PROCESS FOR IDENTIFYING PUBLIC CHARGING LOCATIONS

TRIP ORIGIN (RESIDENCE)

TRIP DESTINATION

WHAT'S THE BEST LOCATION FOR CHARGING?

Identify high traffic areas likely to have PEVs because they originate from residential PEV hotspots

Identify likely PEV destinations using INRIX data and local knowledge

Identify existing PEV charging locations and their usage

Identify convenient charging locations:

CLOSE TO ORIGIN

MID-TRIP (INCLUDES INTER-CITY TRIPS)

CLOSE TO DESTINATION

YES

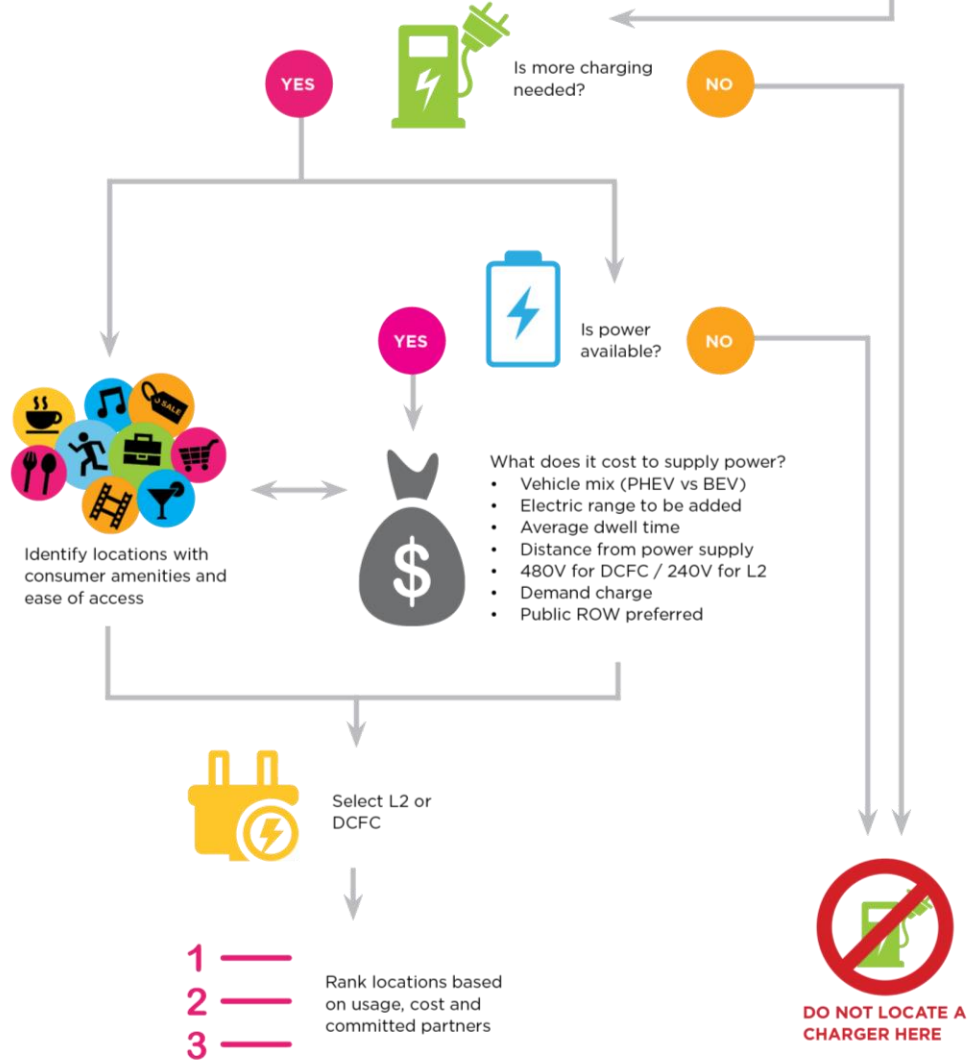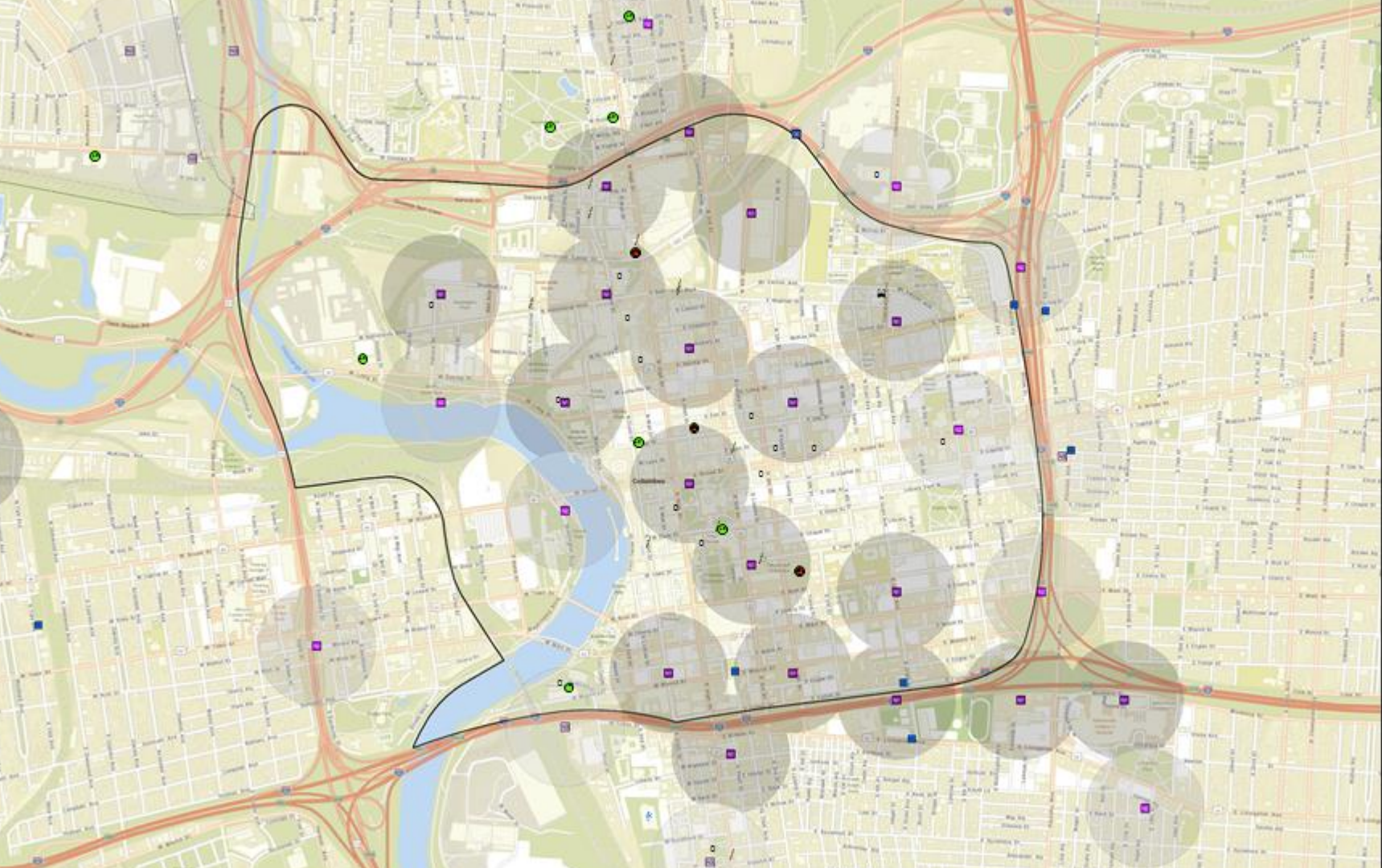Is more charging needed?

