

Feature Presentation

Trenton Moves:

Autonomous Vehicle-Based
Urban Transit System Project

Assistant Commissioner

TOSS

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TRENTON MOVES

(MOBILITY & OPPORTUNITY: VEHICLES EQUITY SYSTEM)

Andrew J. Tunnard

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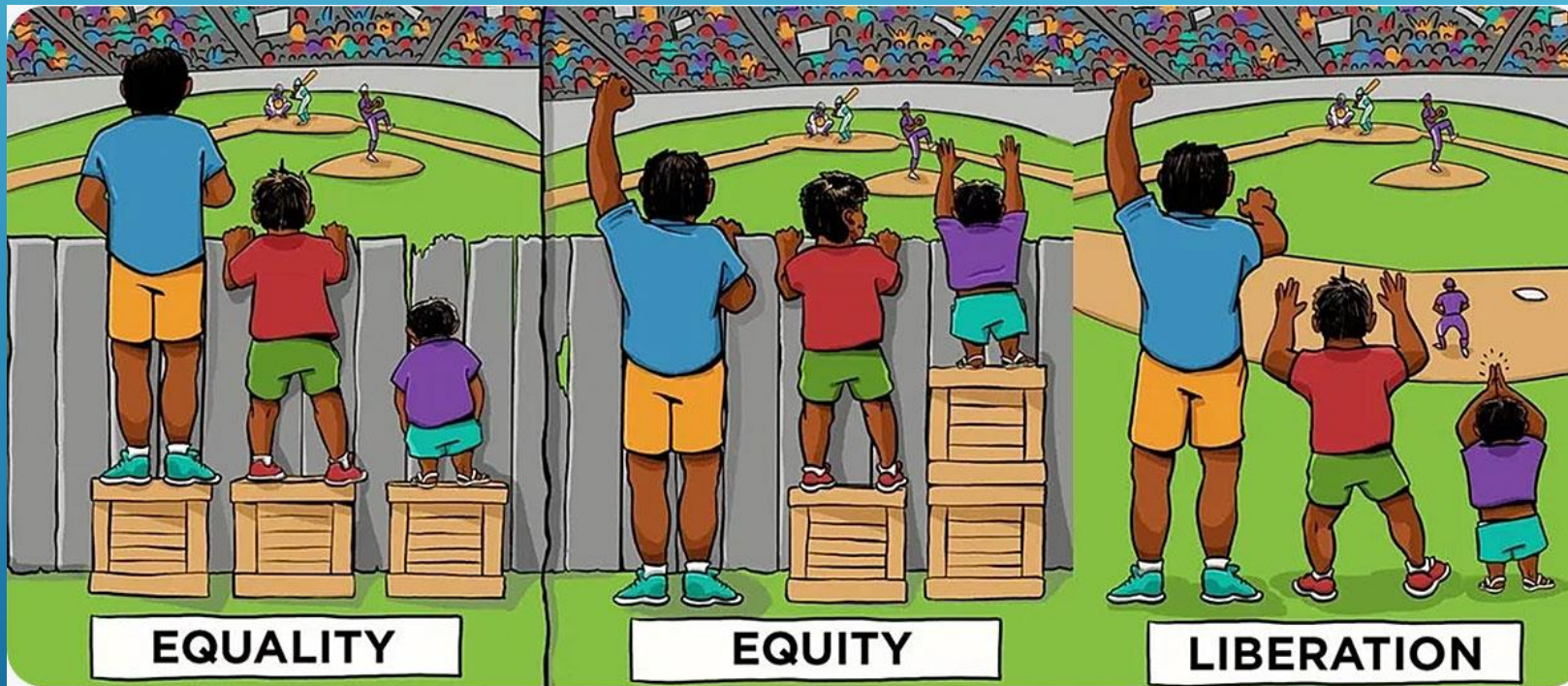
Presented at

NJ STIC 1st Quarterly Meeting 2022

March 16, 2022

TRENTON MOVES

Why?



