

The background is a vibrant, abstract graphic. It features a central bright white light source from which numerous colorful rays emanate, creating a sunburst or starburst effect. The rays transition through a spectrum of colors including yellow, orange, red, and various shades of blue and green. Overlaid on this are large, flowing, wavy shapes in similar colors, giving the overall impression of energy, movement, and a digital or network theme.

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The bridge to possible

A digital transformation: Smart Mobility, Connectivity, Electrification, Autonomy

Laura Perek (she/her/hers)

Global Industry Lead, Transportation

PSOIND-1009



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Cisco Webex App

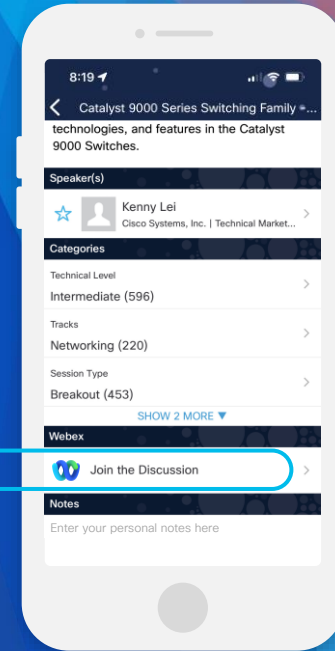
Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
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Webex spaces will be moderated by the speaker until June 9, 2023.

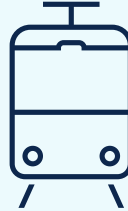


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Agenda

- Transportation Industry and Challenges
- Industry Drivers and Trends
- Automotive Revolution
- Looking Forward

Getting to Cisco Live





Transportation connects us.

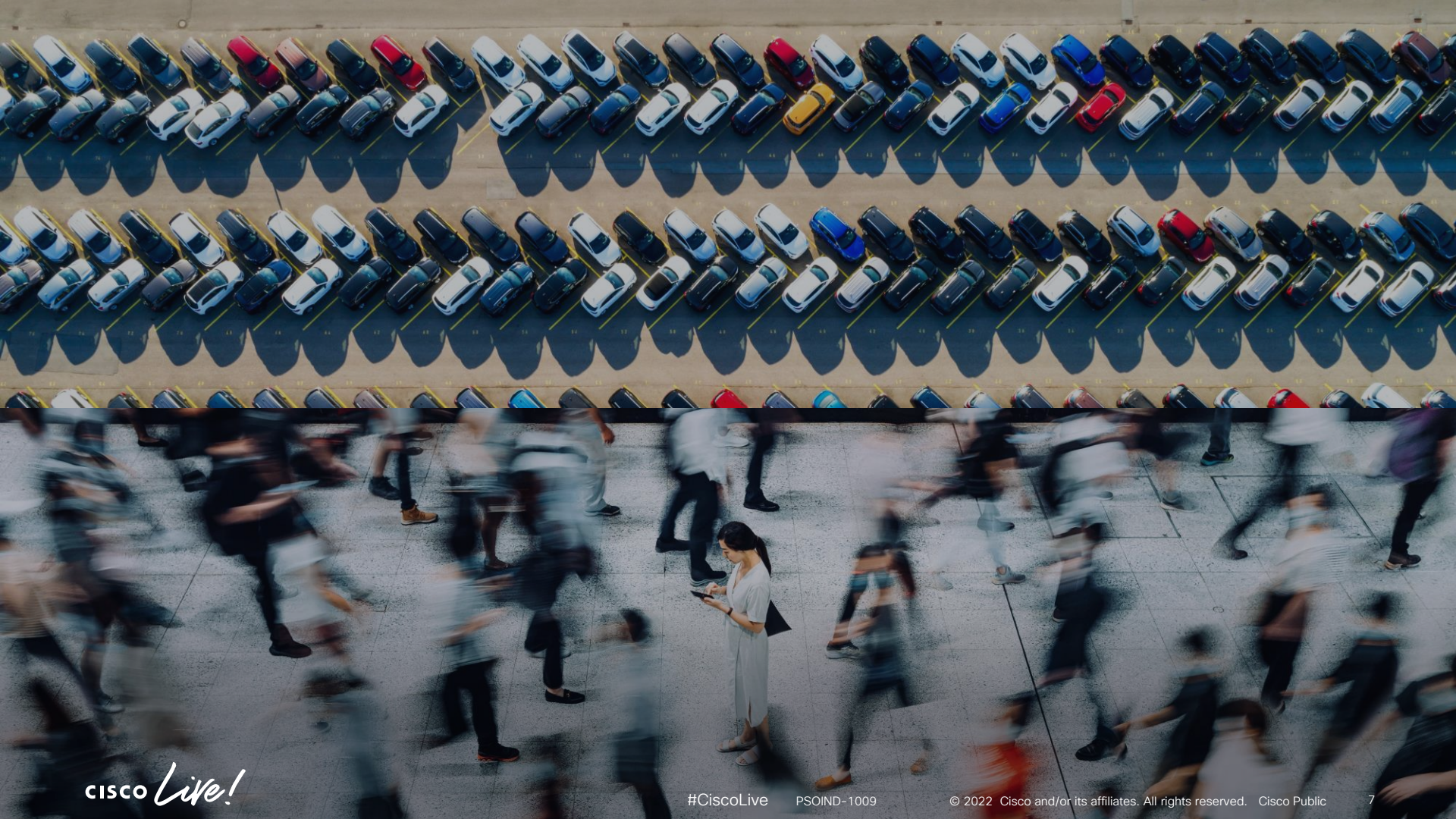
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Impact



