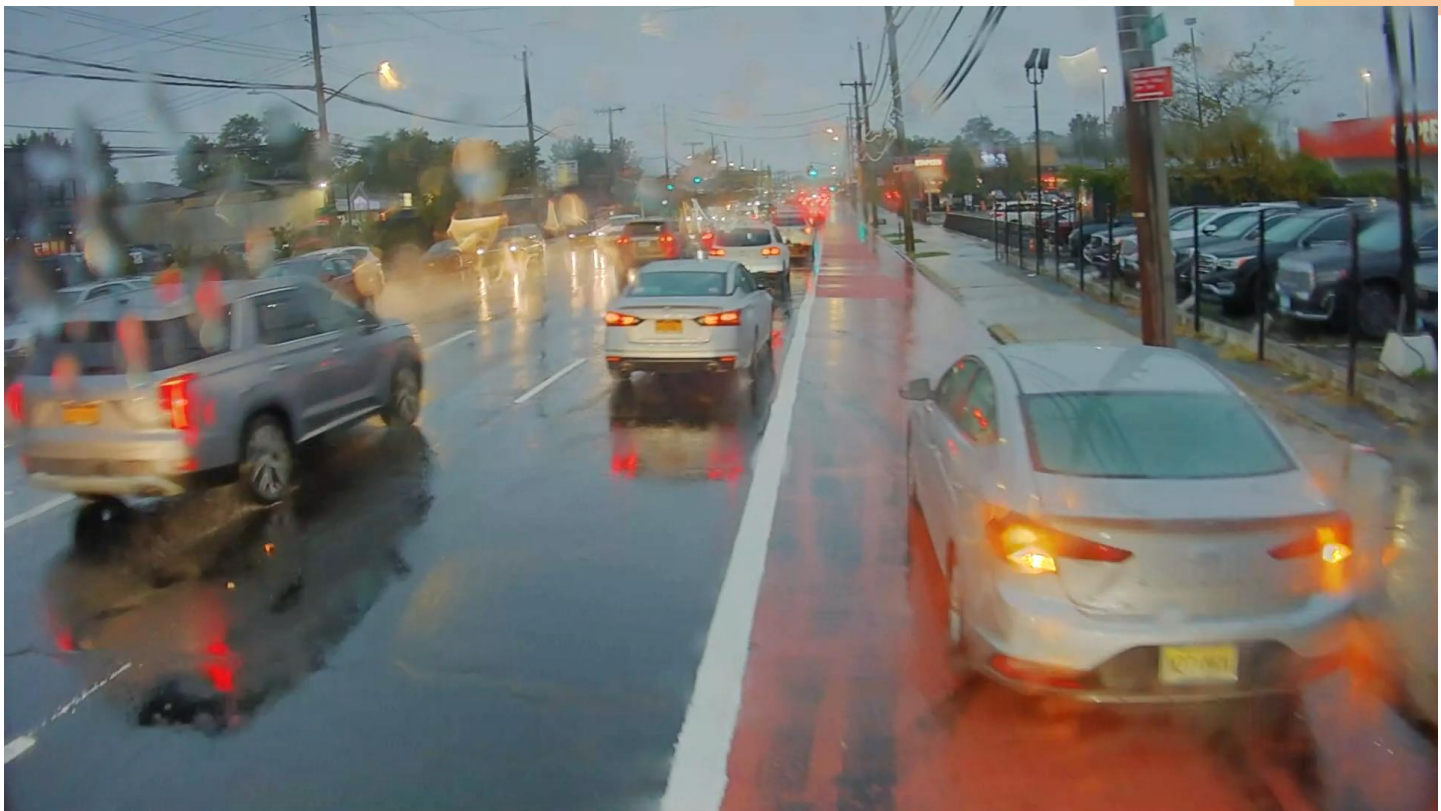
Hayden AI



State of New York Bus Lanes (2020)



What if Buses Could Run Without Obstructions?



