Goldman Sachs “Cars 2025”

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Innovation for the Real World

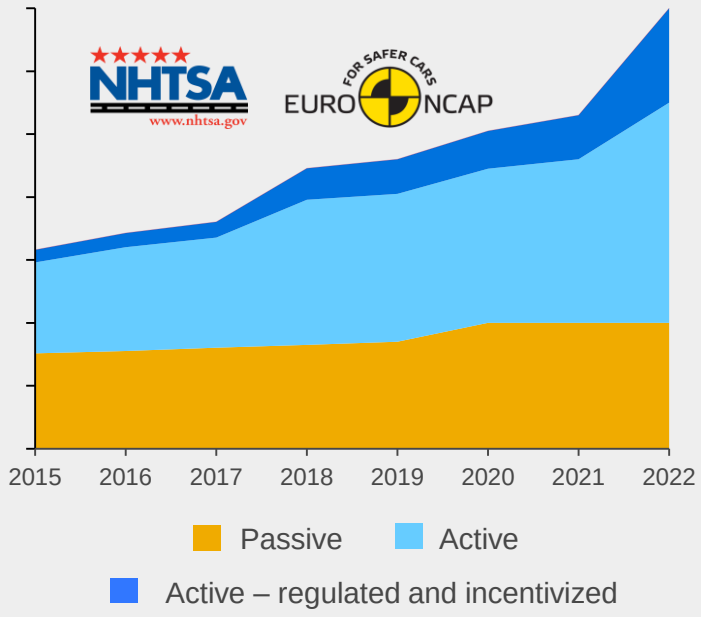
Accelerating macro trends create new challenges

Regulated Active Safety growing with increased consumer awareness

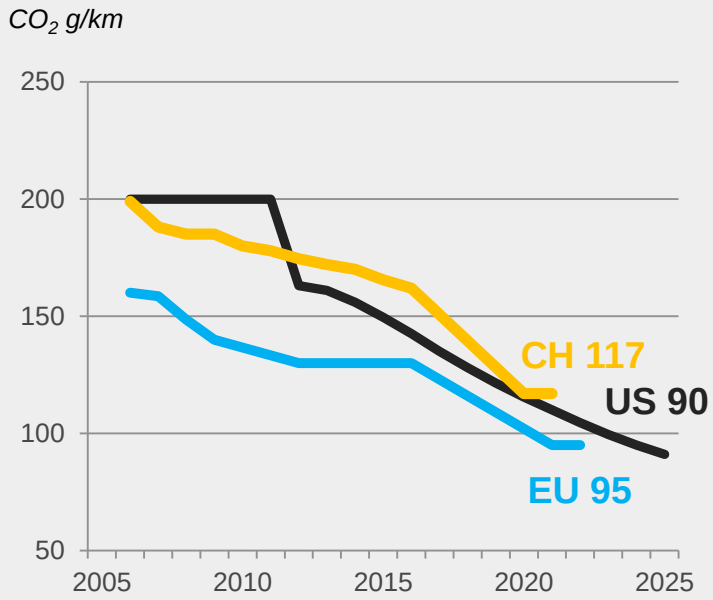
Best-value electrification required to meet step function change in regulation

IoT driving connected car to new levels & creating new challenges

More **Safe**



More **Green**



More **Connected**

Connectivity

- Validating 5.9GHz standard for Dedicated Short-Range Radio Communication (DSRC)

Cybersecurity

- Auto Information Sharing and Analysis Center (ISAC) developing process to share & fix vulnerabilities

Big Data

- OEMs enabled to collect but not personalize information

… and opportunities

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Complete system technology integrator

Macro trends are creating OEM challenges and consumer demand

- Flexible system designs
- Best-value innovations
- Vehicle integration expertise
- Agile software solutions

