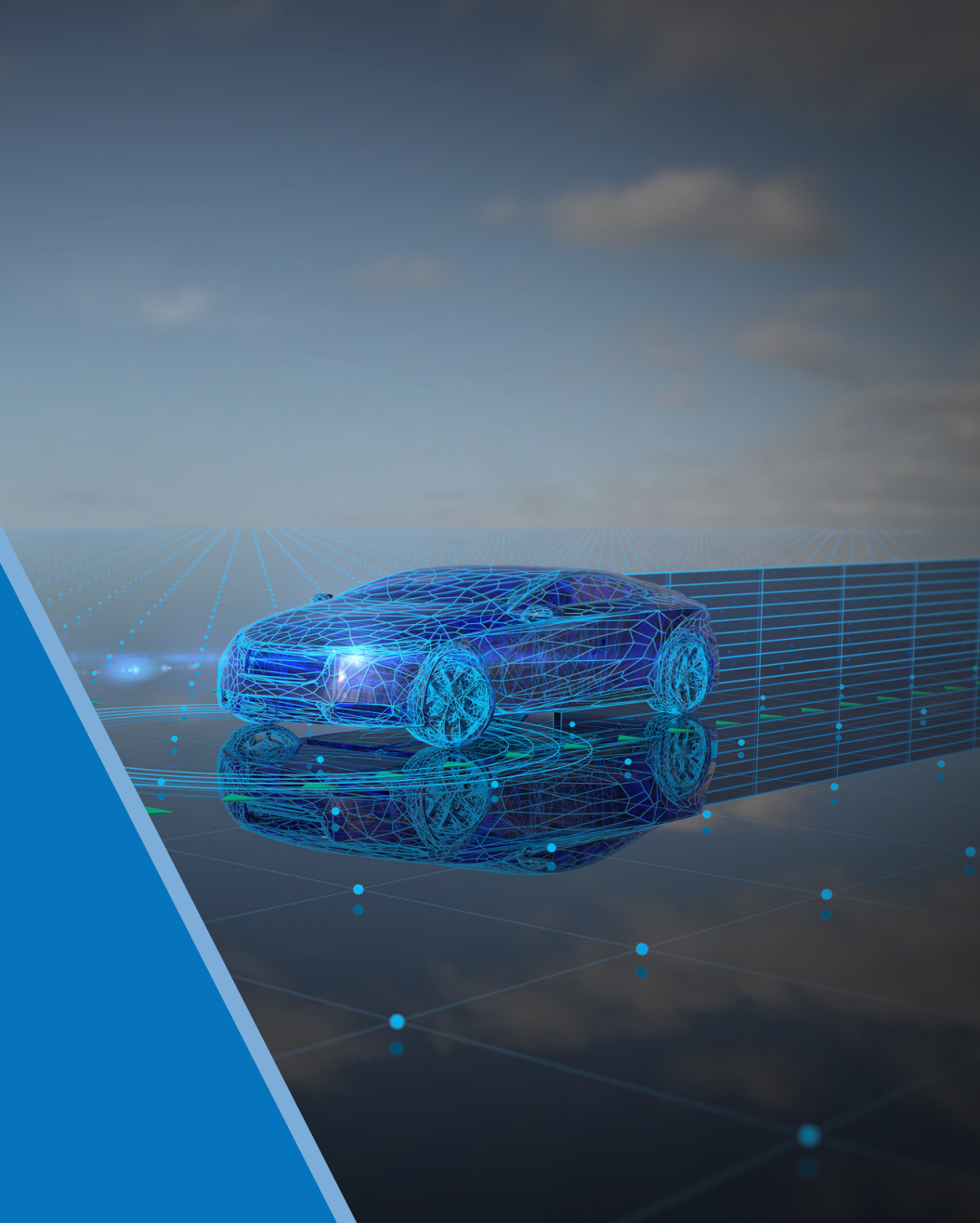# San Francisco Near Term Priority Metrics & Data Uses

CPUC New AV Data Workshop:

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San Francisco Municipal Transportation Agency

June 22, 2023

Why Collect New AV data?

