#### **AI** application in Transport

## Understanding and evaluating AI systems in critical applications





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#### Artificial Intelligence, Machine Learning and Regulation Roundtable

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## CEA and autonomous, connected mobility









# Research and technology for industry

- Trustworthy AI
- Perception, connectivity, cybersecurity
- Trajectory optimization
- Road, rail, air, water, logistics, agriculture







Confiance











### 1. Automation vs. Autonomy vs. Al









### 2. AI technology for autonomous vehicles



#### + Performance -







## 3. Trustworthiness, interpretability, explainability



Machine Learning ≠ common sense



International

**Fransport Forum** 

OECD

#### AI: a few trustworthiness-related issues





### 4. Connected autonomous vehicles

them all...

**One LIDAR to guide** 





Peachtree Corners, GA (Forbes)

- Increase safety (see hidden dangers)
- Connectivity required for remote operation
- Cost of vehicles vs. cost of infrastructure







### 5. Implications for validation and certification





Robustify and expand envelope progressively?



# Level 4 with limitations

- Geographic
- Speed

. . .

Weather

#### Trust the data?

#### Safer Than a Human



That may soon be changing. Musk says the company is very close, and it will soon be able to challenge the regulatory bodies and prove that FSD is safer than human driving. "Certainly, without a question whatsoever in my mind, next year. I think we'll also have enough data next year to be able to show to regulators that the car is safer than the average human."







#### DISCUSSION