Solving customer problems

Intelligent Driving

Delphi responding to opportunities with end-to-end solutions

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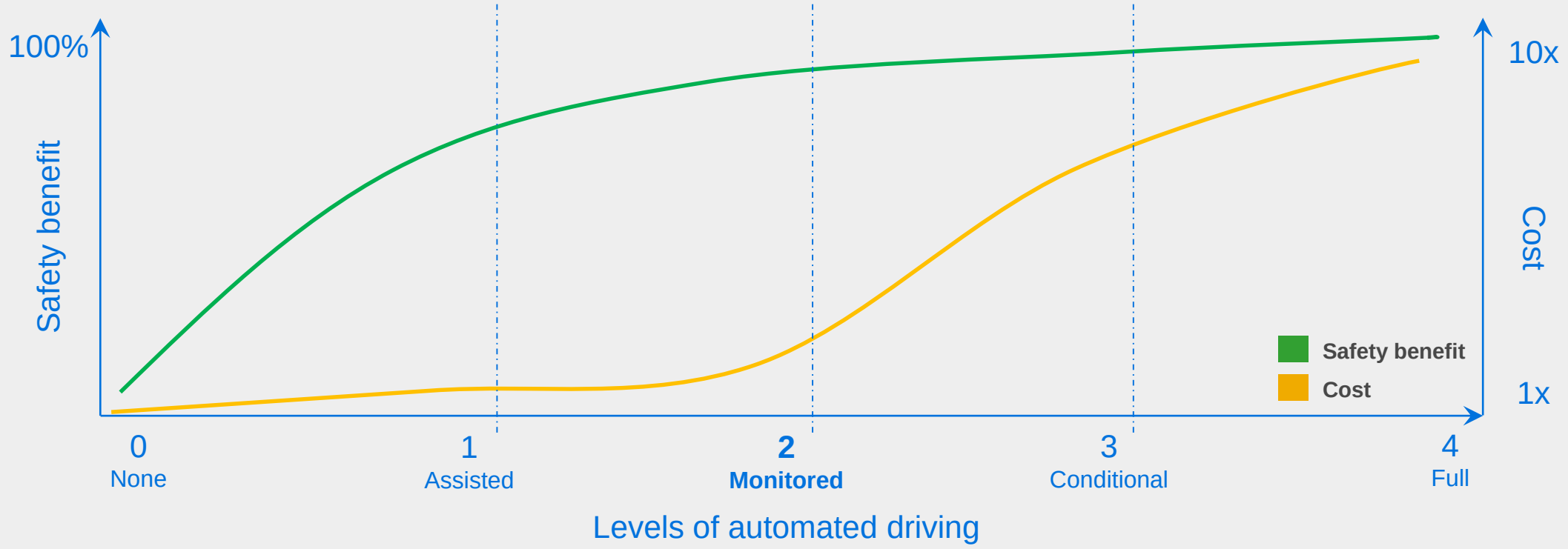
Creating a cost-effective, safer driving experience

Lower levels of automation deliver 80% of the safety benefit for 20% of the cost of fully autonomous driving



Active Safety technology enabling automated driving is available today

Source: NHTSA and Delphi cost models

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US Automotive Crash Fatalities

- Texting
- Using a cell phone or smartphone
- Eating and drinking
- Talking to passengers
- Grooming
- Reading, including maps
- Using a navigation system
- Watching a video
- Adjusting a radio, CD player, or MP3 player

But, because text messaging requires visual, manual, and cognitive attention from the driver, it is by far the most alarming distraction.

