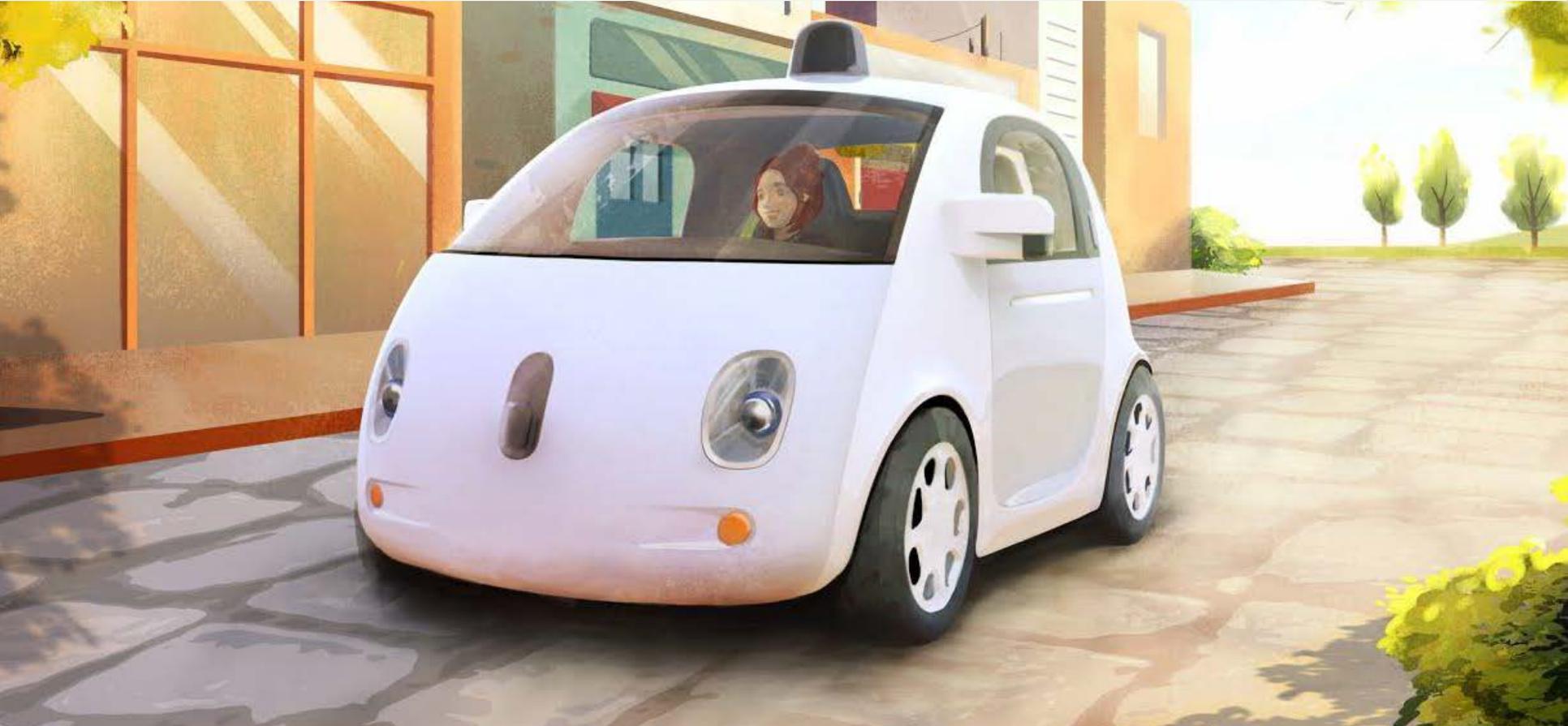


Google Self-Driving Car Project

Sarah Hunter, Head of Public Policy



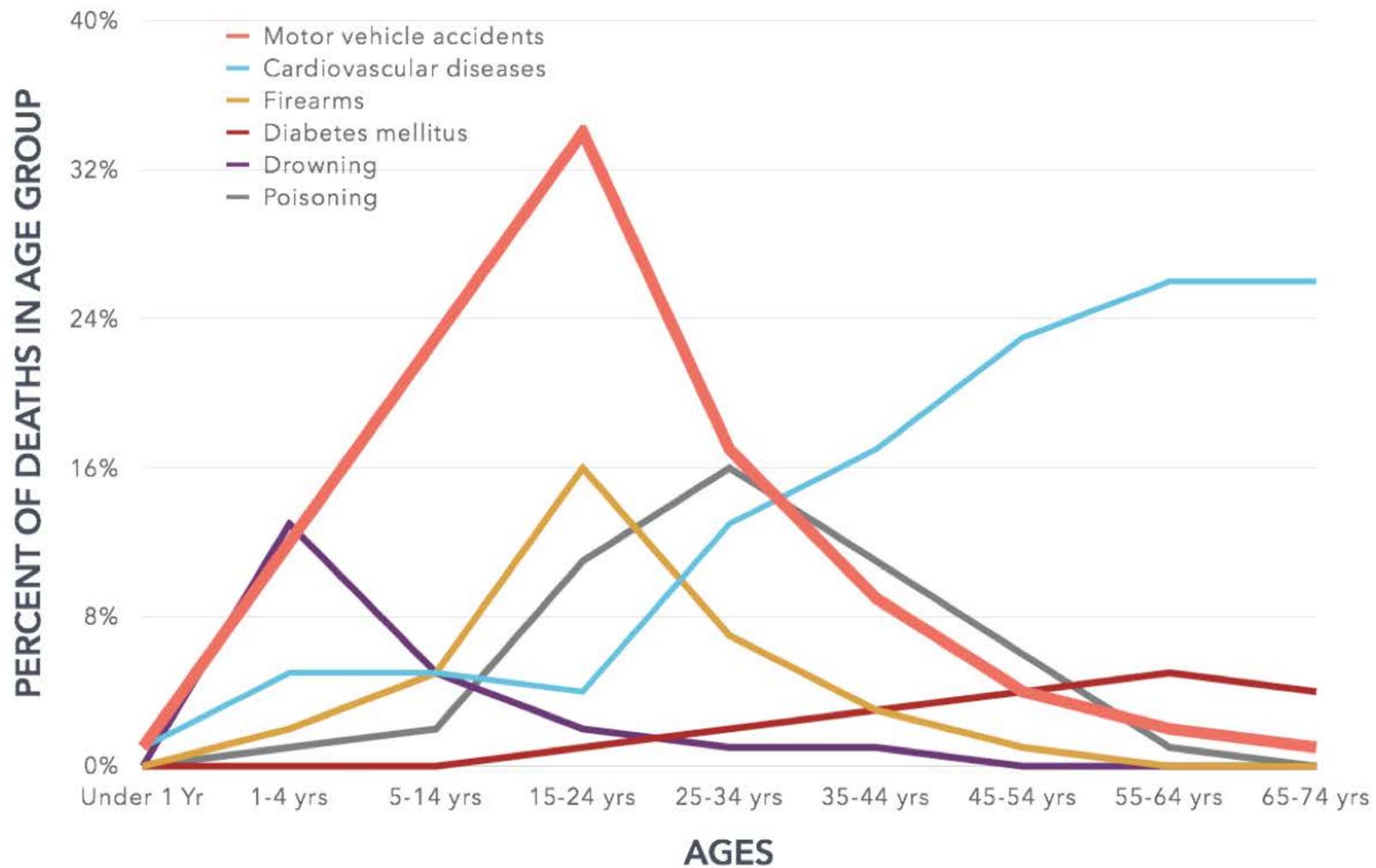








LEADING CAUSES OF DEATH IN THE UNITED STATES



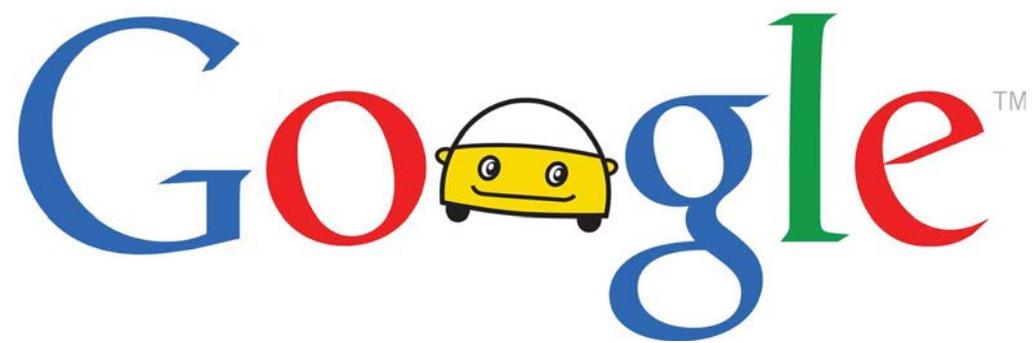








Google™

The image shows the Google logo in its multi-colored font. The letters are: 'G' in blue, 'o' in red, a yellow car with a white roof and a smiling face, 'g' in blue, 'l' in green, and 'e' in red. A small 'TM' trademark symbol is located to the upper right of the 'e'.