TRENTON MOVES



- What? Deploy a Safe, Equitable, Affordable, Sustainable, On-Demand Transportation System
- Where? Trenton and then.....
- When? Hopefully early 2024
- Who? Trenton City Government, Mercer County, State (Governor's office & NJDOT), Princeton University

THE HOW

1. Create a Welcoming Environment

- Create a Vision in the communities/neighborhoods
- Build and foster support at the local level

2. Entice technology companies to “Come Play”

- Form a PPP
- **Private:** Contributes IP, expertise and technology/vehicles
- **Public:** Ensures objectives are achieved. Esp. Equity, Safety & High-quality + Ensures affordability

3. Up-front / “Infrastructure” Funding

- Start-up \$\$\$
 - Operations Centers
 - Kiosks
 - Curb/Road Improvement
 - **Acclimation of Vehicles & Customers**

1. Create a Welcoming Environment

2. Entice/select a feasible technology company

3. Up-front / "Infrastructure" Funding



90,000 RESIDENTS OF TRENTON, NJ

50 KIOSK NEIGHBORHOODS

Existing
Mobility
Providers

Faith
Community

Business
Community

Senior
Community

Public
Housing

Schools

Public Safety

Local
NGOs

Major
Employers

NJDOT
Commissioner

Mayor &
City Council

NJMVC
Chief

NJ Assembly

NJ
Senate

Governor

1. Create a Welcoming Environment

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Direct Community Engagement

90,000 RESIDENTS OF TRENTON, NJ

50 KIOSK NEIGHBORHOODS

Public Housing

Faith Community

Business Community

Senior Community

Mobility Providers

Schools

Public Safety

Local NGOs

Major Employers

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Public Housing



Schools



Senior Community



Community Canvassing

1. Create a Welcoming Environment

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Enthusiastic Government Support

Governor Phil Murphy

☰

Murphy Administration Announces RFEI for Project to Create the First Autonomous Vehicle-Based Urban Transit System in America

12/6/2021

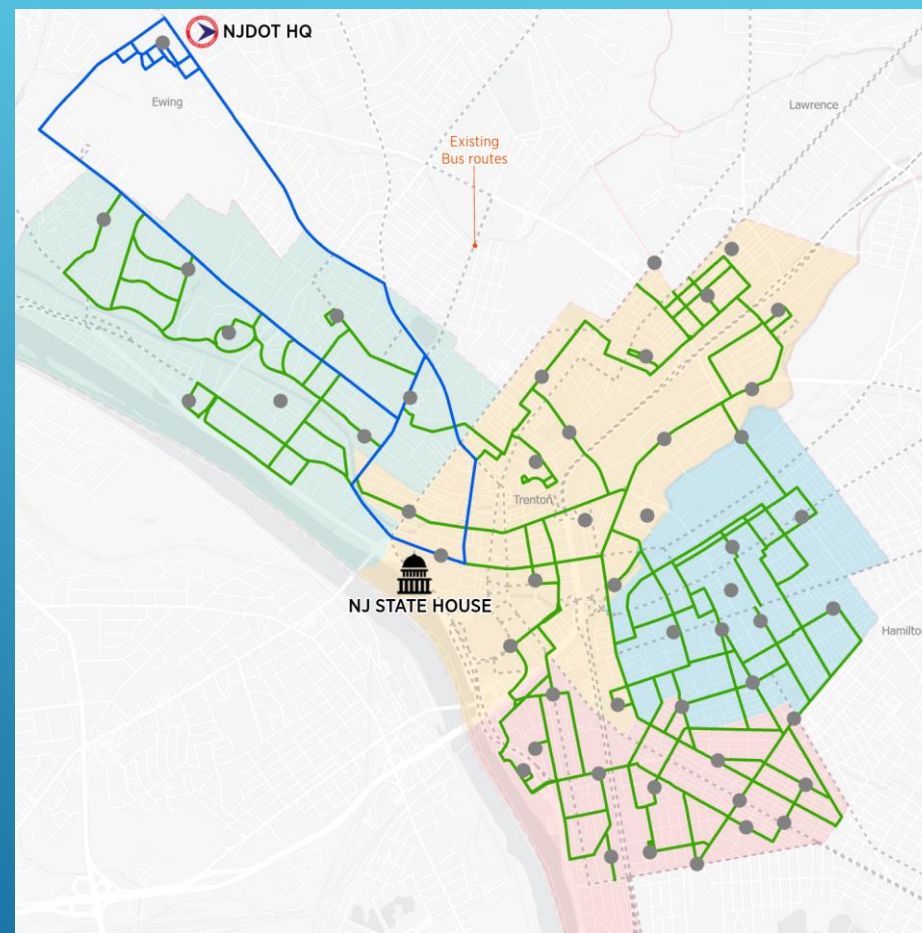
TRENTON – Governor Phil Murphy and New Jersey Department of Transportation (NJDOT) Commissioner Diane Gutierrez-Scaccetti today announced an Request for Expressions of Interest (RFEI) for the Trenton Mobility & Opportunity: Vehicles Equity System (MOVES) Project. Trenton MOVES will act to provide safe, equitable, affordable, and sustainable high-quality mobility through the deployment of 100 Autonomous Vehicles (AVs) throughout the state capital. This on-demand automated transit system will serve 90,000 residents of Trenton.