Transportation accounts for the largest share, **27%**, of total U.S. greenhouse gas emissions.

Between 1990 and 2020, GHG emissions in the sector increased more in absolute terms than any other sector due, in large part, to increased demand for travel.

[EPA](#)



Transportation is responsible for about **half** of all U.S. emissions of NO_x plus other various toxins.

The health effects of air pollution affect millions of people, especially those who live near highways; ports; rail yards; or petroleum extraction, refinery, storage, or transport infrastructure.

[U.S. National Blueprint for Transportation Decarbonization](#)



Roadway fatalities declined for 30 years, but **progress has stalled** over the last decade and went in the wrong direction in 2020.

More than 42,000 people died on America's roads in 2021, the highest total number recorded since 2007.

[USDOT](#)



Industry Drivers

Smart Mobility

Net Zero

Safety

Inclusivity

Automotive Revolution



**Electrification and EV
Charging Infrastructure**



**Electric Vehicle and
Battery Production**



**Connected and
Autonomous Vehicles**

A close-up photograph of a person's hand plugging an orange charging cable into the rear of a dark-colored electric car. The car's surface is highly reflective, showing distorted images of the surrounding environment, including trees and buildings. The background is softly blurred, suggesting an outdoor parking area with greenery.

Electrification and EV Charging Infrastructure

- Driven by governments to meet net zero goals
- Driven by consumers demand for more sustainable modes of transportation
- Increases demand for batteries and battery manufacturing
- Requires charging infrastructure and grid modernization

Electrification and EV charging infrastructure

25%

expected annual growth rate of North American public charging network ports, 2022-2026

\$7.5B

Funding in U.S. bipartisan infrastructure law for public charging

25%

of total electricity demand expected to come from EVs by 2050 (1% today)

Cisco for EV Charging

- Securely connect at scale
- **Business Outcomes:** improved uptime and station maintenance, better driver experience

Cisco for Electric Utilities

- Secure communication data management
- Substation automation
- Distributed energy resources
- **Business Outcomes:** improved grid reliability, prolong useful life of capital assets

A photograph of two workers in blue uniforms and white hard hats walking away from the camera on a yellow safety line in a large industrial facility. The background shows complex machinery, pipes, and structural steel beams.

Electric Vehicle and Battery Production

- Requires changes to automotive OEM design and manufacturing process
- Improved batteries leads to higher EV adoption
- Battery supply chain is a competitive advantage to OEMs
- Reliable and instant access to performance data is a critical advantage to deliver electric and autonomous vehicles

Electric vehicle and battery production

14M

estimated number of EVs sold in 2023,
representing 18% of total market
(up from 14% in 2022)

55%

increase in sales in the US in 2022,
representing 8% of total

1000 GWh/yr

expected battery manufacturing
capacity in North America by 2030
(up from 55 GWh/yr in 2021)

IEA | EERE

Cisco for Automotive Manufacturing

- Next generation smart factories and production
- Advanced manufacturing operations use cases (industrial automation, asset visibility and control, industrial mobility, sustainable factory solutions)
- **Business Outcomes:** securely connected production systems, maximized uptime, improved plant-wide productivity, improved asset management, reduced waste



Connected and Autonomous Vehicles

- Vehicle connectivity leads to new revenue opportunities for automotive OEMs along with improved services for the owners
- Requires intelligent roadway infrastructure to capitalize on many sustainability and safety benefits
- Increases the risk of data breaches, requiring defined cybersecurity strategy

Connected and autonomous vehicles

2

of top 10 automakers will be delivering monthly OTA code updates across their SD vehicle fleet by 2024