Google

self-driving car

6UEJ089



Laser

Camera

Processor

Radar

Position sensor ()

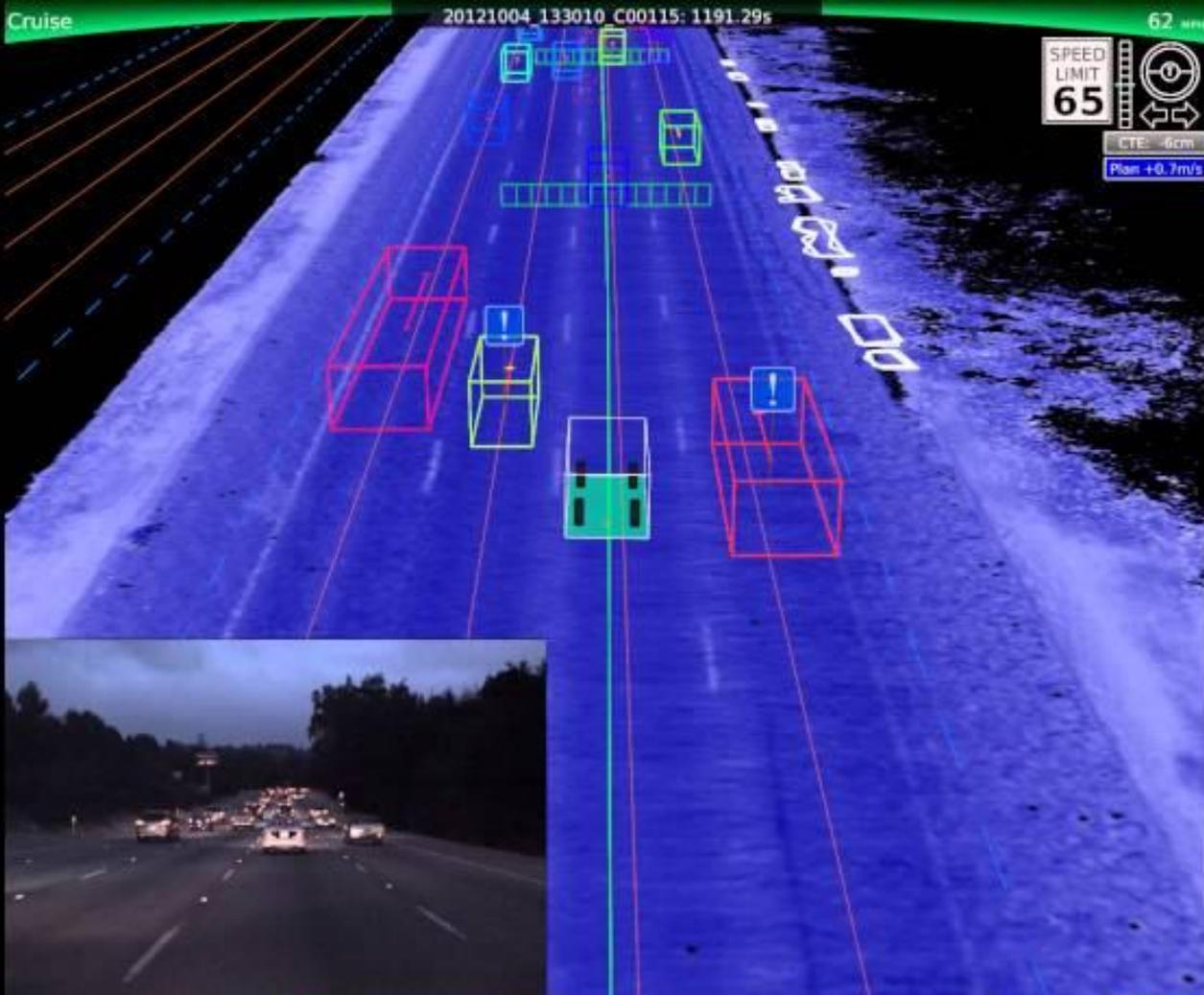
**Orientation sensor
(IMU)**

SPEED LIMIT 65



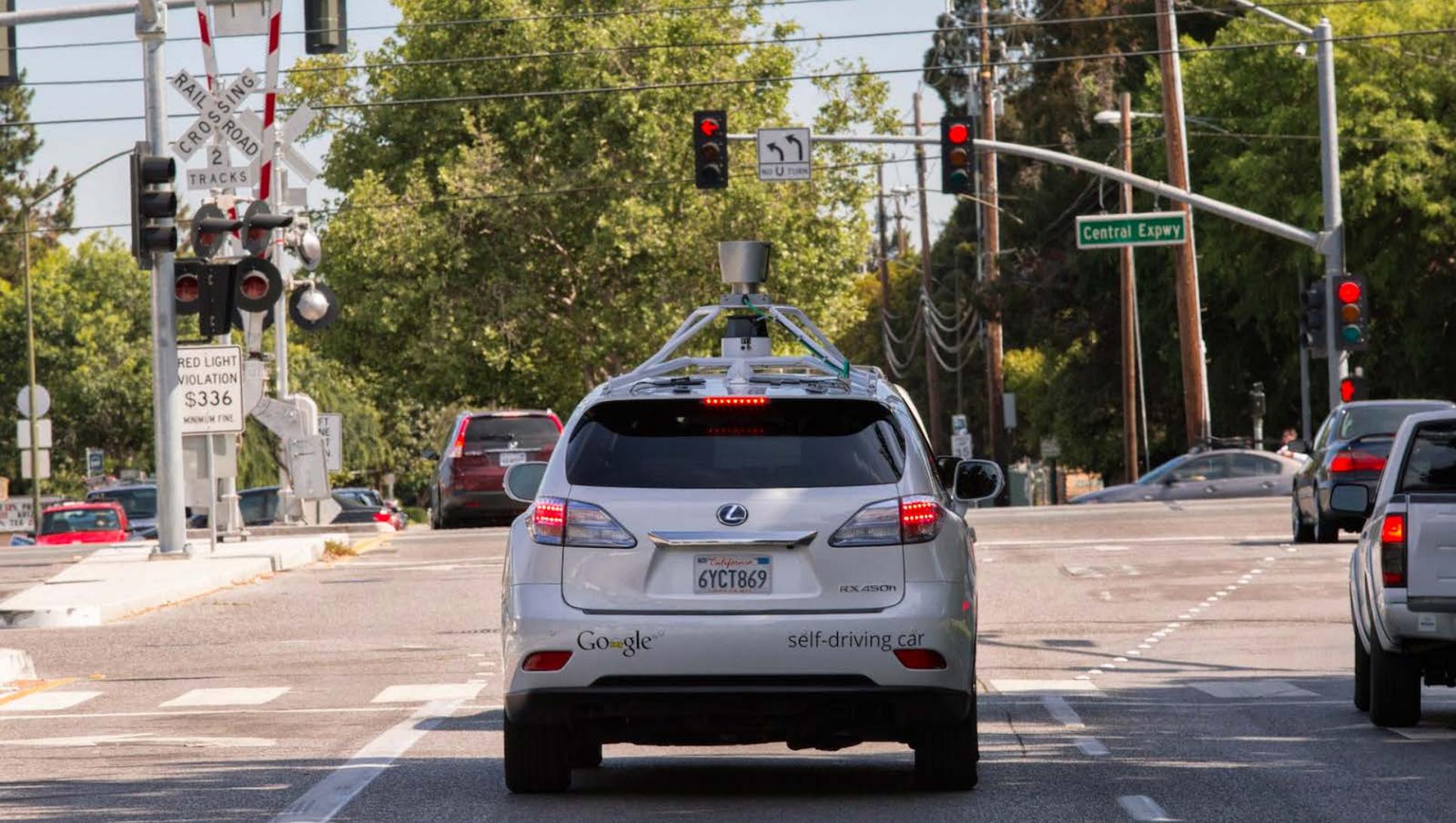
CTE: -6cm

Plan: +0.7m/s



Progress bar with play/pause icon, a green progress indicator, and a time display of 1191.29.