NO

WHAT TYPE OF CHARGING?

PRIORITIZE CHARGING LOCATIONS

Is more charging needed?

YES

NO

YES

Is power available?

NO

Identify locations with consumer amenities and ease of access

What does it cost to supply power?
- Vehicle mix (PHEV vs BEV)
- Electric range to be added
- Average dwell time
- Distance from power supply
- 480V for DCFC / 240V for L2
- Demand charge
- Public ROW preferred

Select L2 or DCFC

1 ——
2 ——
3 ——

Rank locations based on usage, cost and committed partners

DO NOT LOCATE A CHARGER HERE

Downtown Columbus

Legend

- Existing Tesla
- Existing DC Fast Charger
- Existing Level 2 Charger
- Existing Level 1 Charger

- Taxi Zones
- Kroger
- Home Depot
- Walmart
- Target
- Companies with 250+ Employees
- Priority 2 Chargers (COTA)
- Prelim Proposed DC Fast Charge
- MRBL L3 Nonresidential Tier 1
- MRBL L3 Nonresidential Tier 2
- MRBL L3 Nonresidential Tier 3
- 500 Feet Buffer of Tier 1
- 500 Feet Buffer of Tier 2
- 500 Feet Buffer of Tier 3
- MRBL Hypothetical DCFC
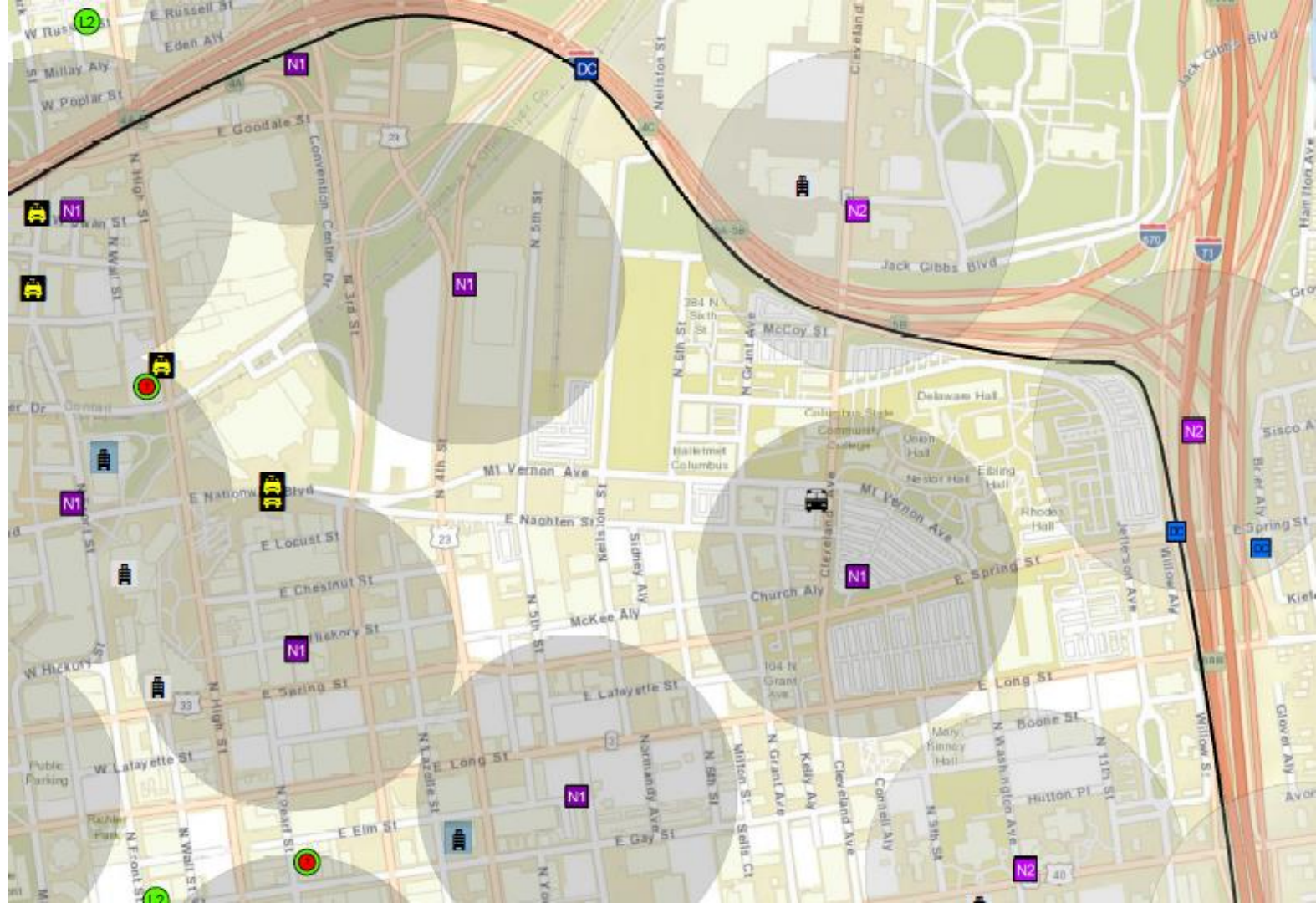
DATA CONSIDERATIONS

- Question regarding input data, such as:
  - **PEV home charging locations**
    - BMV derived data anomalies (largest concentration of plug-in vehicles located in South end of Hilliard near I-70 in low-income small manufacturing area – not residences)
    - Home charging and registration discrepancies—Is registered location actual overnight charging location?
  - **Workplace charging**
    - Personal or employer vehicles? Taxi services?
  - **PEV destinations**
    - INRIX and MPO destination data
    - Day-to-day differences
  - **PEV state of charge**
    - Charging habits
  - **Consumer charging behavior**
- Expect an iterative process – Collect data and improve charger location selection as charger usage database grows.
- Continue implementing local knowledge to improve location selection

SM
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COLUMBUS
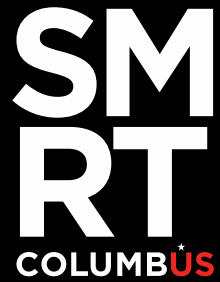
SM RT COLUMBUS

THANK YOU

Credit: Smart Columbus Charging Working Group