Data Processing by DRIVE PX2

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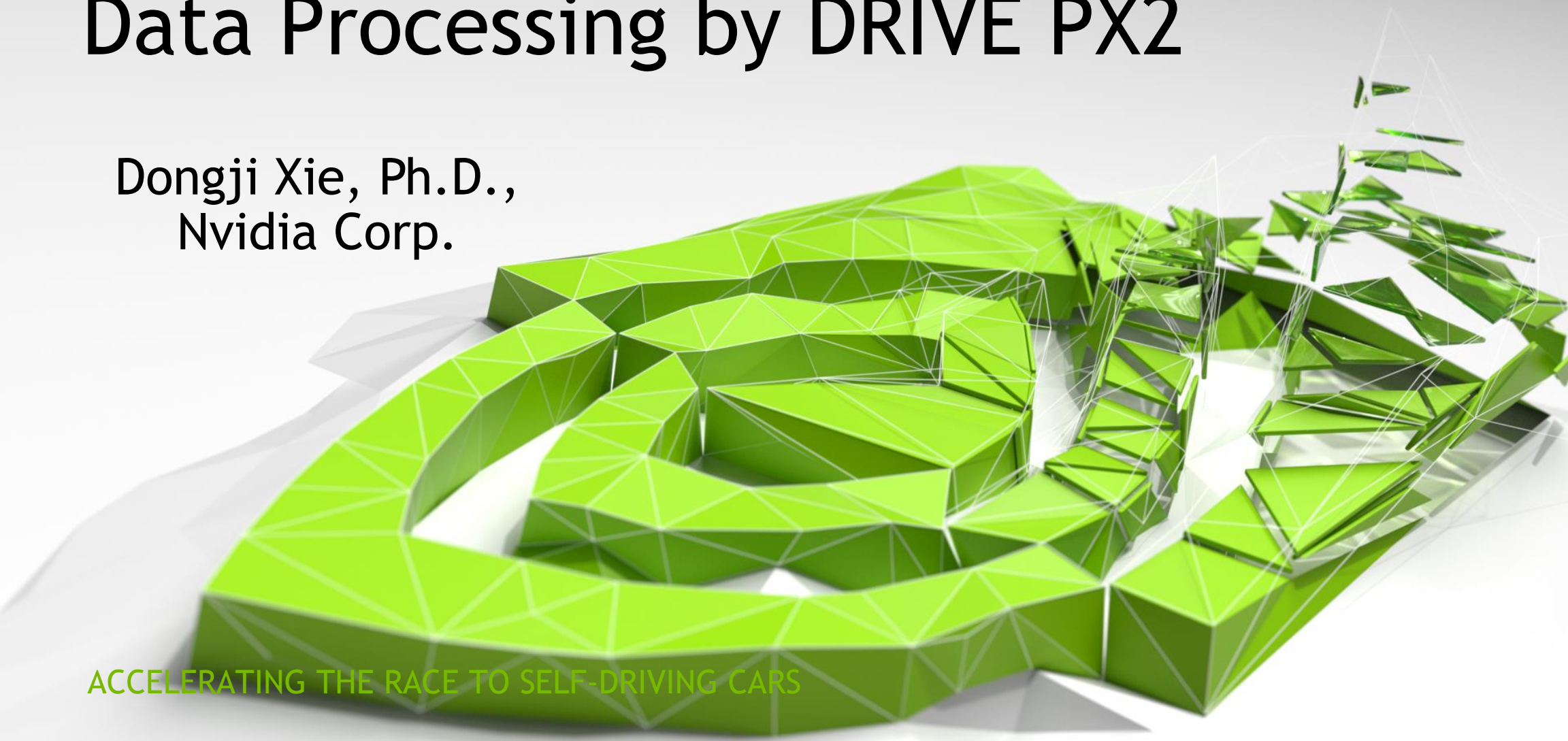