Control buttons for 'Emergency Stop' and 'Apply All'.



RAILROAD
CROSSING
2
TRACKS

RED LIGHT
VIOLATION
\$336
MINIMUM FINE

Central Expwy

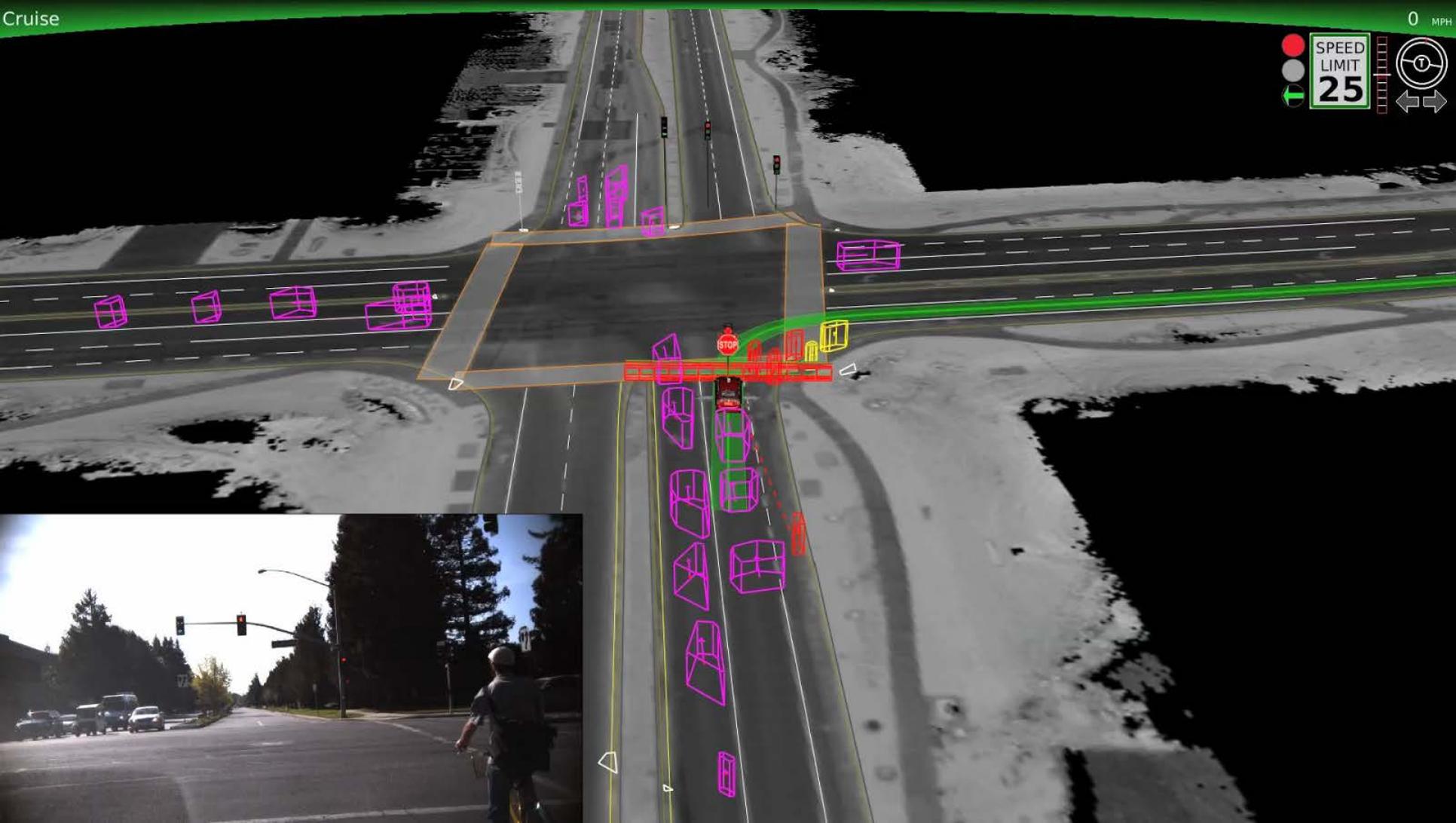
NO U TURN

Google self-driving car

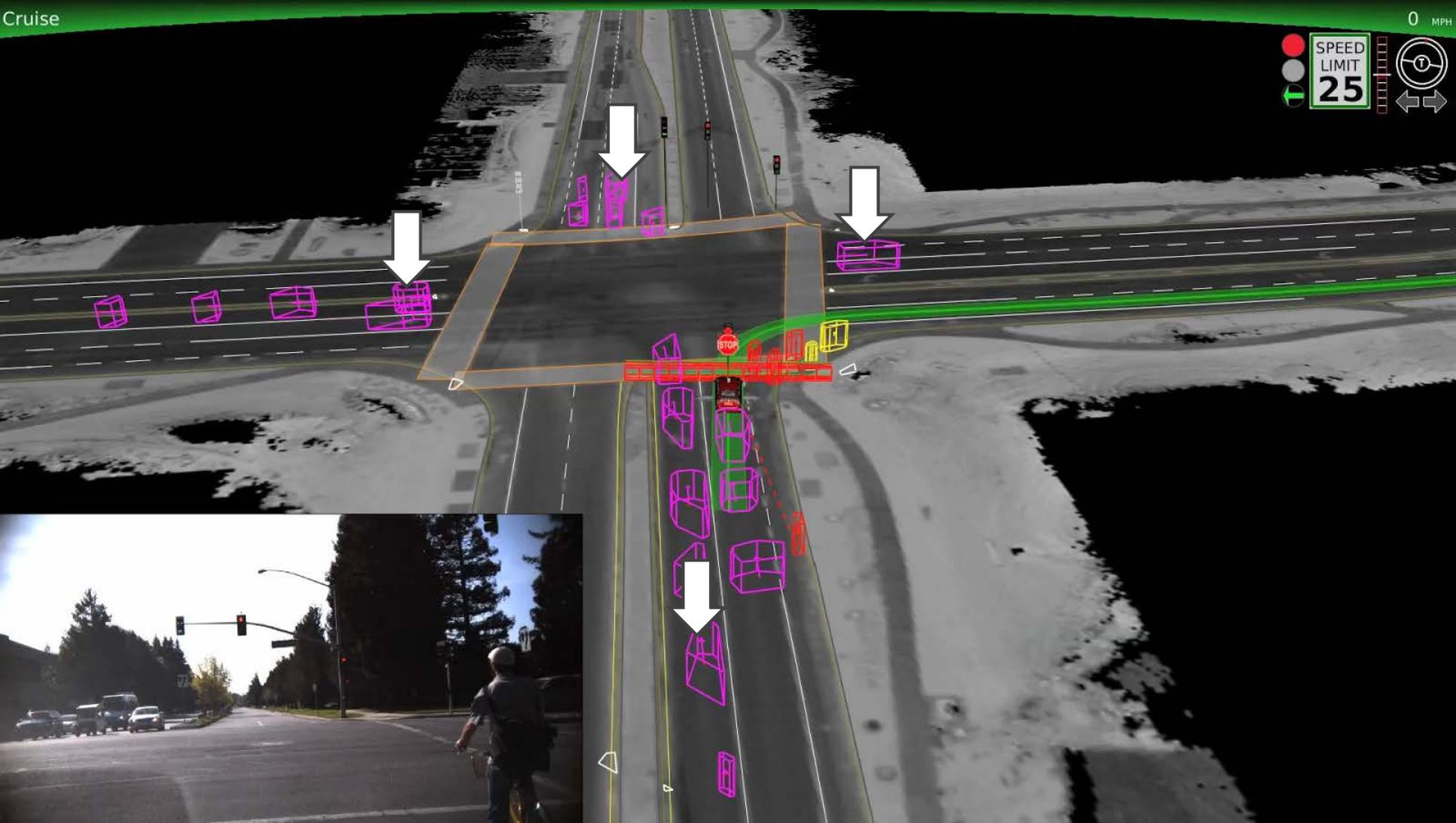
California
6YCT869

RX 450h

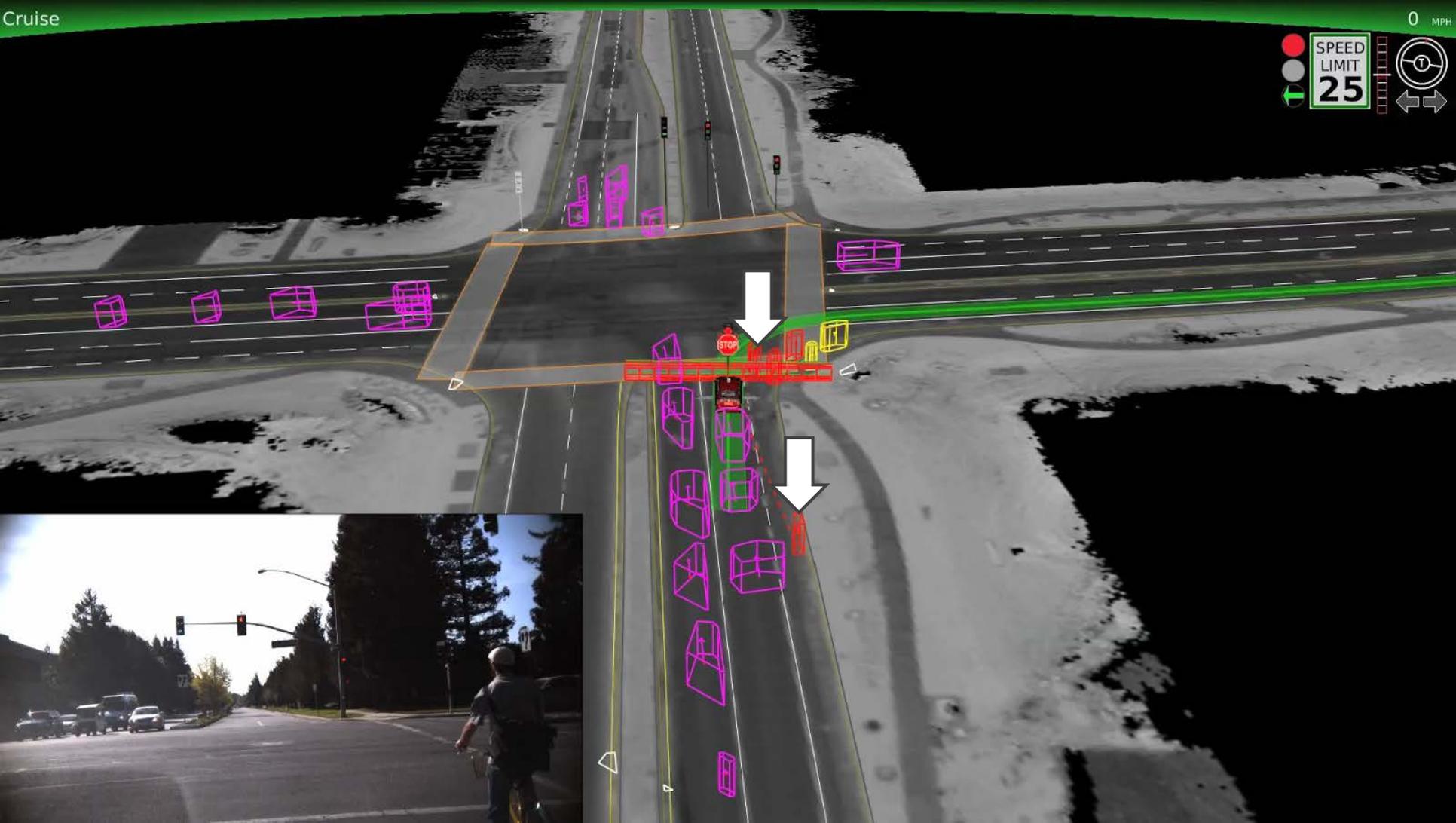
SPEED LIMIT 25



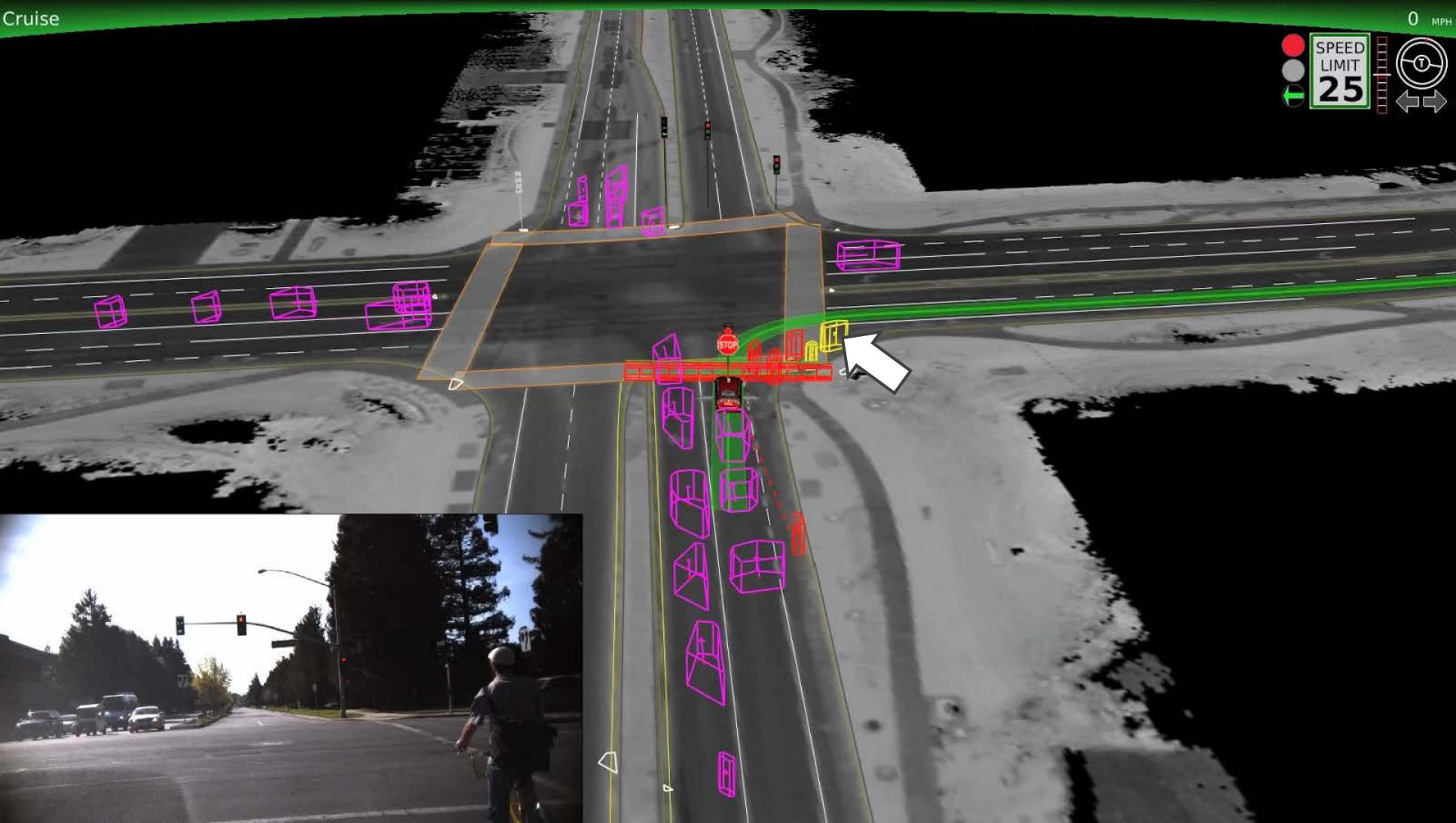
SPEED LIMIT 25



SPEED LIMIT 25

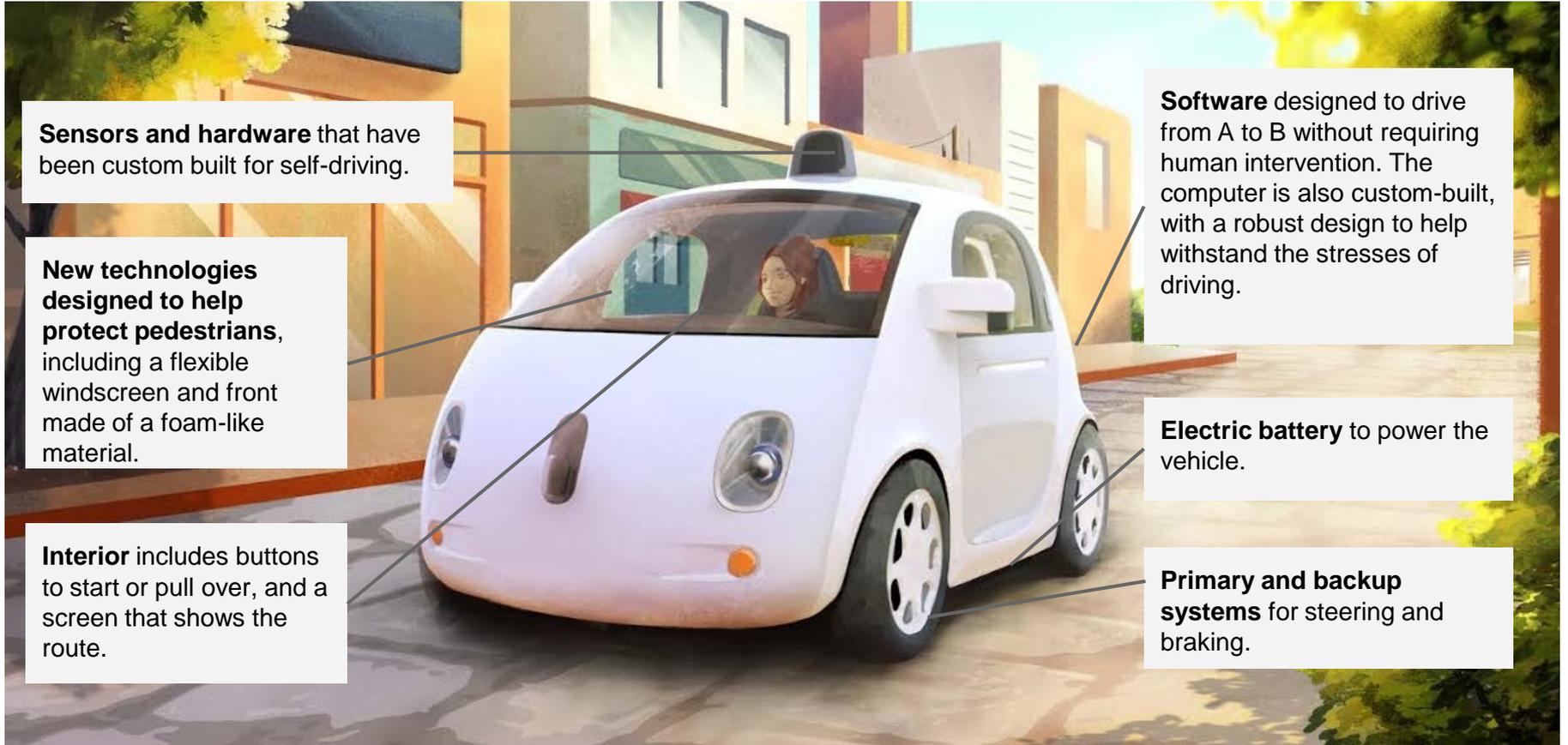