The purpose of existing and new data collection -- and associated metrics -- should be to:

- Create a performance evaluation framework across all CPUC goals for AV Passenger Services, and to

- Support evaluation of incremental permit expansions

New data collection is needed because existing requirements do not support evaluation of the number, rate and impacts of hazards that have arisen from driverless operation

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New Priority Metrics & Their Use

San Francisco Supports CPED Proposals for new safety data collection *with some additions*

WAYMO & CRUISE ADVICE LETTER APPROVALS SHOULD FOLLOW:

- More time to develop post-workshop comments
- Additional workshop(s) with chance for discussion
- Approval of operational safety metrics
- Collection & evaluation of operational safety data

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None of these incidents are captured by required DMV or CPUC data collection

Still has waymo to learn!

Reported AV incidents from driverless operations have increased steadily since start of driverless operations with increase in number, variety, & intensity in 2023

Reported AV Incidents

Legend: Cruise (orange), Waymo (green), Zoox (gray), Unknown (purple)
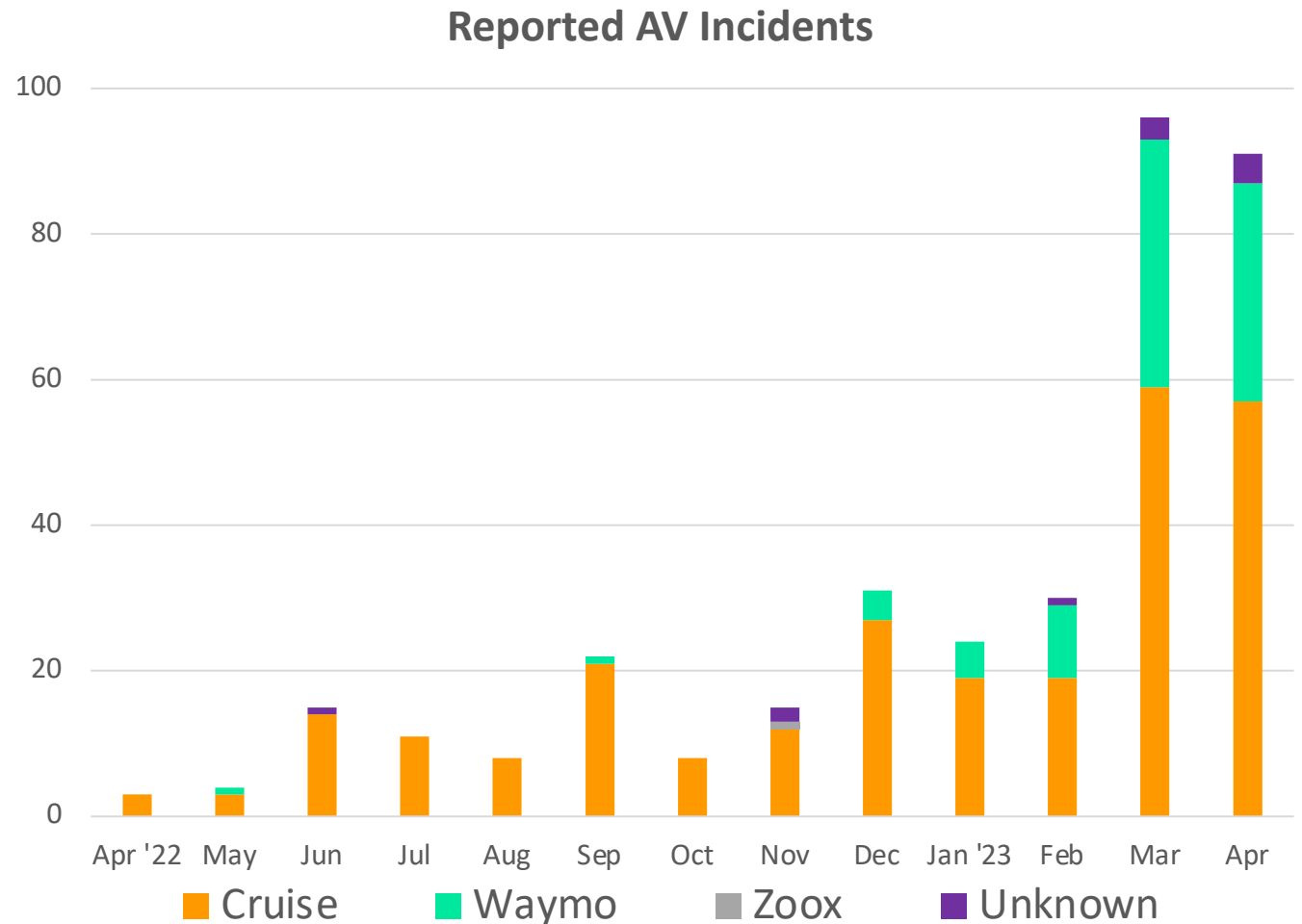
Reported incidents frequently reflect violations of the California Vehicle Code 'Rules of the Road'
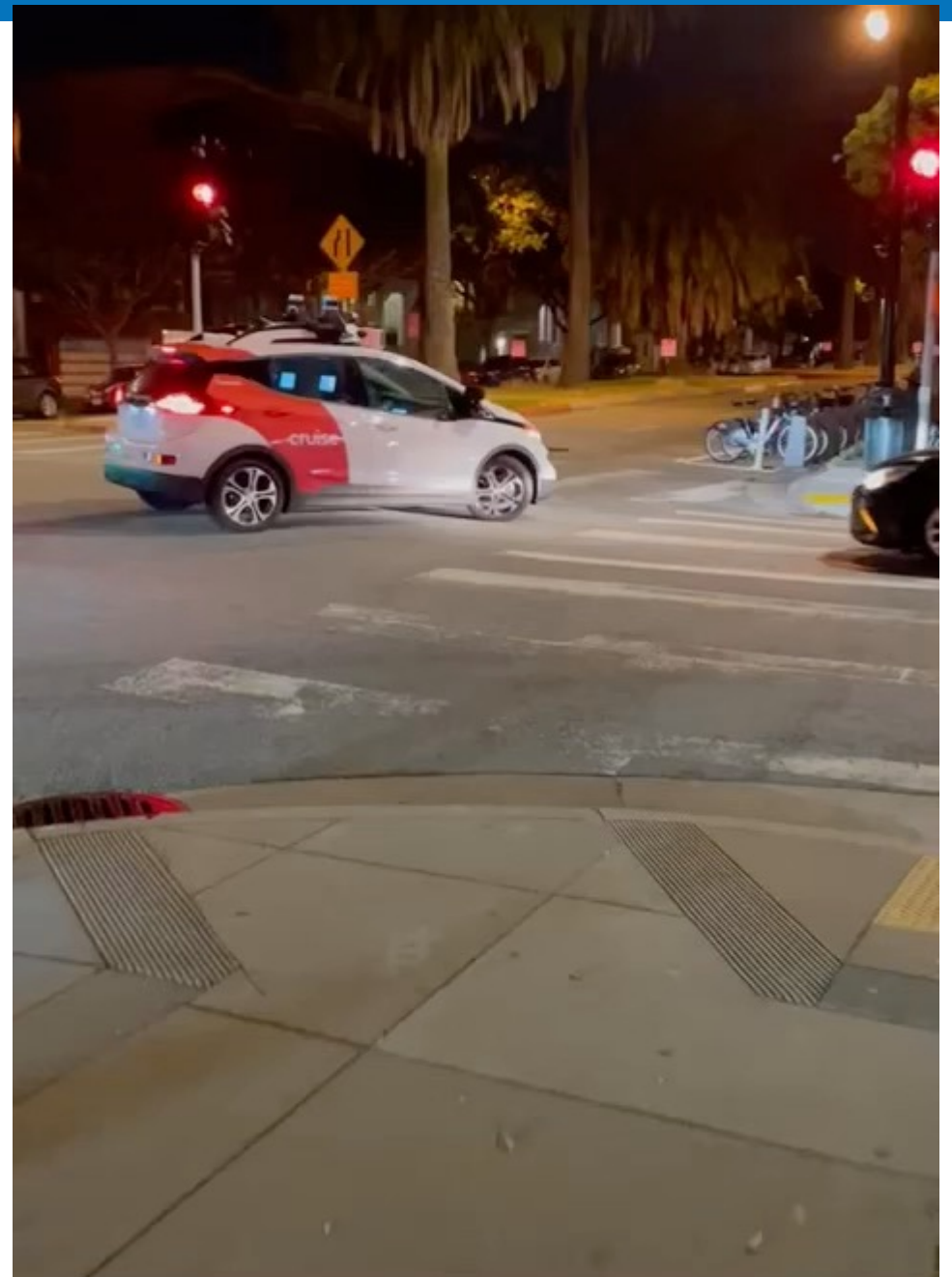
You asked us to prioritize metrics