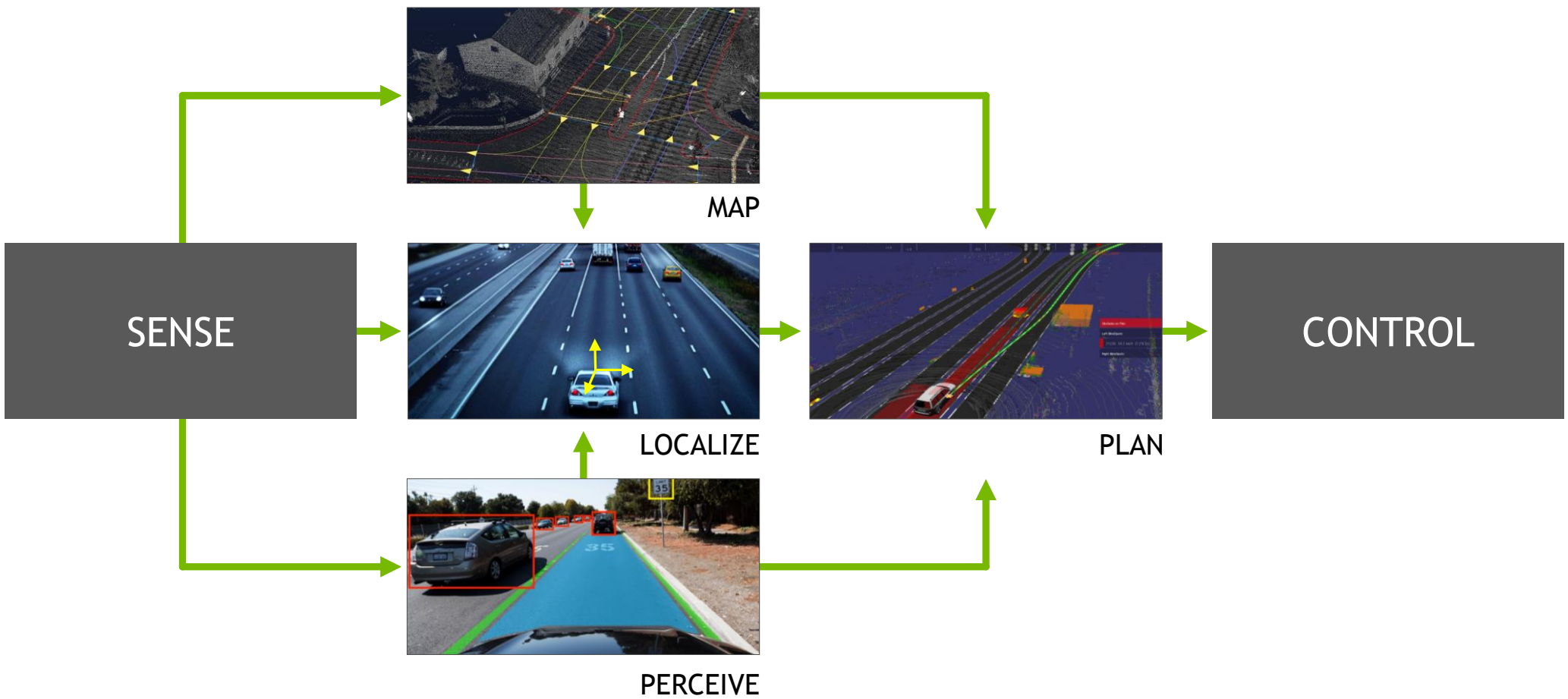
ACCELERATING THE RACE TO SELF-DRIVING CARS