SPEED LIMIT 25









Sensors and hardware that have been custom built for self-driving.

New technologies designed to help protect pedestrians, including a flexible windscreen and front made of a foam-like material.

Interior includes buttons to start or pull over, and a screen that shows the route.

Software designed to drive from A to B without requiring human intervention. The computer is also custom-built, with a robust design to help withstand the stresses of driving.

Electric battery to power the vehicle.

Primary and backup systems for steering and braking.



Q&A



Optional Slides

Google[x] mission

Invent and launch
moonshot technologies
that make the world
a radically better place



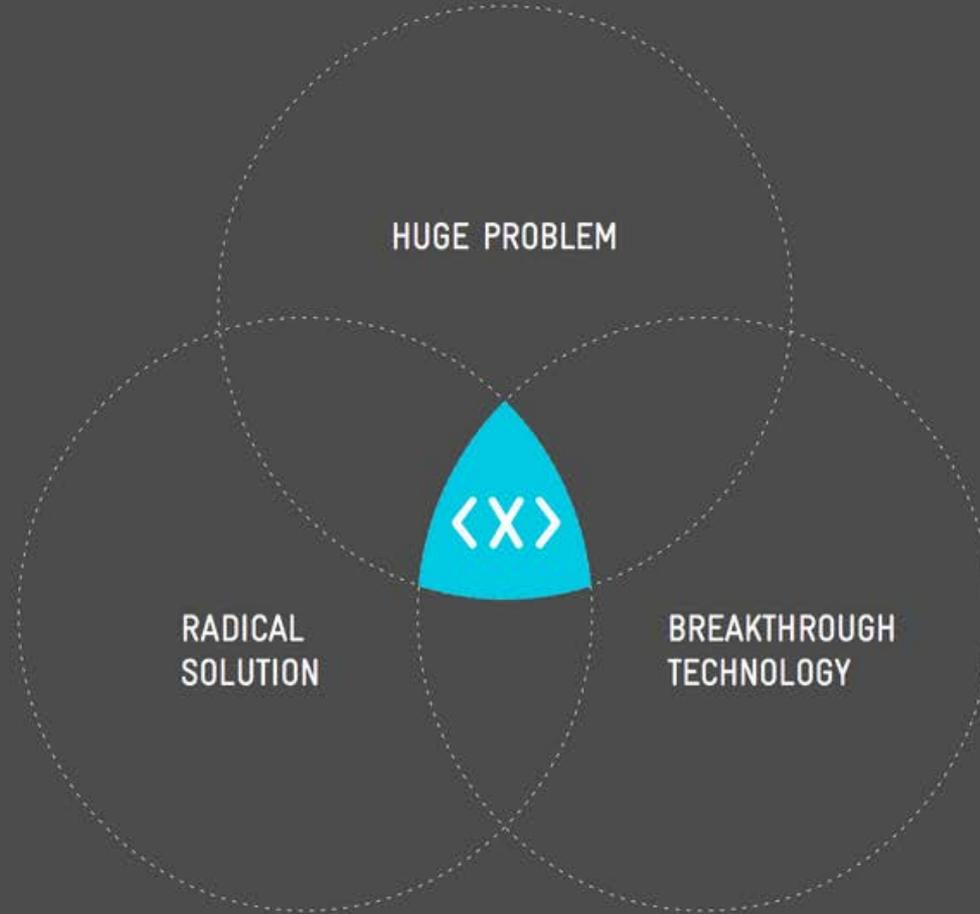


Warren Eaton (L), mechanic, Lincoln Beachey (seated) and two helpers. Beachey is seated in the Gnome rotary engine powered "Little Looper", 1915.

What is a moonshot?

