Connected and Automated Transit Users Forum

Next Generation Purpose-Built Vehicle RFI
Industry Overview

May 13, 2020

TODAY'S MODERATORS

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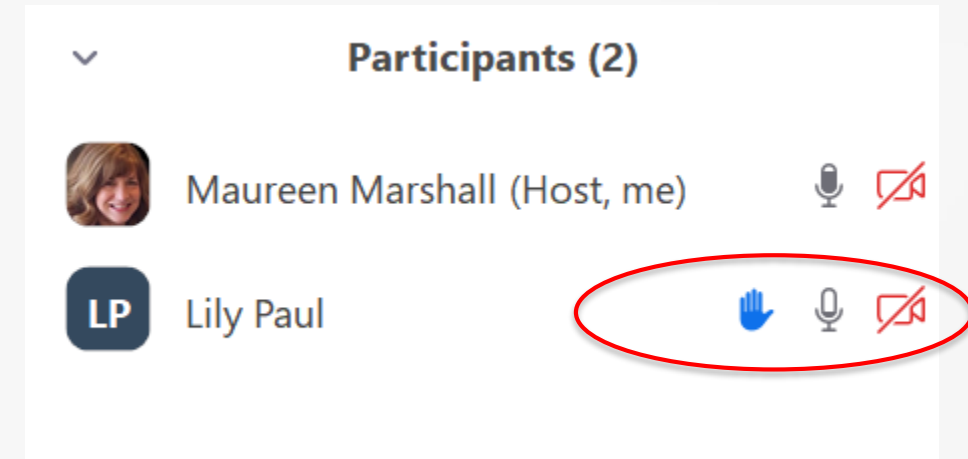(205) 515-8752
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Planning today for tomorrow's transit future.

QUESTIONS AND ANSWERS

1. **PLEASE USE THE RAISE HAND FUNCTION TO BE CALLED ON – LOCATED IN PARTICIPATES NEXT TO YOUR NAME**

Participants (2)

Maureen Marshall (Host, me)

LP Lily Paul

2. **OR USE THE CHAT BOX**

All Questions and Answers will be recorded and posted at www.catuf.org

THINKING OUTSIDE OF THE BUS

Over 250 Members

A GLOBAL ORGANIZATION WITH REGIONAL FOCUS

CONNECTED AND AUTOMATED TRANSPORTATION USERS FORUM - COHORT

Agency input and guidance on **Transit Agency Needs, Design, Key Performance Parameters and Requirements**

- Agencies are piloting transit AVs that do not meet operational needs
- Special focus on safety, crashworthiness and accessibility that meets needs of transits at a national level

Curb vehicle weight	29,330 lb (13,300 kg)
Gross vehicle weight (with full passenger capacity)	40,350 lb (18,300 kg)
Average vehicle weight (used in the model)	35,273 lb (16,000 kg)
Vehicle size	40 ft
Vehicle capacity	39 seated, 37 standing
Engine size	280 hp (209 kW)
Engine efficiency	96%
Final drive efficiency	95%
Engine response time	14 s
Frontal area	7.7 m^2
Rolling coefficient	0.015
Rotating mass factor	1.15
	0.7
	0.2
	0
	0 km/h

CATUF was established in 2018 which has lead to a COHORT of twelve (and growing) transit fleet operators

CALSTART

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CALSTART CATUF NEXT GENERATION, PURPOSE-BUILT, COHORT

NEXT GENERATION, PURPOSE-BUILT, TRANSIT AV RFI

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Purpose and Intent:

- Begin a dialogue with key stakeholders (e.g. vendors, OEMs, suppliers)

- Focused on the key design and performance parameters –derived from transit agency input, guidance and direction

- Moving the activity beyond pilots to commercially deploying a transit AV

Leading to several vehicle deployments across the United States

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Solicitation:

- Open to all vendors, manufactures, suppliers, engineering firms and their partners
- Feedback on key design and performance parameters
  - Mandatory requirements (i.e. automation, compliance)
  - 'Nice to have' requirements (i.e. video communications)
  - Local and regional requirements (i.e. safety)
- Submissions should attempt to address all KPP's and provide adequate supporting information

All Design and Key Performance Parameters were shared within the RFI

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Key Notes on Operation Design Domains and Safety:

- Vehicles must be highly reliable and flexible in nature to meet the needs of many agencies

- Operational modes include, but are not limited to:
  - First/Last Mile
  - Circulator
  - Personal Rapid Transit (guard-railed operation or dedicated lane)

- Safety is paramount to the success of AV deployments and should be considered in all aspects of the design solution

Tomorrow's transit AV's will be a 'go – to' vehicle for at scale deployment

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RFI Response Format:

- Responses should be limited to 25 pages (plus any supporting appendices)
- Responses should include:
  - Cover Letter
  - Body – KPP responses
  - Rough order of Magnitude Budget
  - *Any appendices*

Industry's responses will shape the future of transit automation

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Cover Letter:

- Need all contact information
  - Point of Contact(s)
  - Address
  - Telephone number(s)
  - Email address(es)
  - Link to organization's website
  - Brief summary of your organization and experience related to autonomous vehicle and systems development

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Body:

- Clearly describe the vehicle solution(s)
  - *Providing a clear understanding of how the solution meets the KPPs (i.e. drawings, renderings and photos)*
- Technology Readiness Levels (TRLs)
- Detailed response to each of the KPPs
  - Solution
  - Reactions
  - Considerations
  - All applicable information
  - Reasoning if a KPP cannot me met and alternative solutions

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Rough Order of Magnitude:

- To the degree possible budget and timelines associated with the delivery your solution
- Considering the following and quantities and build types:
  1. up to 3 – prototypes
  2. up to 15 – pilots
  3. up to 100 - production units.

PLEASE NOTE: The ROMs will not be shared PUBLICLY

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Evaluation:

- Responses will be evaluated based on:
  - ❑ *Organization's knowledge and background in transportation and automation*
  - ❑ *Near term capabilities meeting design and KPPs*
  - ❑ *Ability to address each of the design and KPPs with innovative solutions that are achievable*
  - ❑ *Level of detail given in response to each of the KPPs*
  - ❑ *Ability to communicate openly about why a KPP could not be met and in doing so offering an achievable alternate solution(s)*

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NEXT GENERATION, PURPOSE-BUILT, TRANSIT AV RFI

Critical Dates:

- **Friday, May 22, 2020 (5pm PST):** Last day to submit questions.
  - All questions should go to: mmarshall@calstart.org
- **Friday, June 5, 2020:** All questions and answers will be compiled and uploaded to www.catuf.org
- **RFI Deadline - Monday , June 15, 2020 (5pm PST):** All RFI's to be submitted by this date

NEXT GENERATION, PURPOSE-BUILT, TRANSIT AV RFI

Next Steps:

- RFI responses will be reviewed
- Top responders will have an opportunity to showcase their solutions/products to the cohort during a scheduled webinar (~Starting August)
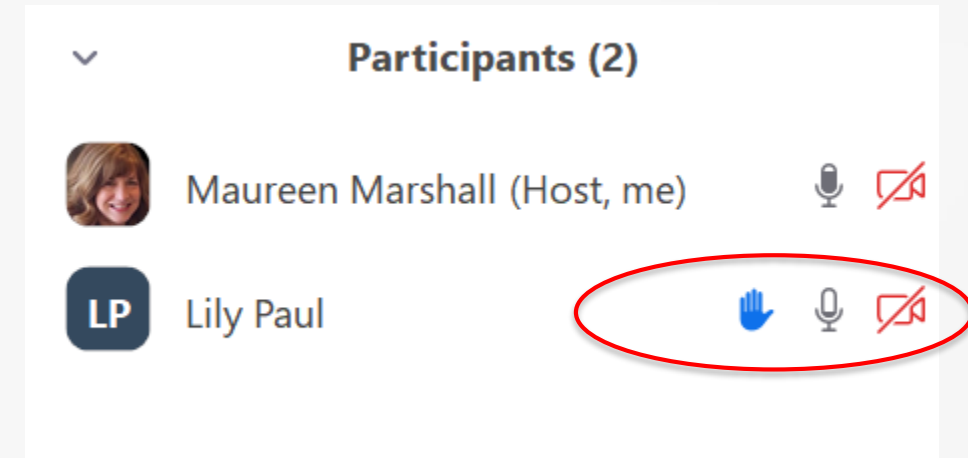
This effort is expected to lead to an RFP for vehicles

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