Autonomous Vehicle (AV) is coming sooner than we were thinking---

- >10M AVs may be on the road by 2020?
- Autocruise/Co-pilot is the first step

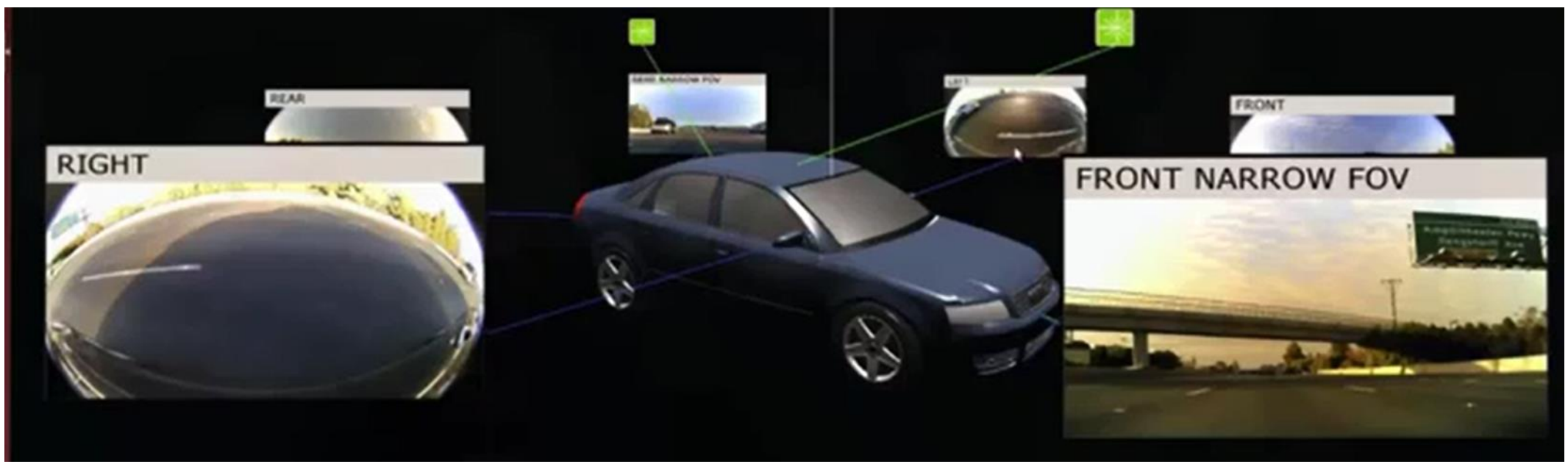
- Data processing is the key
  - Data collection
  - Data Analysis
  - Responses/Control