OPTIONAL SLIDE: What is a moonshot

[delete me before using this slide]



OPTIONAL VIDEO: Steve Mahan video

[delete me before using this slide]



OPTIONAL VIDEO: Project History

[delete me before using this slide]

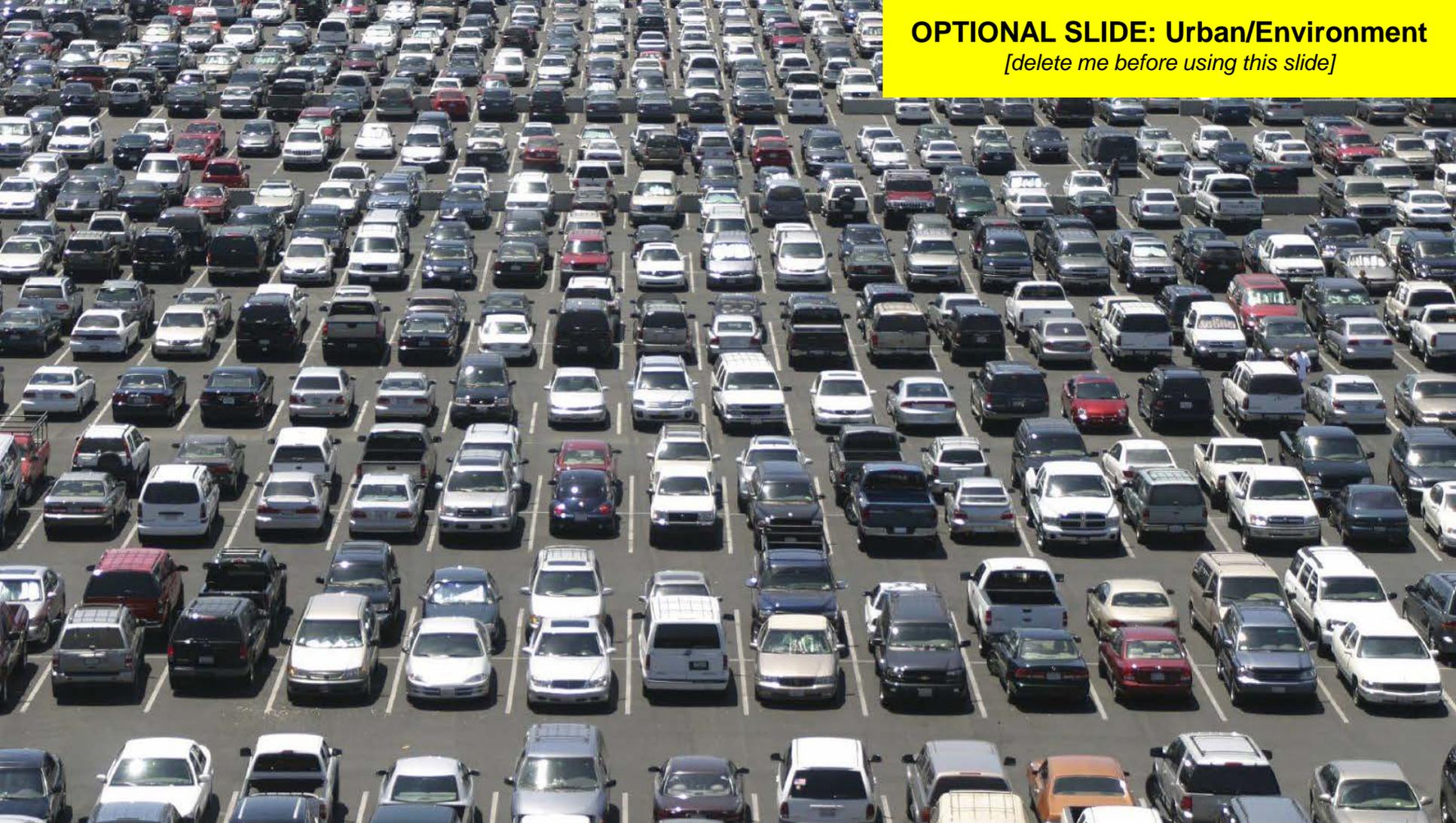


OPTIONAL SLIDE: Accessibility/Seniors

[delete me before using this slide]



OPTIONAL SLIDE: Urban/Environment
[delete me before using this slide]



OPTIONAL VIDEO: A ride in the car

[delete me before using this slide]



WORK IN PROGRESS

SLIDES FOLLOW

In process of drafting more technical content, but these slides have not been approved yet. Please do not use for now.

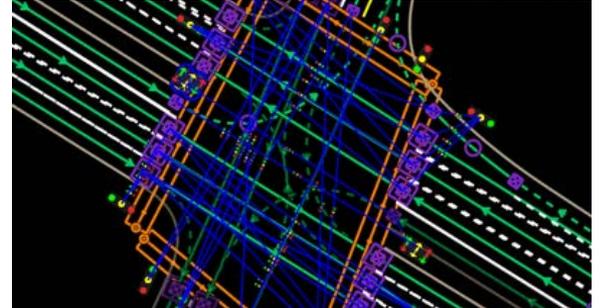
OPTIONAL SLIDE: Safety drivers video

[delete me before using this slide]

video coming soon

Approaches to the Driving Problem

- Human-Like
 - Signs, existing infrastructure
 - Really hard perception problem
- Specialized Infrastructure
 - Electronic railway, centralized planning
 - Expensive, exclusive access
- Our Approach: Virtual Infrastructure
 - Precise, highly annotated maps
 - Used to aid perception & planning
 - Have to keep the map up-to-date

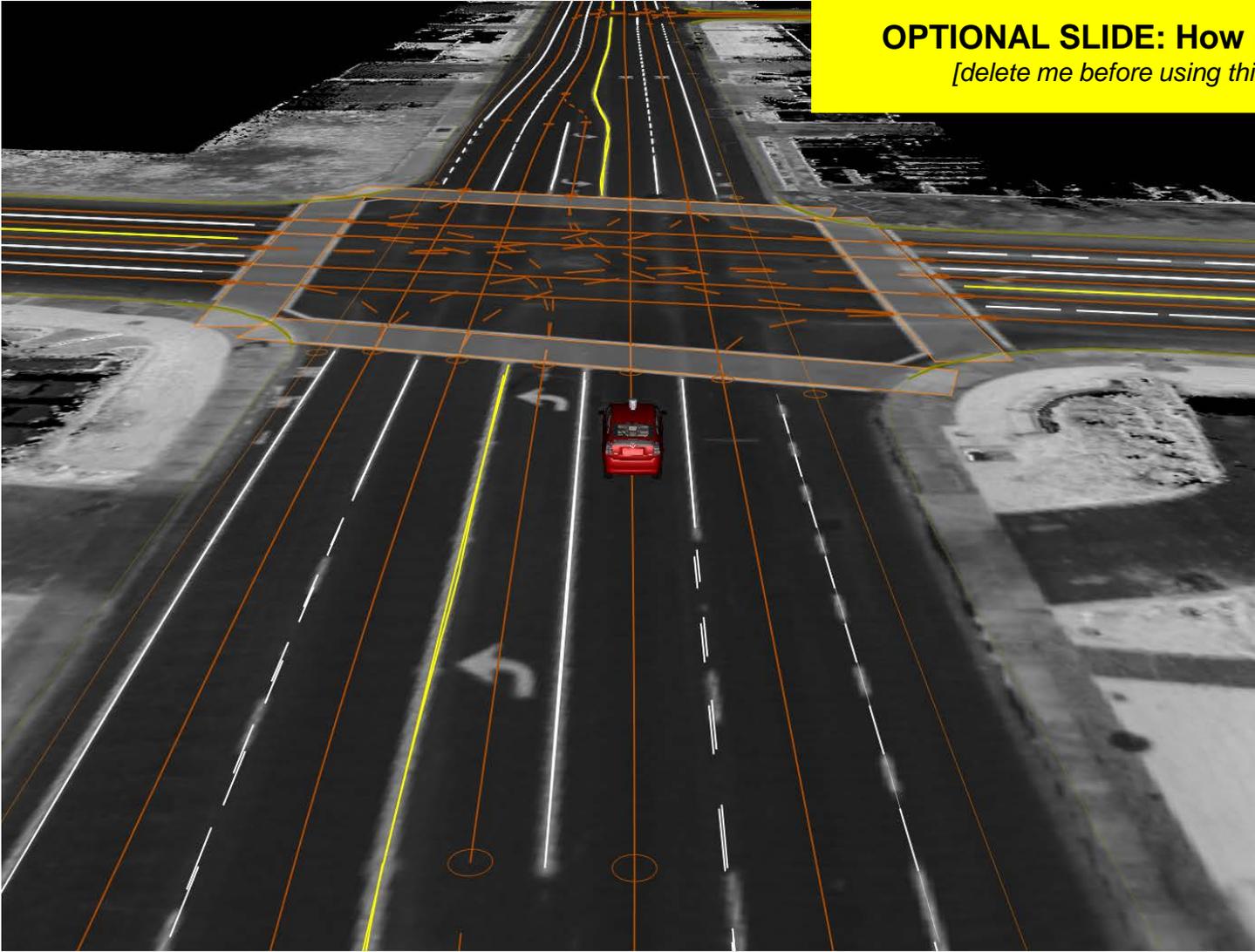


- 1 Where am I?
- 2 What's around me?
- 3 What will happen next?
- 4 What should I do?