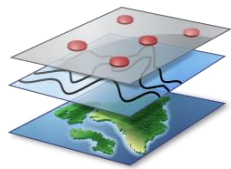
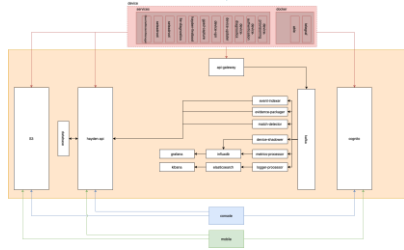
Hayden Perception Platform



Context &
LPR Camera

J1939

Antenna

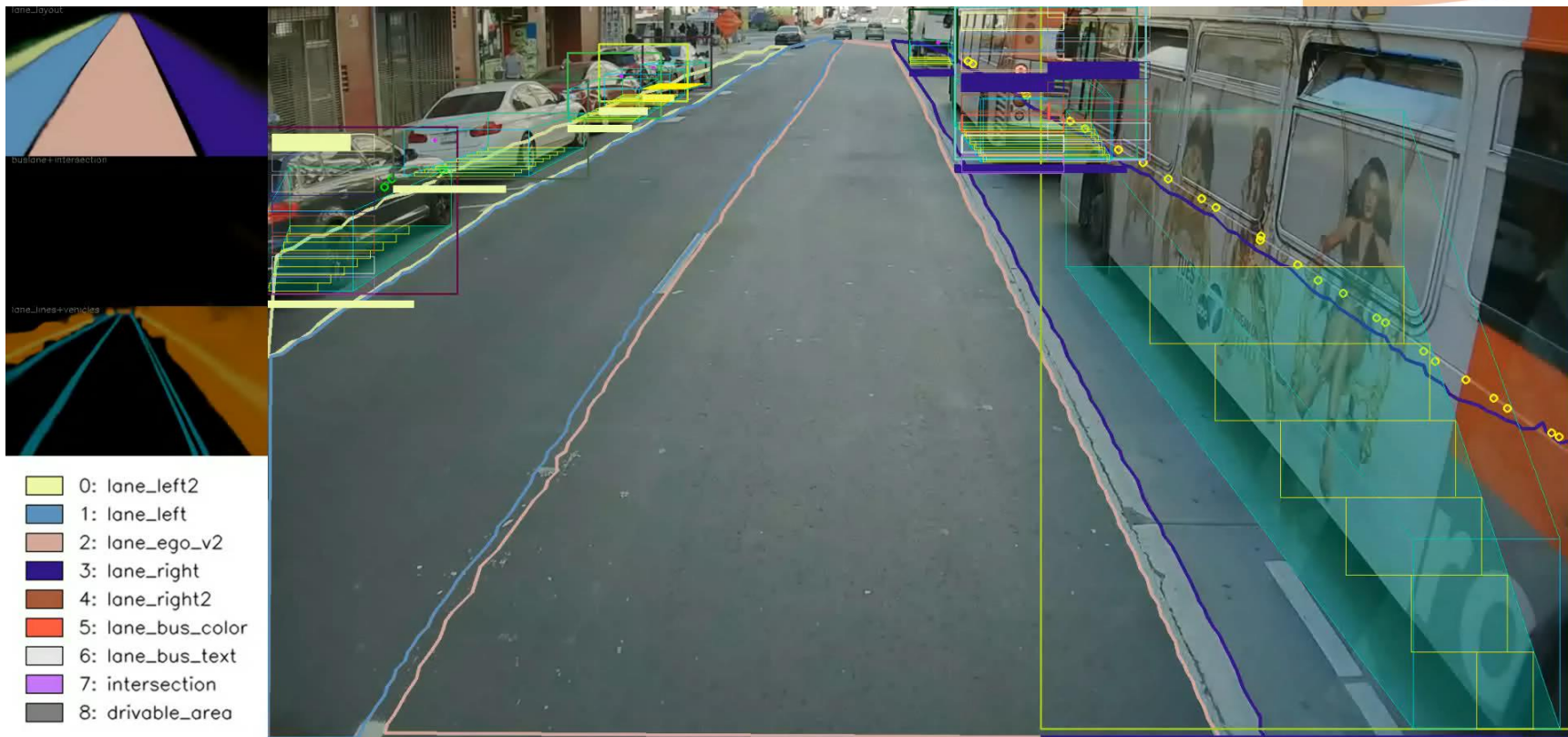


Cloud

Hayden AI

Portal

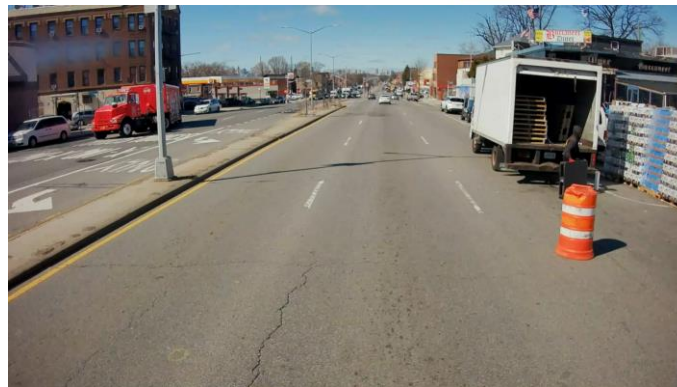
On-Device Processing



One Device - Multiple Use Cases