The Basic Autonomous Driving Loop



Driving

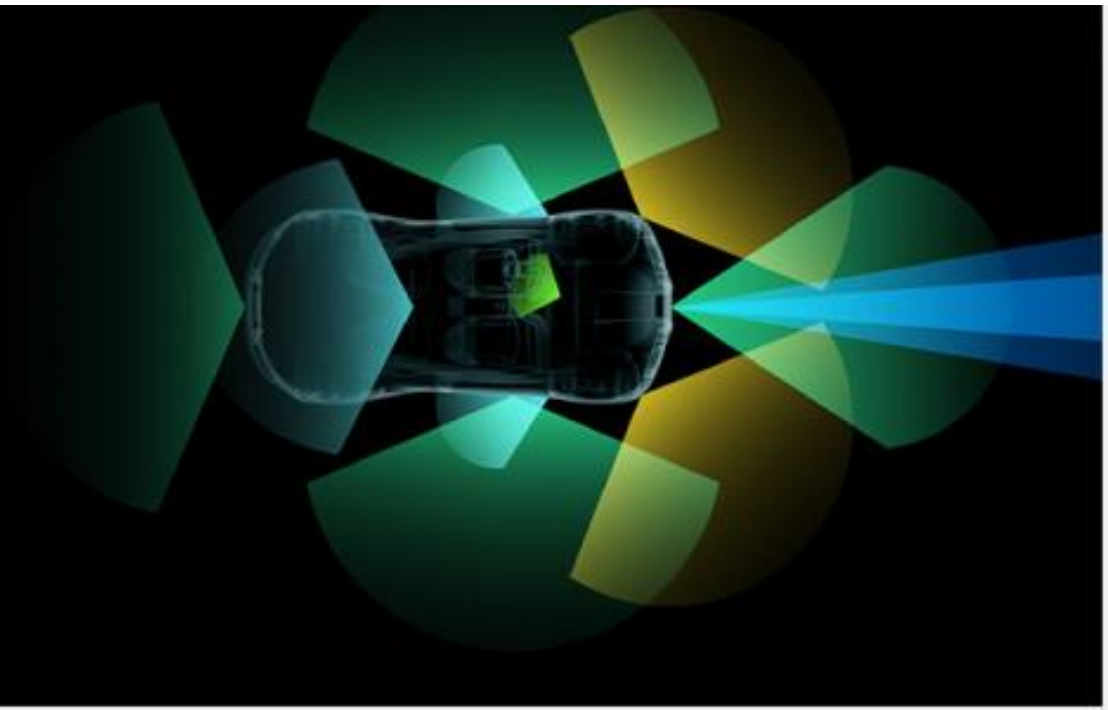

I can now drive you to work based on mapping previous
Mapping-to-Driving
Co-Pilot
Guardian Angel


