Webinar Agenda

2:00 PM  Introductions and Agenda Overview - Marcel Porras
2:05 PM  Overview of the One Year Permitting Process - Jose Elias
2:15 PM  Requirements for MDS Provider Compliance During One Year Permit - Hunter Owens
2:20 PM  Introducing MDS Agency API for the One Year Permit - Todd Petersen
2:35 PM  The MDS Sandbox Environment - Sean Holman
3:10 PM  How We’re Defining MDS Agency Compliance - John Ellis
3:50 PM  Wrap Up/Next Steps - Marcel Porras
4:00 PM  End
Overview of the One-Year Permitting Process
Overview: When does the pilot start?

- **January 28**: application opened
- **February 15**: application closes
  - takes 15-20 business days to process
- **March 4**: begin issuing permits
Insurance Requirements

- **CGL**: $5 million
- **Umbrella**: $5 million
- **Workers’ Comp**: $1 million
- **Auto**: $1 million

*GL: $5M per occurrence. [Can be satisfied w/a min $1M CGL w/a policy specific CGL Excess policy of $4M.]
Bond Requirements

- Performance bond of $80/vehicle
- Include LLC: dba
- Must be notarized
- Submit bond to cao.insurance.bonds@lacity.org
Sidewalk Riding Prevention

- "No Riding on Sidewalks" required in 48 point font on platform
- User education on app
Overview: Fleet Size

- 3,000 vehicles max
- + 2,500 in disadvantaged communities
- + 5,000 in the San Fernando Valley
Overview: Equity

- Public engagement plan
- Cash option
- Non-smartphone option
- Low-income plan
Lessons Learned

- Submit insurance to KwikComply ASAP

- Use Contractor’s Performance Bond form
  - Bond must be signed and notarized by principal of the company
  - Please see the Execution Instructions for signature on bonds (pg. 43)
Q&A
One-Year Permit Requirements: MDS Provider Compliance

- Company applies for one-year permit

- If company is already operating
  a. Check that ETL works
  b. Issue new third-party client credential
  c. Assuming all other requirements met, permit is issued

- If company is not already operating
  a. Run MDS-Validator on Staging Data
  b. Confirm staging data is valid
  c. Go to step 2

FYIs

For responding to myLA311 requests, user accounts to come during the permit period for your operations staff.

We will be requiring MDS 0.3.0 on provider 90 days after release of 0.3.0.
MDS 0.3.0 Updates

- **Info at:** [https://github.com/CityOfLosAngeles/mobility-data-specification/milestone/3](https://github.com/CityOfLosAngeles/mobility-data-specification/milestone/3)
- **RC set to hit next week**
- **Features:**
  a. Query Time Fix
  b. Timestamp change!
  c. Allow rounding to nearest accuracy unit for GPS
  d. How to support multiple provider versions
  e. Agency refactor
  f. GBFS auto discovery URL
  g. /service-areas now expresses geofences
  h. associated_trips -> associated_trip
  i. Much more!
Q&A
Summary - Top Three Takeaways

1. Submit your permit application early!
2. Contact Jose with questions on the one-year application at jose.elias@lacity.org
3. Email ladot.innovation@lacity.org for MDS onboarding/compliance questions
Introducing MDS Agency API for the One-Year Permit
Provider Access
Fleet Management Workflow

Vehicle Assembly

- Receive and assemble vehicle from manufacturer
- Upload new firmware
- Registration of vehicles in your system

Vehicle Registration

Endpoint: /vehicles

Method: POST

Body Params:

- Device_id
- Vehicle_id
- Propulsion
- Type
- Year
- ...

Register Vehicle With Agency

Vehicle Deployment

- Vehicle Deployment to Right of Way
- Available on the app
Deployment Workflow

- Vehicle Deployment to Right of Way

**Vehicle Event**

**Endpoint:**
/vehicles/{device_id}/event

**Method:** POST

**Body Params:**

Event_type = 'service_start'
|| rebalance_drop_off
|| maintenance_drop_off

- Start Service
Start Trip Workflow

Request Rental

- User requests rental start
- User scans barcode
- Start of reservation

Vehicle Event

Endpoint:
/vehicles/{device_id}/event

Method: POST

Body Params:

Event_type = 'trip_start'

Start Trip with Agency

Start Ride

- Unlock Vehicle
- Secure Payment
- Notify App
Update Telemetry Workflow

Start Ride \| t>=30m \| t>=30 sec

- During ride

Telemetry

Endpoint: /vehicles/telemetry
Method: POST

Body Params:
- device_id
- timestamp
- GPS
- charge

Update Agency

End Ride

- Vehicle
- Settle Payment
- Notify App

Updated 03/06/19
Update Telemetry Workflow

End Ride **OR** $t \geq 30m$ **OR** $t \leq 24 \text{ hrs}$

- During ride or after termination of ride

**Telemetry**

Endpoint:
/vehicles/telemetry

Method: **POST**

Body Params:

- device_id
- timestamp
- GPS
- charge

**OR** $t < 24 \text{ hrs after End Ride}$

- Prior to ride completion **OR** expiration of 24 hour period after ride.
End Trip Workflow

- User requests rental start
- User scans barcode
- Start of reservation
- Update Telemetry

Vehicle Event

Endpoint: /vehicles/{device_id}/event

Method: POST

Body Params:

Event_type = 'trip_end'

- Unlock Vehicle
- Secure Payment
- Notify App
Retrieval Workflow

- Vehicle Deployment to Right of Way

  **Vehicle Event**
  
  **Endpoint:**
  /vehicles/{device_id}/event
  
  **Method:** POST
  
  **Body Params:**
  
  Event_type = 'service_end'

- Retrieval from street
The MDS Agency Sandbox Environment
The MDS Sandbox Environment

- Signup is live. Send email to support@ladot.io for an account.
- Sandbox URL: https://sandbox.ladot.io/agency/dev
- Admin page: https://mds.ladot.io
- MDS CLI: https://github.com/CityOfLosAngeles/mds-agency-cli
MDS Agency Sandbox Walkthrough

- Retrieve the LA service areas
- Register a vehicle (using OAuth credentials)
- Start the first trip
- Send telemetry
- End trip
- Other events (pickup/dropoff, low battery, maintenance, etc)
Q&A
How We’re Defining MDS Agency Compliance
1. Verify that dockless mobility providers have correctly implemented support for MDS Agency (see previous workflows - slides 20-25).

1. Make sure that individual devices are accurately reporting data per the MDS Agency spec: [https://github.com/CityOfLosAngeles/mobility-data-specification/tree/dev/agency](https://github.com/CityOfLosAngeles/mobility-data-specification/tree/dev/agency)

1. All dockless mobility providers compliant by April 15
1) Integrate with MDS Agency APIs and notify LADOT of a supporting mobile app version prior to award of one-year permit.

2) Use Agency APIs for all vehicles in use on streets in the City of Los Angeles.

3) Make good faith efforts to submit all accurate data described in MDS Agency.

4) Continue compliance with MDS Agency APIs over the duration of the one-year permit, including i) new versions of the mobile application you may release; and ii) new versions of the MDS that LADOT may release.
1. Verify the number of vehicles registered against registry endpoint (/vehicles) is consistent with those that report data within (/service_area).

2. Verify that vehicles appearing as available in the mobility providers app match those with that status in MDS Agency.

3. LADOT reserves the right to verify that vehicles are not deployed (service_start, rebalance_drop_off, maintenance_drop_off) in service areas that would exceed their respective vehicle cap as defined in the permit. At this time for Agency, Vehicles are measured as the number of vehicles with the status of available, reserved, trip, or unavailable within the vehicle registry.

4. Telemetry data is required with submissions to the vehicle event endpoint (/vehicles/x/event) including event_types: service_start, rebalance_drop_off, and maintenance_drop_off.
Testing Integration Compliance: Vehicle Rental

1. LADOT to go and rent a vehicle. LADOT will verify:
   a. Only vehicles with the status of available or reserved are eligible for rentals.
   b. At the time of rental start, the Vehicle event endpoint (/vehicles/x/event) shall be called with the event type of trip_start prior to unlocking the vehicle.

2. LADOT to end the ride. Validate that:
   a. At rental end, Vehicle event endpoint (/vehicles/x/event) shall be called with the event type of trip_end within five seconds of rental termination.

3. Telemetry data is required with submissions to the vehicle event endpoint (/vehicles/x/event) including event_types: trip_start, trip_end, trip_enter, and trip_leave.
Testing Integration Compliance: Vehicle Trip

1. LADOT to ride the vehicle for approximately 10 mins. Validate that:
   a. During the rental, Update Telemetry endpoint (/telemetry) shall be called with accurate information every 30 meters while vehicle is in motion and 30 seconds while at rest. For providers who do not calculate distance in real-time, a periodic rate of five seconds can be used while vehicle is in motion.
   b. Telemetry data is required with submissions to the vehicle event endpoint (/vehicles/x/event) including event_types: service_start, trip_start, trip_end, trip_enter, trip_leave, rebalance_drop_off, and maintenance_drop_off.
1. LADOT to ride the vehicle for approximately 10 mins and post trip, will validate that:
   a. The Update Telemetry endpoint (/telemetry) shall be called for the specific trip within 24 hrs after the vehicle trip is over.
   b. For any given trip, data reported via the (/telemetry) endpoint shall contain temporal and location data for every 300 ft (91 meters) while vehicle is in motion and 30 seconds while at rest. For Mobility Service Providers who do not calculate distance in real-time, a periodic rate of 14 seconds can be used while vehicle is in motion.
Discussion
Wrap Up & Next Steps