1

OPTIONAL SLIDE: How it works 2

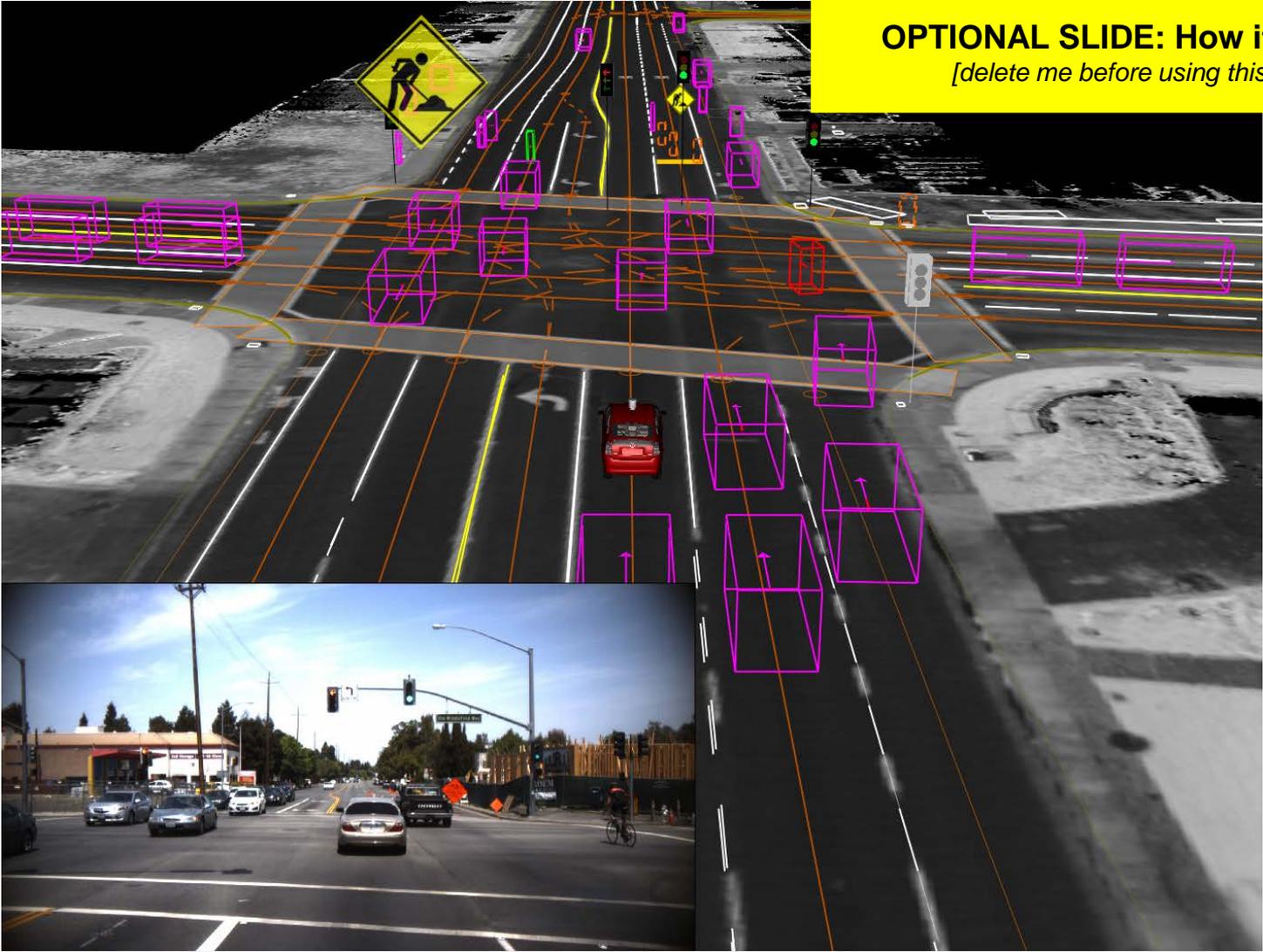
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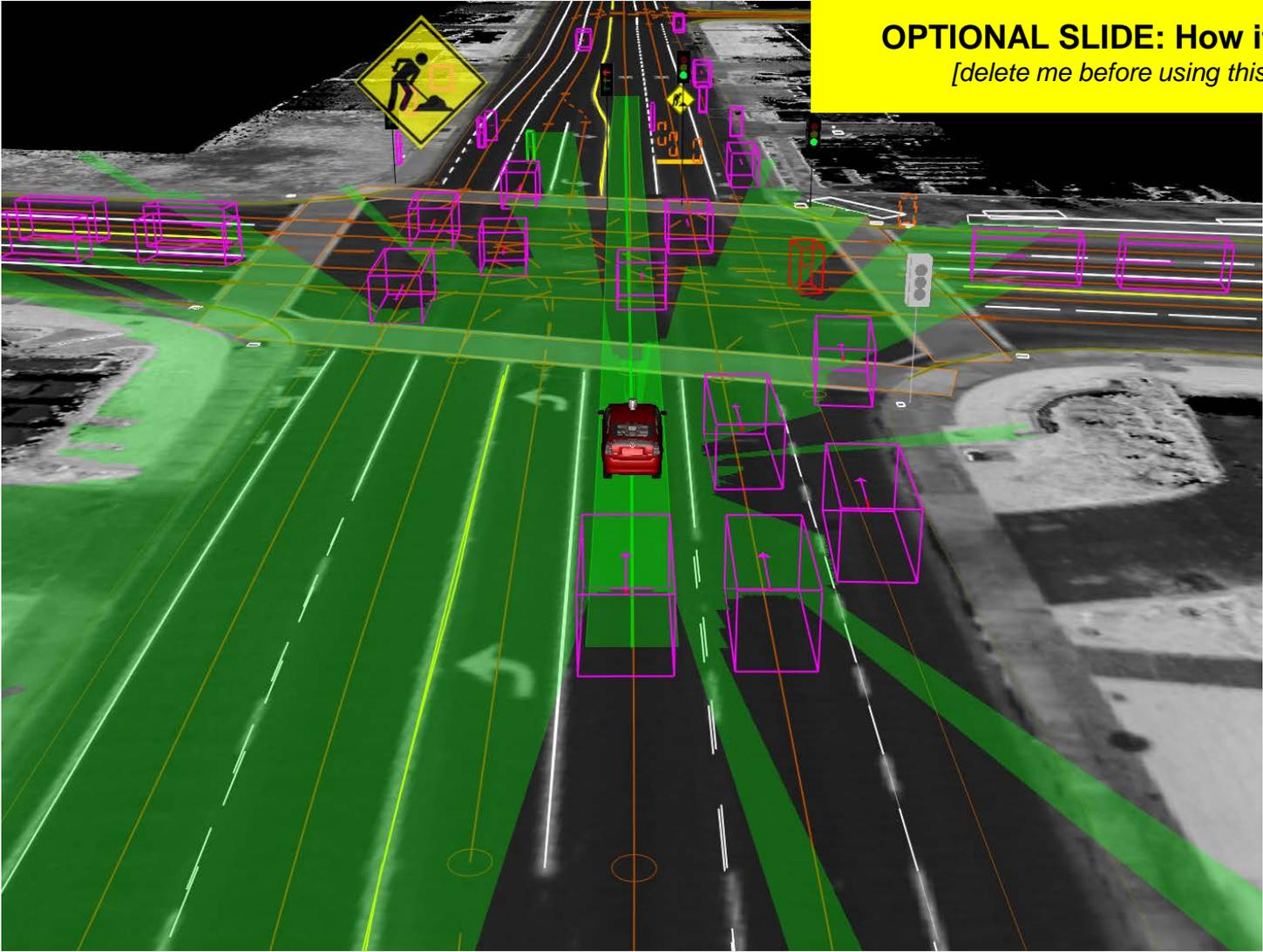
2