REAR
RIGHT
FRONT
FRONT NARROW FOV

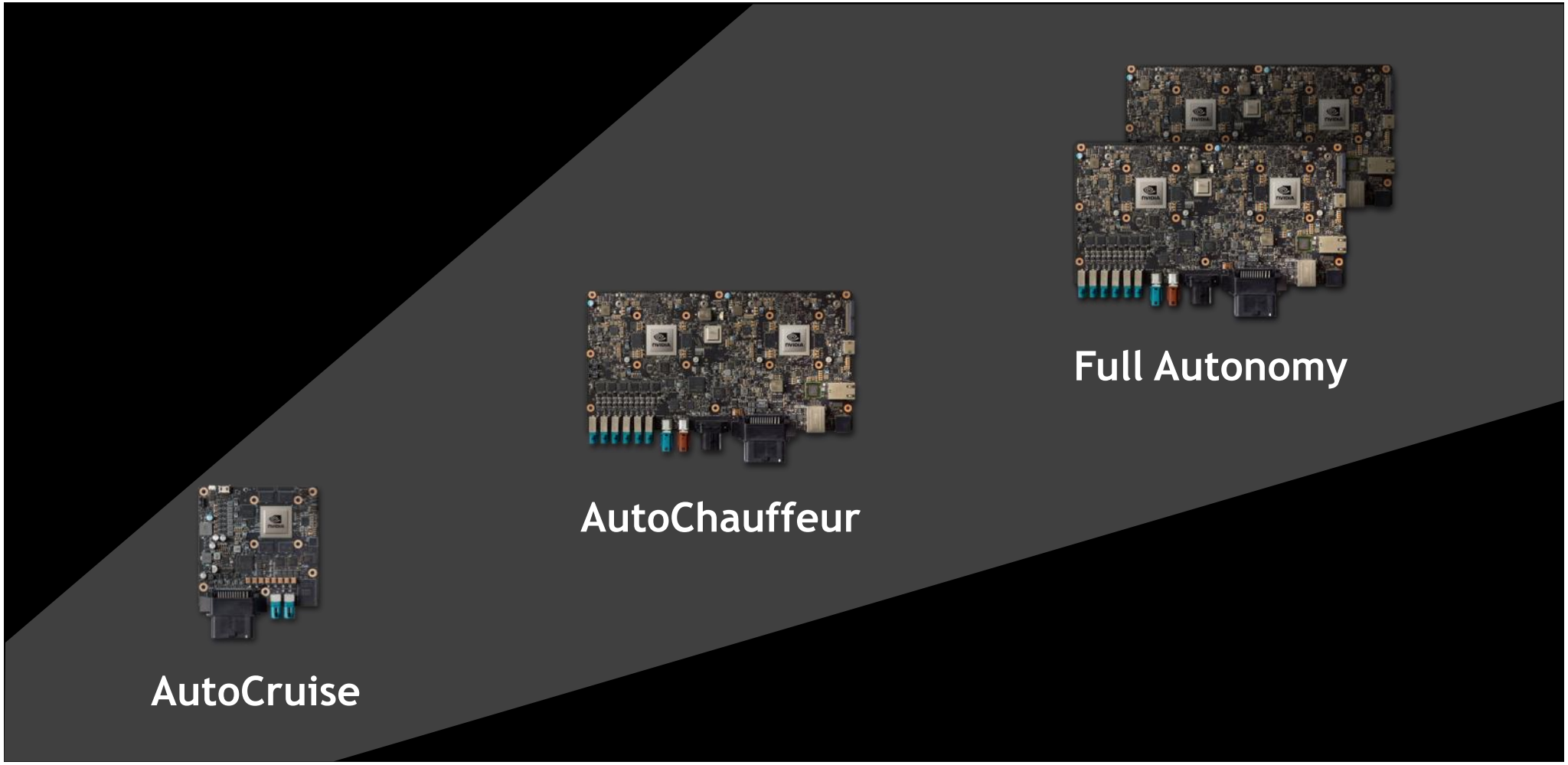
Sensor Fusion

SENSOR FUSION

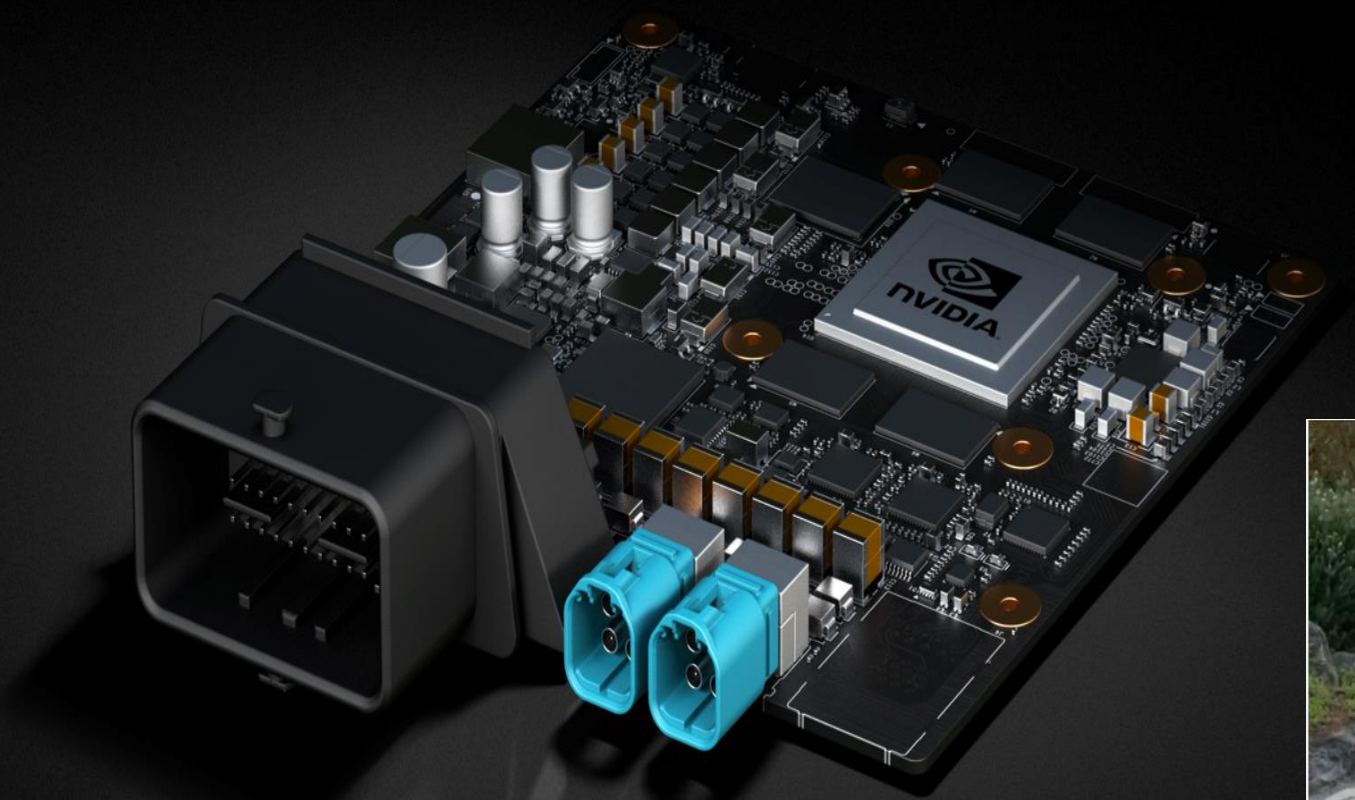
DRIVE PX 2 systems can fuse data from multiple cameras, as well as lidar, radar, and ultrasonic sensors. This allows algorithms to accurately understand the full 360-degree environment around the car to produce a robust representation, including static and dynamic objects. Use of Deep Neural Networks (DNN) for the detection and classification of objects dramatically increases the accuracy of the resulting fused sensor data.