Bus Stop



Double Parking

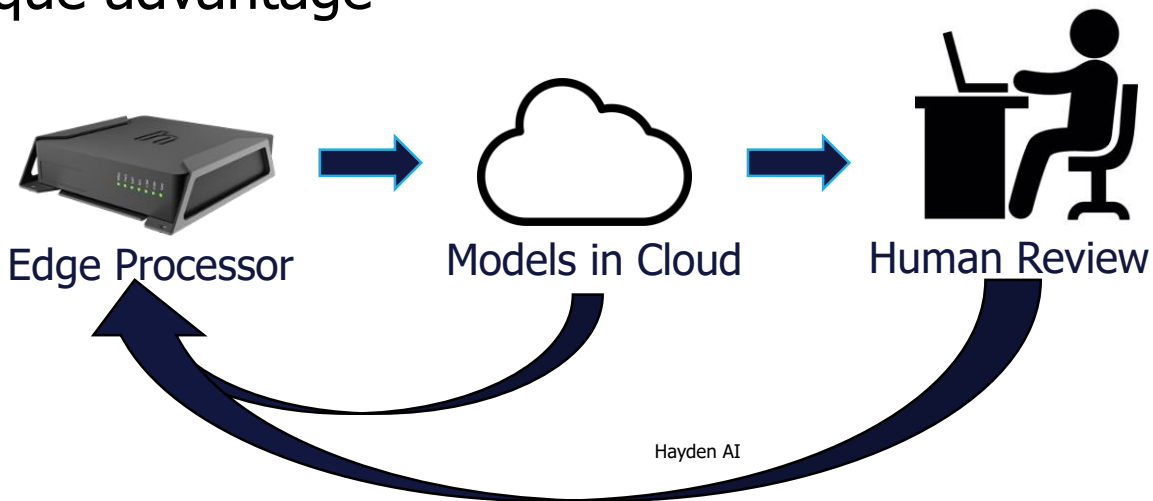


Bike Lane



Salient Aspects

- Edge Processing is Critical
 - 4 GB/hr x 10 hrs/day x 30 days = 1.2 TB
- A unique advantage



Perception Challenges



Hayden AI

License Plate?



Is This a Vehicle?



Is This a Vehicle?