40%

reduction in energy use with vehicle-to-infrastructure communication enabled control

12%

of new passenger cars expected to have L3+ autonomous technology by 2030

Cisco for Connected & Autonomous Vehicles

- Cellular management and Wi-Fi connectivity
- Connected roadways and intersections
- Autonomous vehicles for industry (rail, mining, manufacturing, retail)
- **Business outcomes:** faster scaling, new revenue opportunities, improved safety, better customer experiences, improved security



Looking forward

Electrification

SD Vehicle

Public Funding

Safety & Security

Industry Resources

- Portfolio Explorer use cases
- EV charging solutions
- Customer stories
- Autonomous operations for industries



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These points help you get on the leaderboard and increase your chances of winning daily and grand prizes

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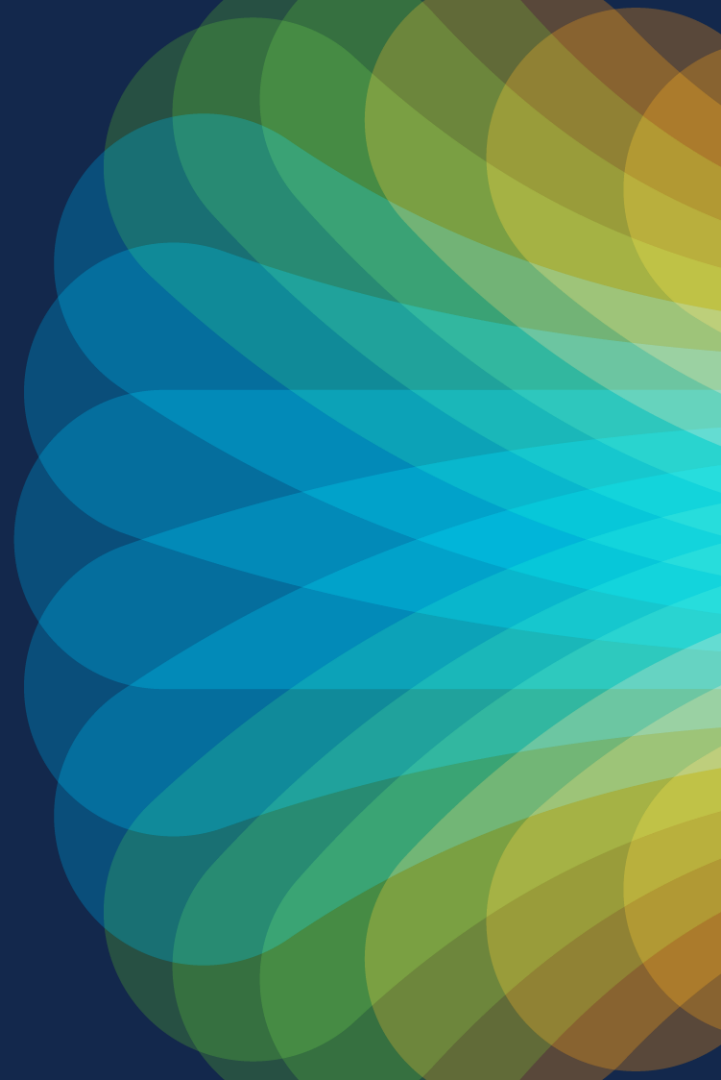


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Thank you

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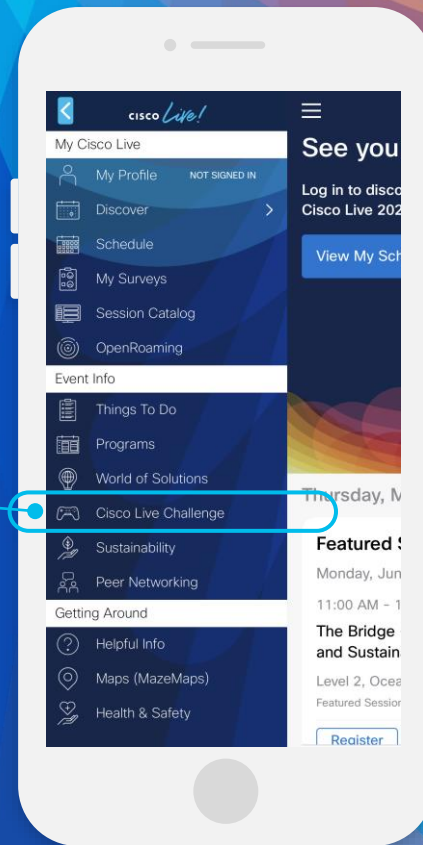


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- 3 Click on View Your Badges at the top.
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