NVIDIA DRIVE PX 2

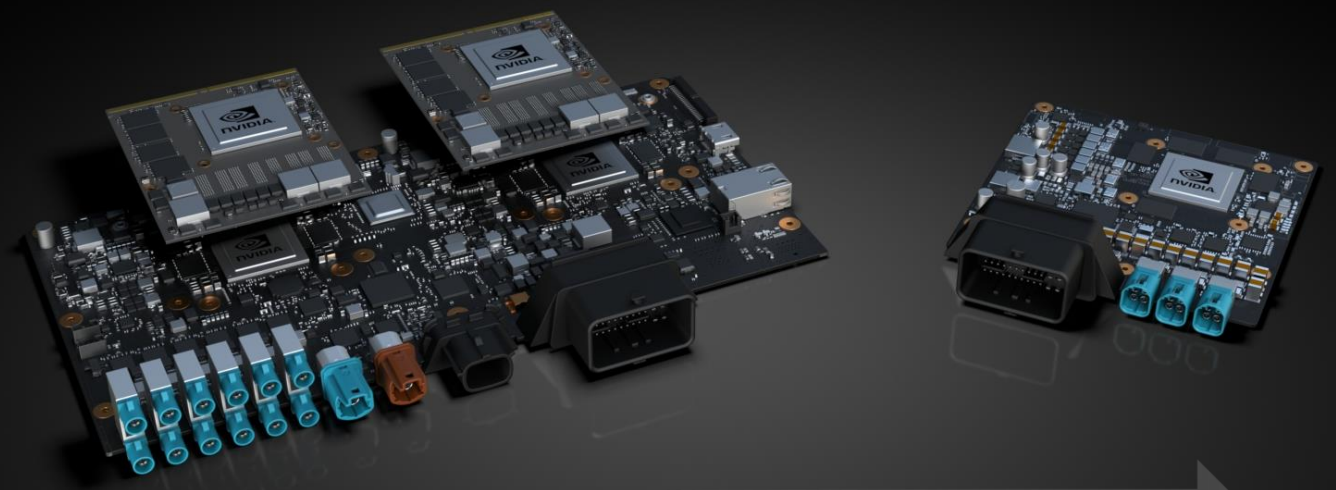


NVIDIA DRIVE PX2 AUTOCRUISE + MAPPING



INTRODUCING XAVIER

AI SUPERCOMPUTER SOC



ONE ARCHITECTURE

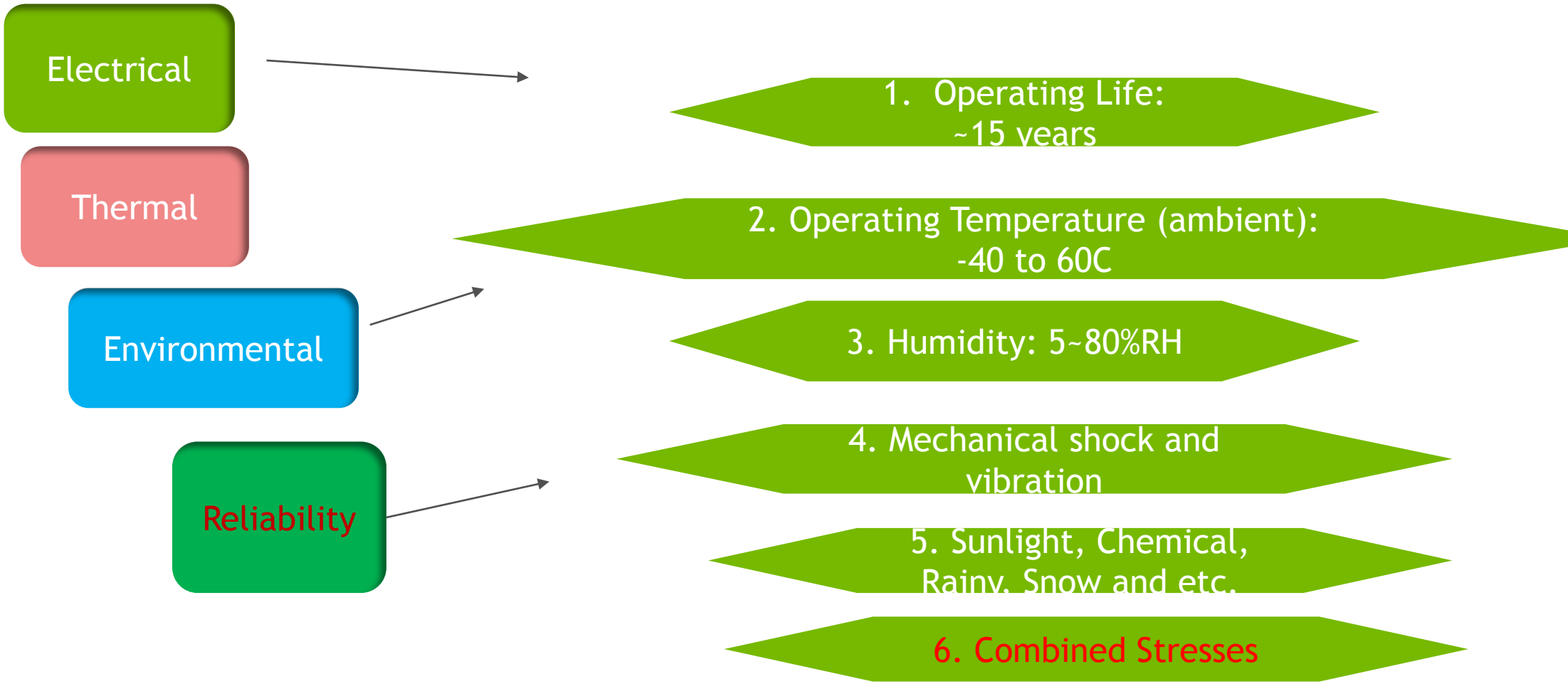
DRIVE PX 2

