

SANDAG Draft Micromobility Data Use Cases v2 (3/4/19)

Dockless Vehicle Trip Data (as supplied by MDS)

1. Determine proportion of micromobility trips that start or end near transit stations.
 - a. Define distance threshold in cooperation with NCTD and MTS
 - b. Include local bus stops in addition to heavy rail, LRT, and *Rapid* services (e.g., routes that serve major transit stations)?
2. Determine arterials and local roads being used for the majority of micromobility trips
 - a. Define majority
 - b. Include comparison of trips along roads with bike infrastructure versus none
3. Determine trip start and end densities by specified geography:
 - a. Leverage MGRAs?
 - b. Leverage Census Blocks?
 - c. Leverage TAZs?
4. Determine volume of inter-city versus intra-city trips
5. Determine mean, mode, and median trip duration
6. Determine mean, mode, and median trip distance
7. Determine average daily trips per dockless vehicle
8. Determine total number of rides per day, week, month citywide
 - a. Determine total number of rides per day, week, month in smaller municipal geographies (e.g., CPAs, BIDs, TPAs)
9. Determine average proportion of dockless vehicles in service
10. Determine dockless vehicle availability and status
 - a. Location – GPS coordinates since not linked to PII
 - b. Duration
 - c. Vehicle reservation data
11. Determine mean, median, and mode of vehicle speeds
12. Usage of designated vehicle parking areas/drop-zones
13. How are micromobility trips impacting mode share changes and/or GHG reductions?

**Cross-tabulation opportunities for use cases above include vehicle type, time of day, etc.*

Non-Trip Data (as supplied by monthly reports from operators)

- Vehicle operations and maintenance
 - Are operators complying with fleet caps (if applicable?) Are those caps appropriate to meet rider demand?
 - Are operators keeping the specified minimum % of fleet in operation for rider use?
 - Number of reports each operator receives from the public regarding devices that are not in good working order and/or are unsafe to ride.
 - Do vendors routinely place their scooters in high-income areas because of demand?
 - Are service area boundaries being respected? If not, where are the majority of violations occurring?

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- Equity
 - Are dockless vehicles being equitably deployed across neighborhoods?
 - Are dockless vehicle operators complying with minimum fleet requirements in specified disadvantaged communities?
 - Are new services helping people and communities most in need of better transportation options?
 - Why is demand different across income levels? Could it be because of disparities in the safety infrastructure that, if improved, would attract more ridership where it's currently low?
- Incidents/Collisions
 - Where and when are the majority of dockless vehicle collisions occurring?
 - Do the collisions or incidents involve injury, death, and/or property damage?
 - What type of riders are most vulnerable? What rider characteristics are associated with these collisions - age, gender, helmet use
 - Are safety concerns dealt with promptly? Are operators disclosing incidents resulting in injury within 24 hours of receiving notice?
- Customer service
 - Mean and median operator response time to improperly parked devices, devices reported to be an obstruction hazard, and devices not reported to be an obstruction hazard.