OPTIONAL SLIDE: How it works 3

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2



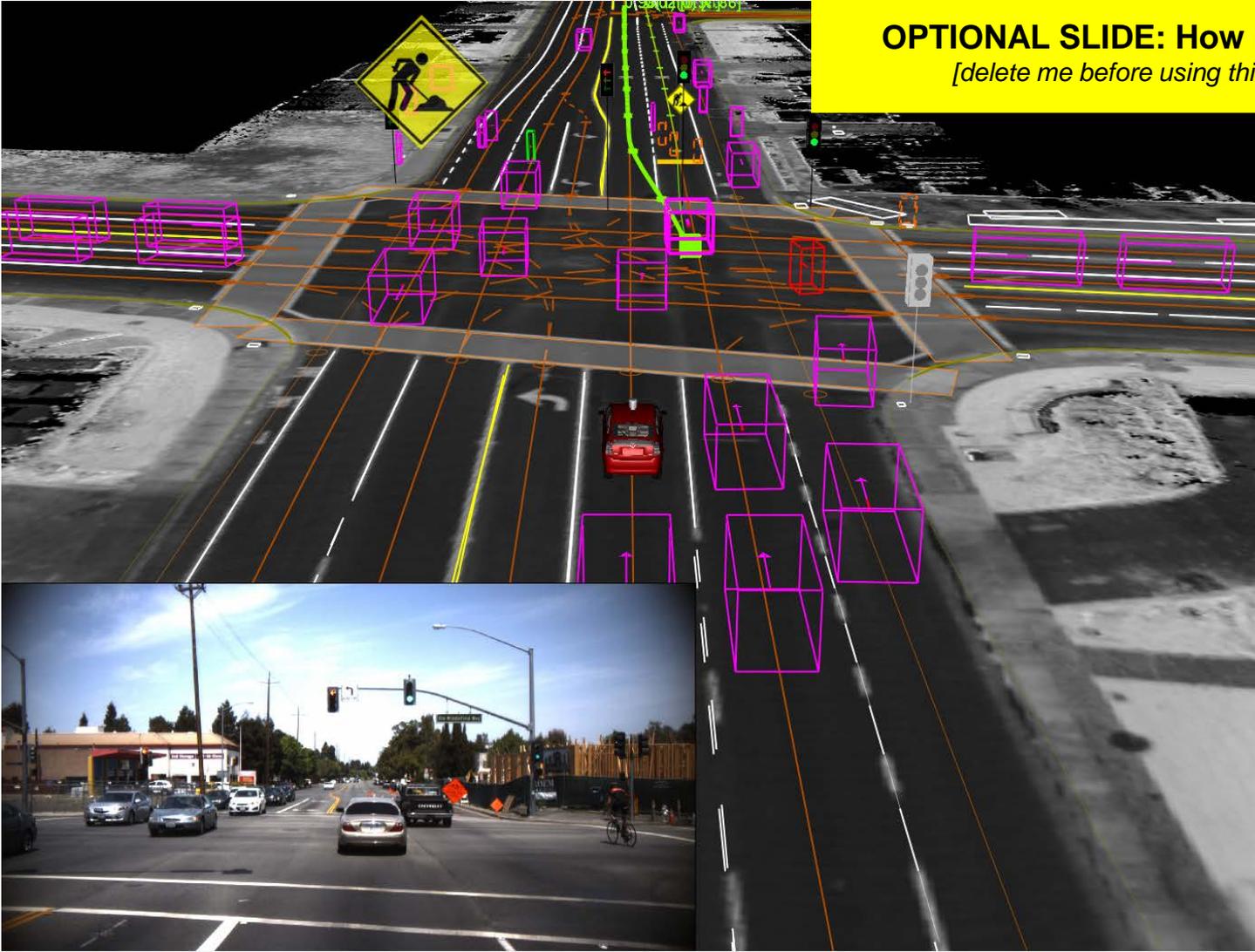
OPTIONAL SLIDE: How it works 4

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3

OPTIONAL SLIDE: How it works 5

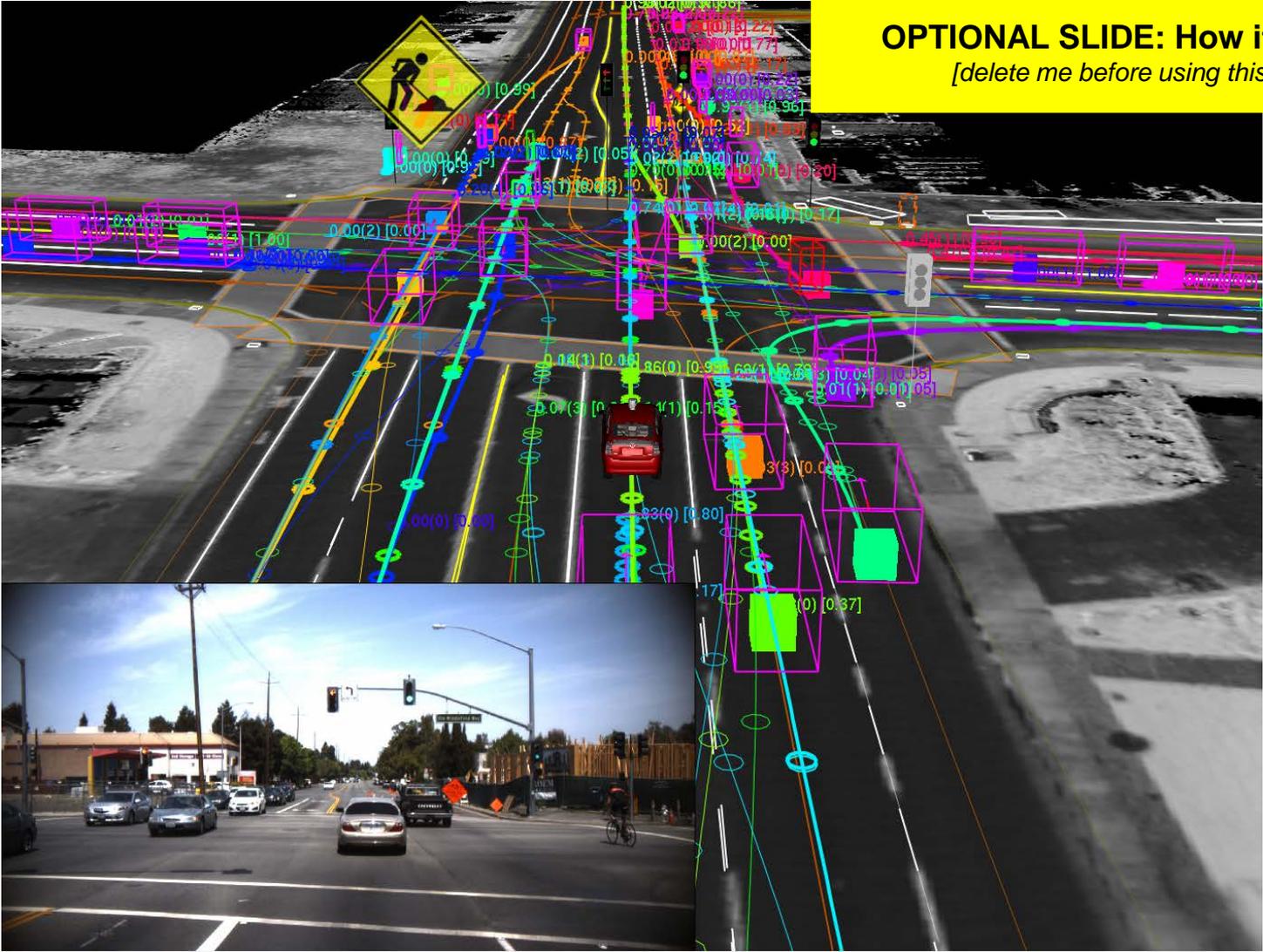
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3

OPTIONAL SLIDE: How it works 6

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4

OPTIONAL SLIDE: How it works 7

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