2 PARKER + 2 PASCAL GPU | 20 TOPS DL | 120 SPECINT | 80W

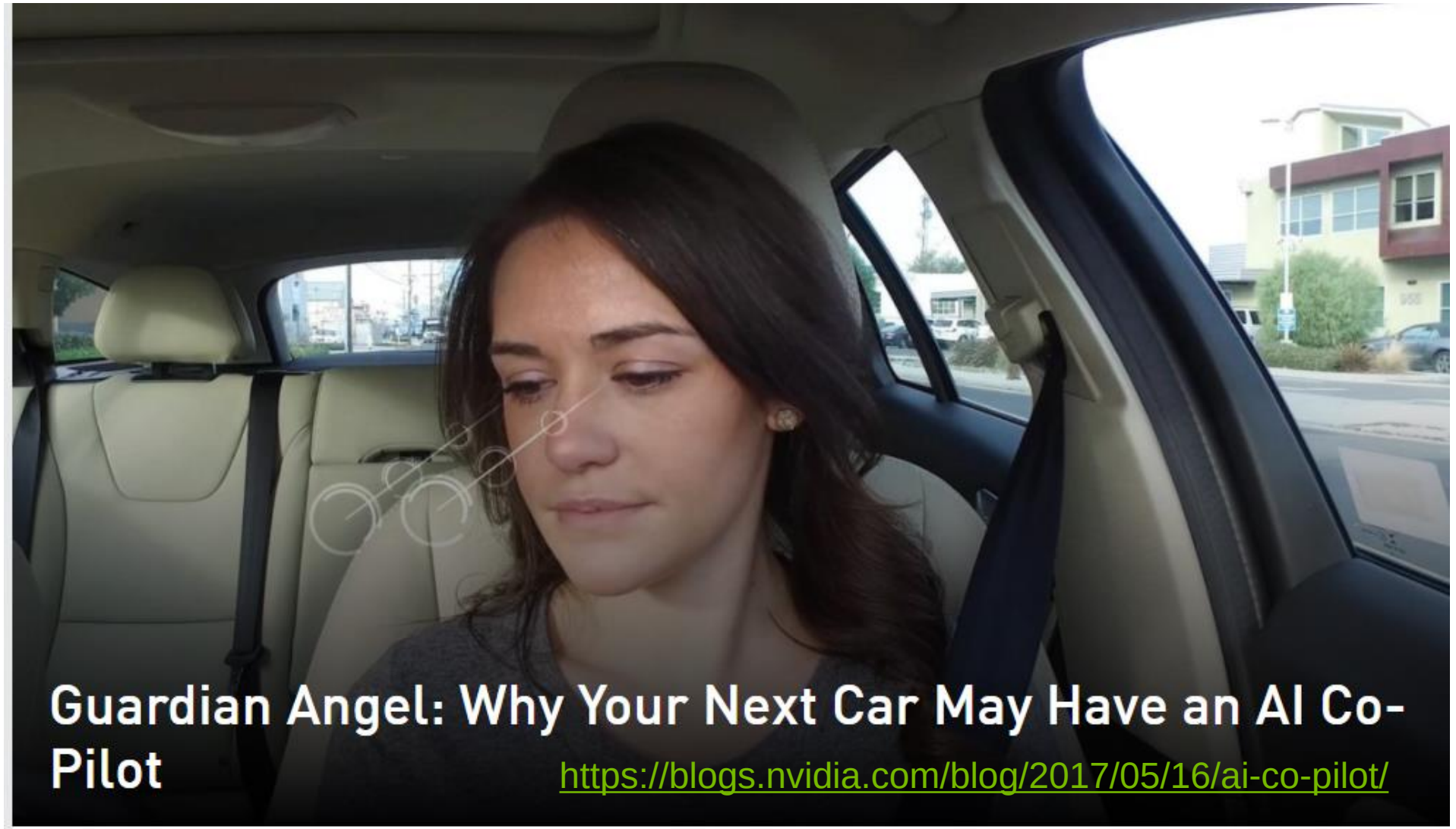
XAVIER

20 TOPS DL | 160 SPECINT | 20W

AUTONOMOUS VEHICLE ELECTRONICS-FIELD REQUIREMENT



Co-pilot—1st Step of Autonomous Driving



Thank You