Drivers in their 20s make up 27 percent of the distracted drivers in fatal crashes. **(NHTSA)**

National Highway Traffic Safety Administration (NHTSA)
Source: http://www.iihs.org/iihs/topics/t/general-statistics/fatalityfacts/overview-of-fatality-facts

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Creating intelligent electrification with Delphi's 48V solution

48V electrification

Optimized electrical architecture is the foundation

The Delphi solution

Builds on electrical solution competency

- Includes electrical architecture, power electronics and management

Designs a custom vehicle architecture

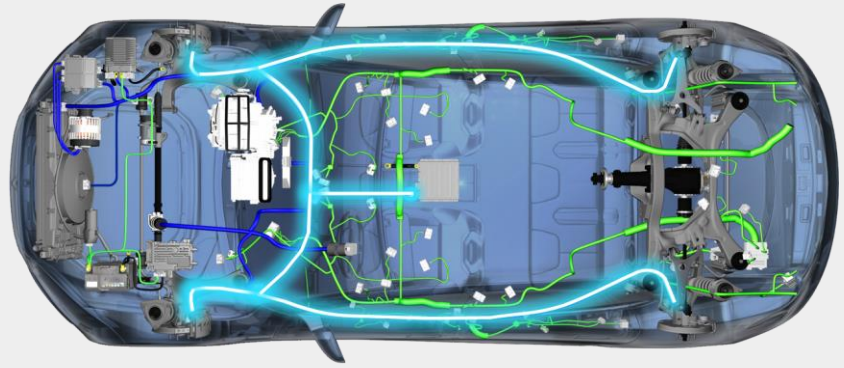
- Maximizes the use of power, moving high load components to 48V & incorporating all desired comfort, convenience & functional features

Incorporates Delphi's suite of products

Enabling intelligent electrification

Improved functionality, better performance, greater efficiency

Software, Software, Software…



Optimized electrification architecture

Fuel injection systems	DC/DC converter
Engine control	Connected Infotainment
Valve Train & engine sensors	Active Safety

Customized vehicle architectures for all applications

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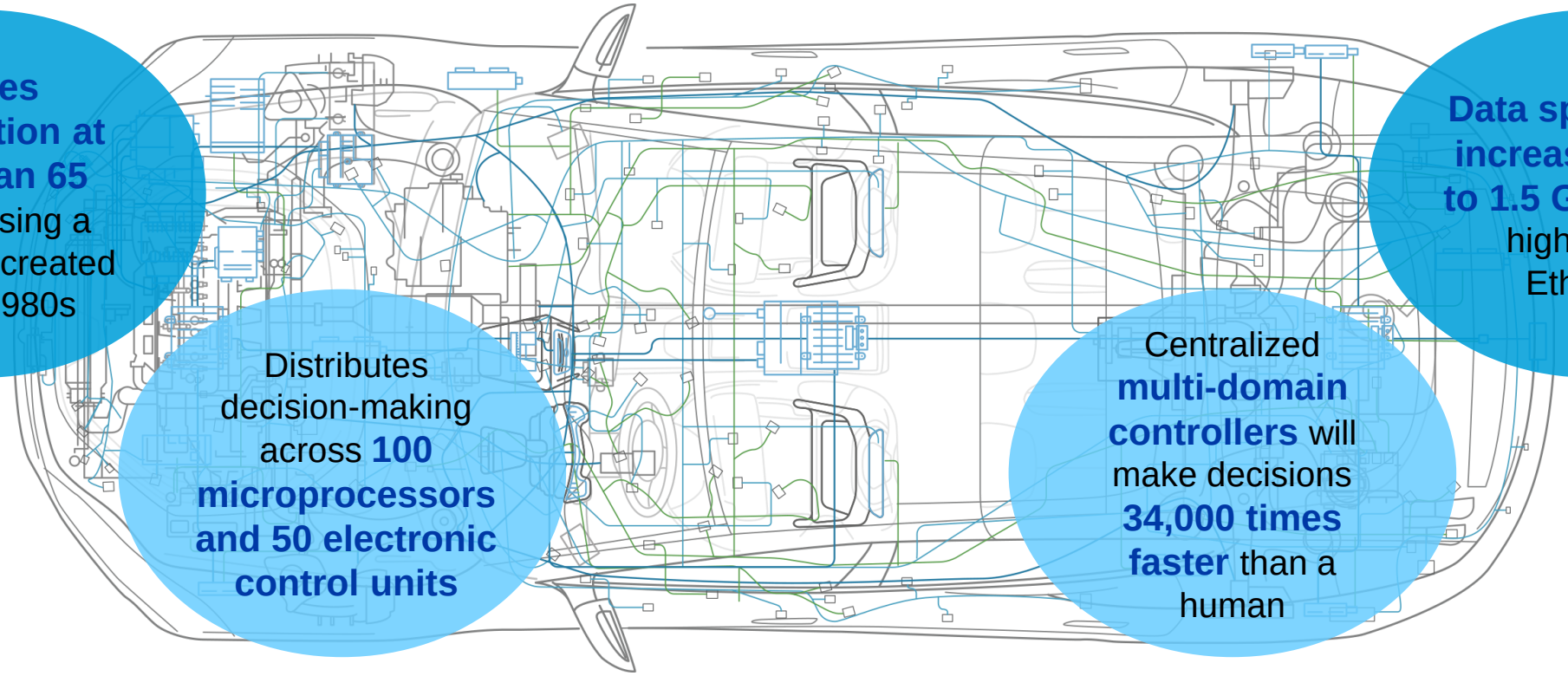
Future solutions enabled by industry-leading architectures