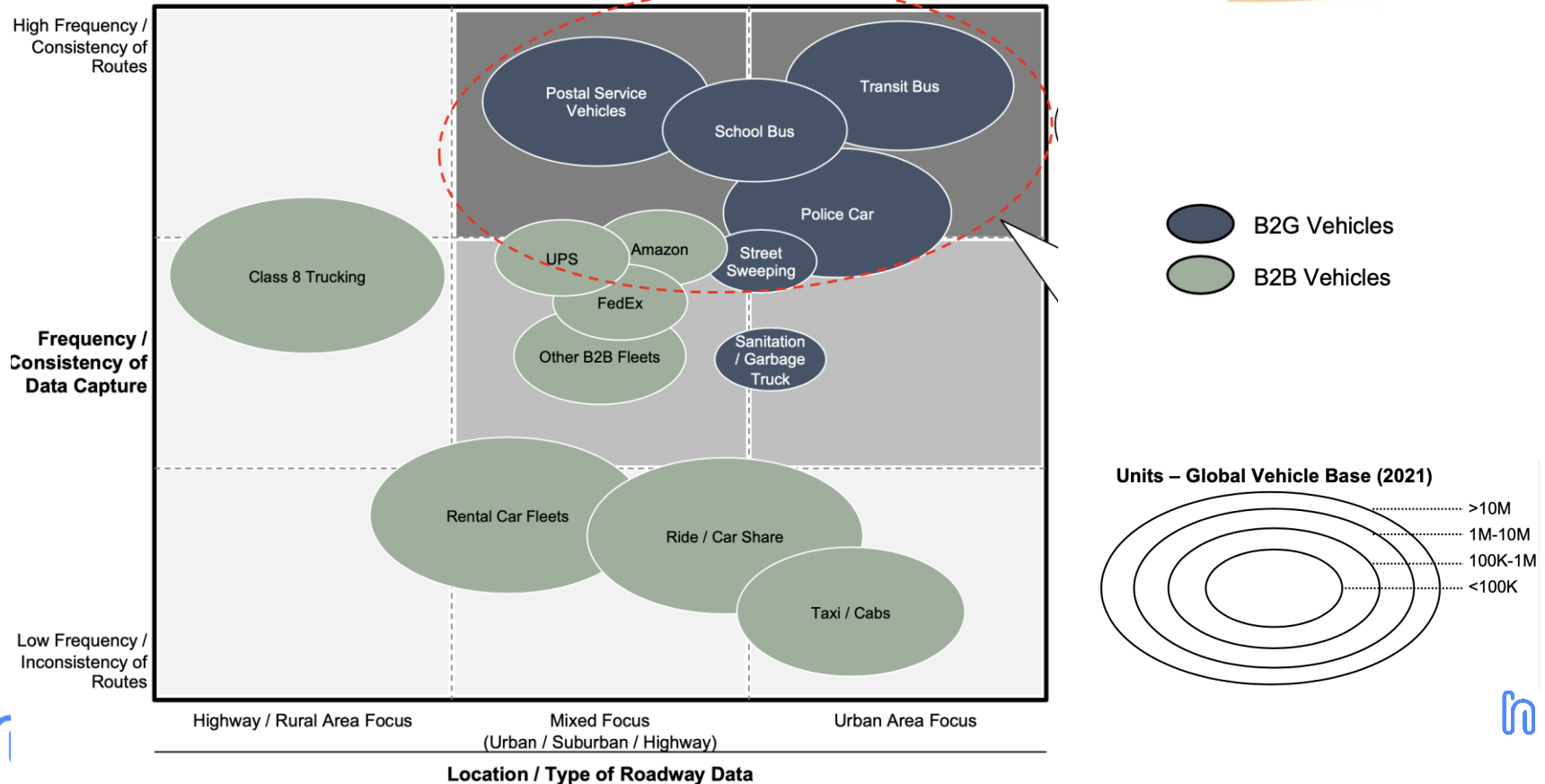
How Do Startups Work with Govt Agencies?

- Technology
 - Performance
 - 98.05% F1 Score (precision & recall) vs 90% FP rate
 - Cost
- Obsessively customer focused & responsive
- Referrals
- Pilots



- Revenue model
 - Large multi-year contracts
 - HaaS – Hardware as a Service
 - Hardware + SaaS