- Safety is our most important goal!
- Safety should be viewed from a system perspective
  - Considering crashes AND hazardous incidents
  - Considering passenger safety AND public safety

- Developing safety metrics is our top priority

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Priority Metric: Safety - Crashes

- SF supports CPED proposal for disaggregate reports & recommends:
  - Align with existing crash reporting framework
  - Require crash reporting under all permits
  - Require each report to identify permit(s) authorizing driving at time of event
- Analysis must recognize that all reports are self-reports written by permittees (not 3rd party evaluations)
- Role of crash reports in permitting process warrants workshop focused solely on this topic

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Priority Metric: Safety - Unplanned Stops

- Hazardous unplanned stops are not all 'minimal risk condition' events; data collection must be broader to capture:

- Number, Duration & Impact of Unplanned Stops

  - Affecting Fire Suppression

  - Affecting Rail Transit

  - Affecting Other Transit

  - Affecting Roadway Workers

- Rate of Unplanned Stops

  - per VMT, by permit, by month, by county

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Priority Metric: Safety - Planned AV Stops

- Hazard: Loading in travel lane can be especially dangerous for people with disabilities, cyclists & pedestrians and can create a service barrier for people with disabilities

- % planned stops for passenger loading within 18" of curb or off street (driveway, parking lot, etc.)

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Other Commission Goals & Related Metrics

Environment: Emissions (GHG & PM2.5) per passenger mile traveled

Disability Access

- Availability of WAV service
- Equivalency of WAV service to non-WAV
  - % of requested trips completed
  - response time

Equity
- Fair distribution of access to service & quality of service
- Fair distribution of negative impacts of AVPS

Essential Data Features

Data quality is essential for useful metrics & reliable evaluation

Comprehensive	Disaggregate	Complete and non-duplicative	Timely	Public
• Reports should include all data elements required to calculate all metrics • Each CPUC goal requires various metrics for proper assessment of performance	• Reports should describe individual trips, collisions, incidents, or other events • Aggregation may preclude various types of analysis	• Permittees should submit complete reports, providing ALL required elements • Data should be reported under all permits	• Data should be reported & produced monthly to monitor & evaluate progress & to respond timely to issues affecting the public	• Data should be public to support transparency & public trust in the industry & its regulation

Use: Most Data Should be Available to Public

New AV Data rulemaking should conclude with adoption of confidentiality matrix that:

- Protects privacy of AV users & incident 3rd parties

- Presumes data is public unless confidential treatment is justified (consistent with CPUC TNC rulings)

- Prevents continuous re-litigation of previously rejected trade secret claims

- Addresses all data fields (including new fields not addressed in TNC rulings)

- Does not allow confidential treatment for TNC fields redacted based on *driver privacy*

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Conclusion

- Commission agenda for June 29 proposes to approve Advice Letters submitted by both Cruise & Waymo

- Commission proposes to adopt safety metrics *after* approvals & has not identified timeline for setting minimum standards on these or other metrics

- This process is backwards

- Development of operational safety metrics should not be rushed

- Commission should take the time needed to develop operational safety metrics & minimum standards before approving 24/7 service with unlimited fleets

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Thank you!