2015 → 2020+



Moves information at less than 65 Mbps using a language created in the 1980s

Distributes decision-making across **100 microprocessors and 50 electronic control units**

Centralized **multi-domain controllers** will make decisions **34,000 times faster** than a human

Data speeds will increase 2200% to 1.5 Gbps using high speed Ethernet

High speed data enables tomorrow's technology today

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Consumer demand is driving connected car capability

World-class connectivity helps address Safe & Green challenges

The IoT is disrupting traditional automotive

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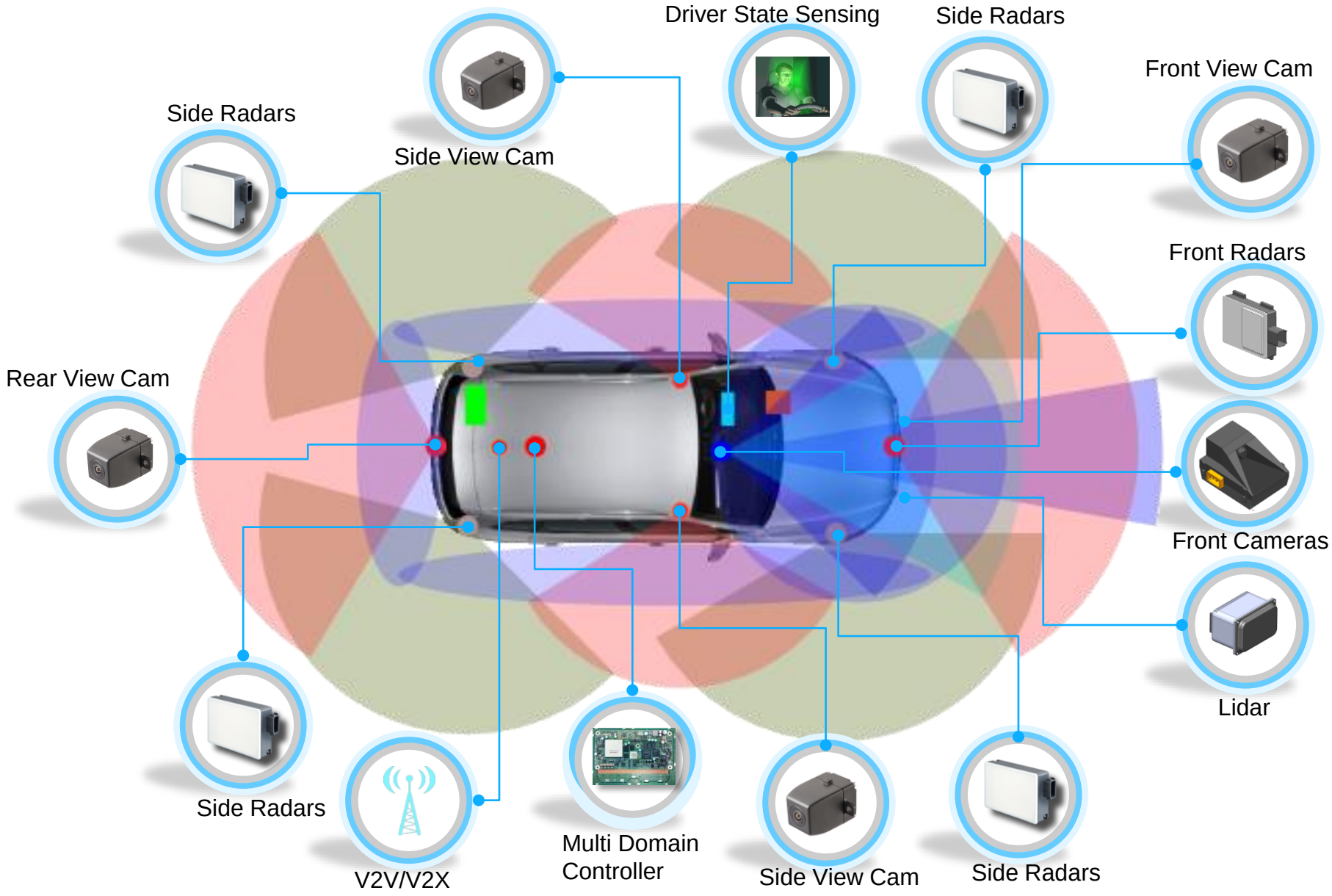
Intelligent Driving – where it all comes together