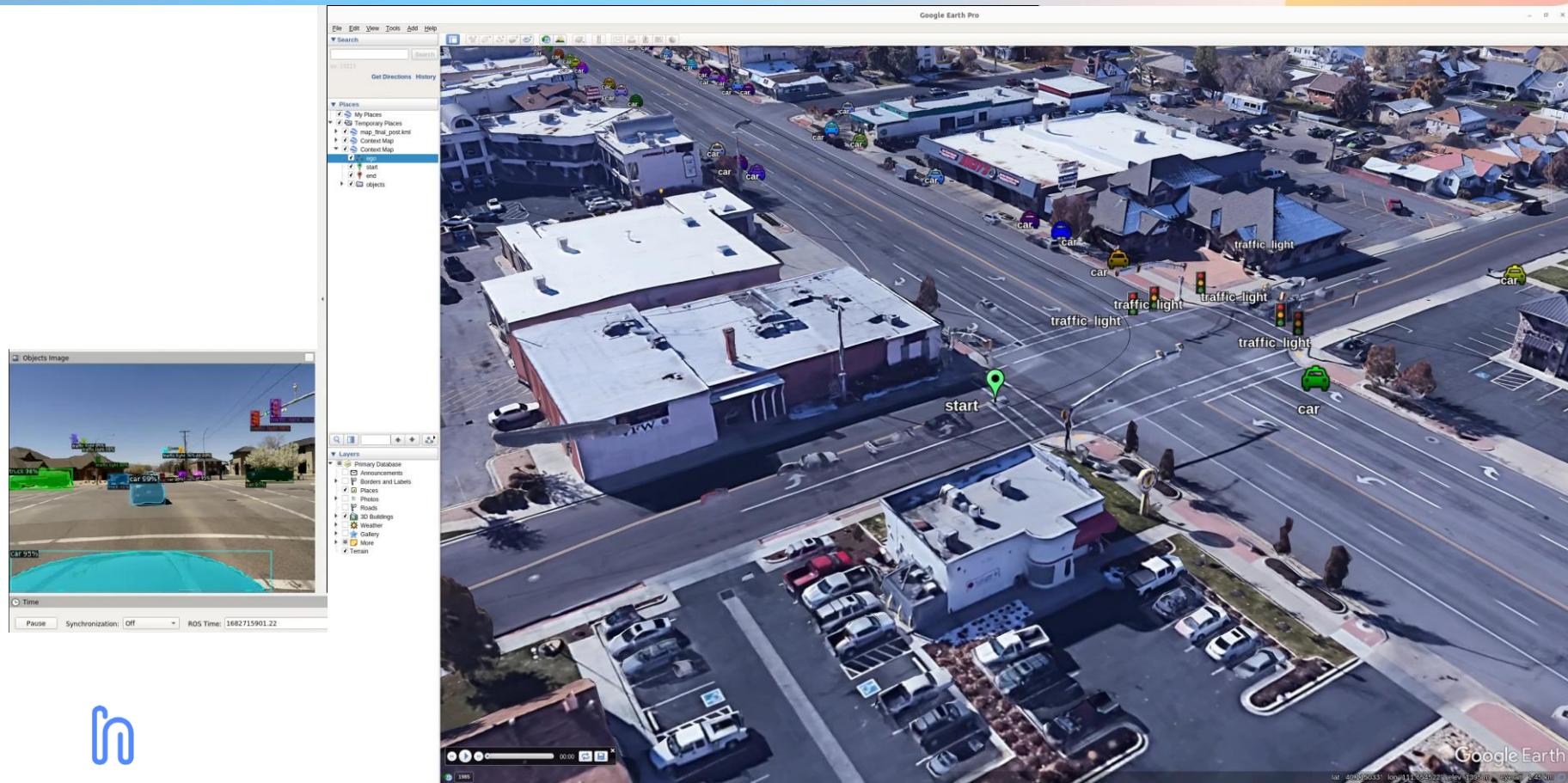
Extremely Rich Urban Area Focused Data



Smart City Insights



Smart City Insights



- Computer Vision helps improve transit efficiency
 - \$8 ROI of “travel time and fleet saving benefits” for \$1
- Single device -> multiple use cases
- Non-safety critical -> path to revenue
- Privacy protecting by design

- <https://www.hayden.ai/platform>
- <https://www.mwcog.org/assets/1/28/10062017 - Item 12 - DO NOT PRINT - Bus Lane Enforcement Study Final Report.pdf>

Extremely Rich Urban Area Focused Data