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Building blocks of Intelligent Driving

Optimized Vehicle Architecture

Multi-Domain Controller
High speed electrical architecture
Engine management system

Manage complexity & performance

Connected Infotainment

Integrated Cockpit Controller
BYOD
Cloud computing

Features & functionality

Active Safety Sensor Fusion

Suite of sensors

Redundancy & reliability

Enabling Automated Driving

Massive amounts of Software

Coded by Delphi and partners

Automated algorithms, learning as you drive

Safe, Green & Connected converge for a world-class driving experience

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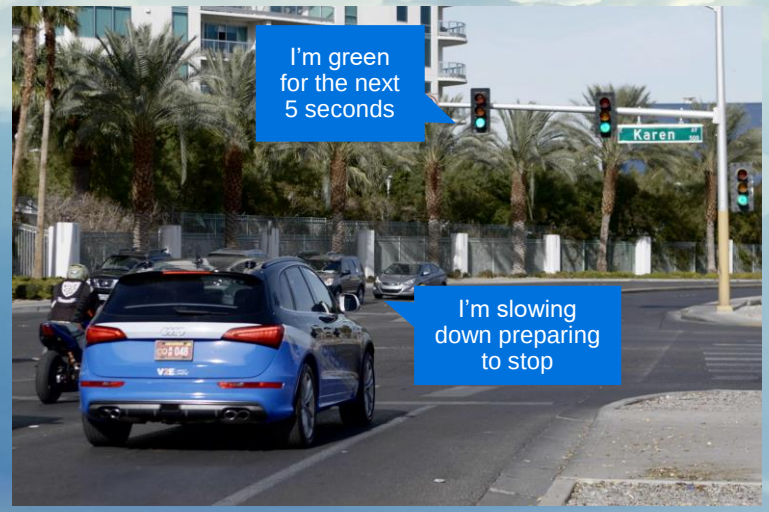
Continuing to advance automated driving technology

V2cloud

V2P
Vehicle to pedestrian

V2I
Vehicle to infrastructure



V2V
Vehicle to vehicle

Leveraging Active Safety technology to prevent accidents

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Safe, Green and Connected converge…

V2safe **V2green**

V2connected

…for an intelligent driving experience

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Thank you!

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