"Since taking office, we have worked relentlessly towards making New Jersey the innovation center of America," said **Governor Murphy**. "There is perhaps no initiative that embodies this goal more than the Trenton MOVES project, which will attract tech talent from around the country and the world with the mission of creating an autonomous vehicle-based transit system in our Capitol that will provide a new, affordable transportation solution for underserved areas of Trenton. This is an exciting project with immense potential and I look forward to the day that the first vehicle hits the road."

"Mobility is about equity and access to opportunity," said **New Jersey Department of Transportation Commissioner Diane Gutierrez-Scaccetti**. "Trenton MOVES represents an opportunity to utilize innovation to sustainably improve the quality of life of the mobility-constrained in many of our cities. By starting in Trenton, we will have the opportunity to work with a close and effective partner; ultimately our vision is that this effort will ideally scale throughout the state and the region".

◀ Trenton MOVES, Governor Murphy Press Release, Dec 2021

▶ Trenton MOVES, Planned Operational Design Domain.
© CARTS



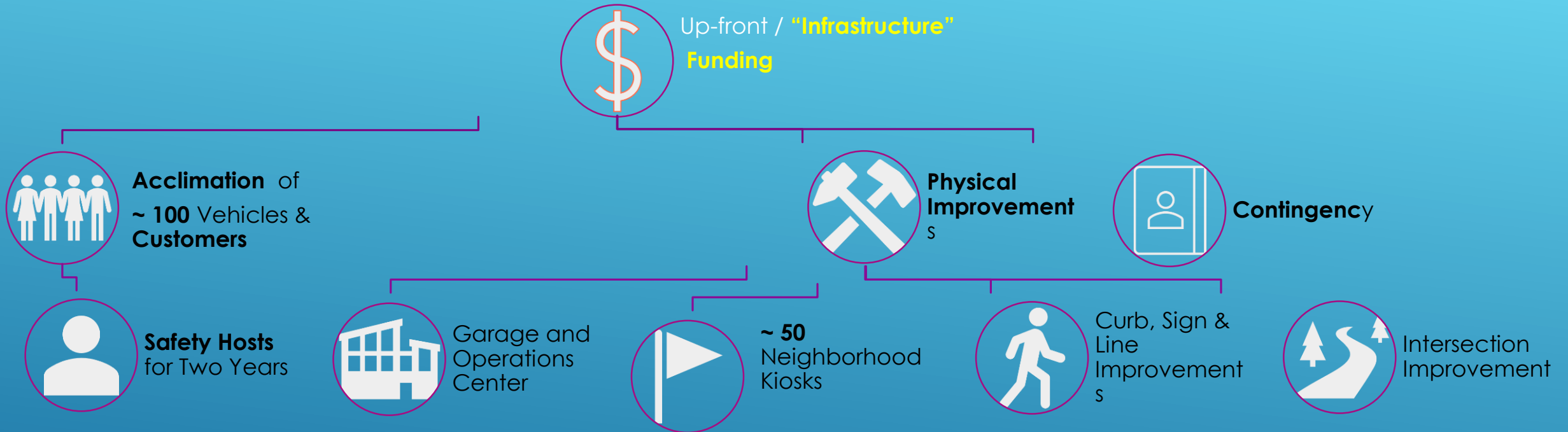
Select, through a competitive procurement process, a capable tech entity to form a PPP, where

- **Private:** Contributes their IP, expertise and technology that is:
 - Safe
 - High-quality (on-demand, 12/7/350 that **can evolve** to 24/7/350)
 - Affordable (Low Cost of **production**)
 - Sustainable (EV, **ride-share**, ...)
- **Public:** Partners with **Private** to formulate an ODD, Service & Pricing Plan that achieves:
 - Equity (Mobility for All)
 - Affordability (Low Pricing where need be, **Market Pricing** elsewhere)
 - Sustainability (**Shared-riding** wherever/whenever feasible)

✓ Create a Welcoming Environment

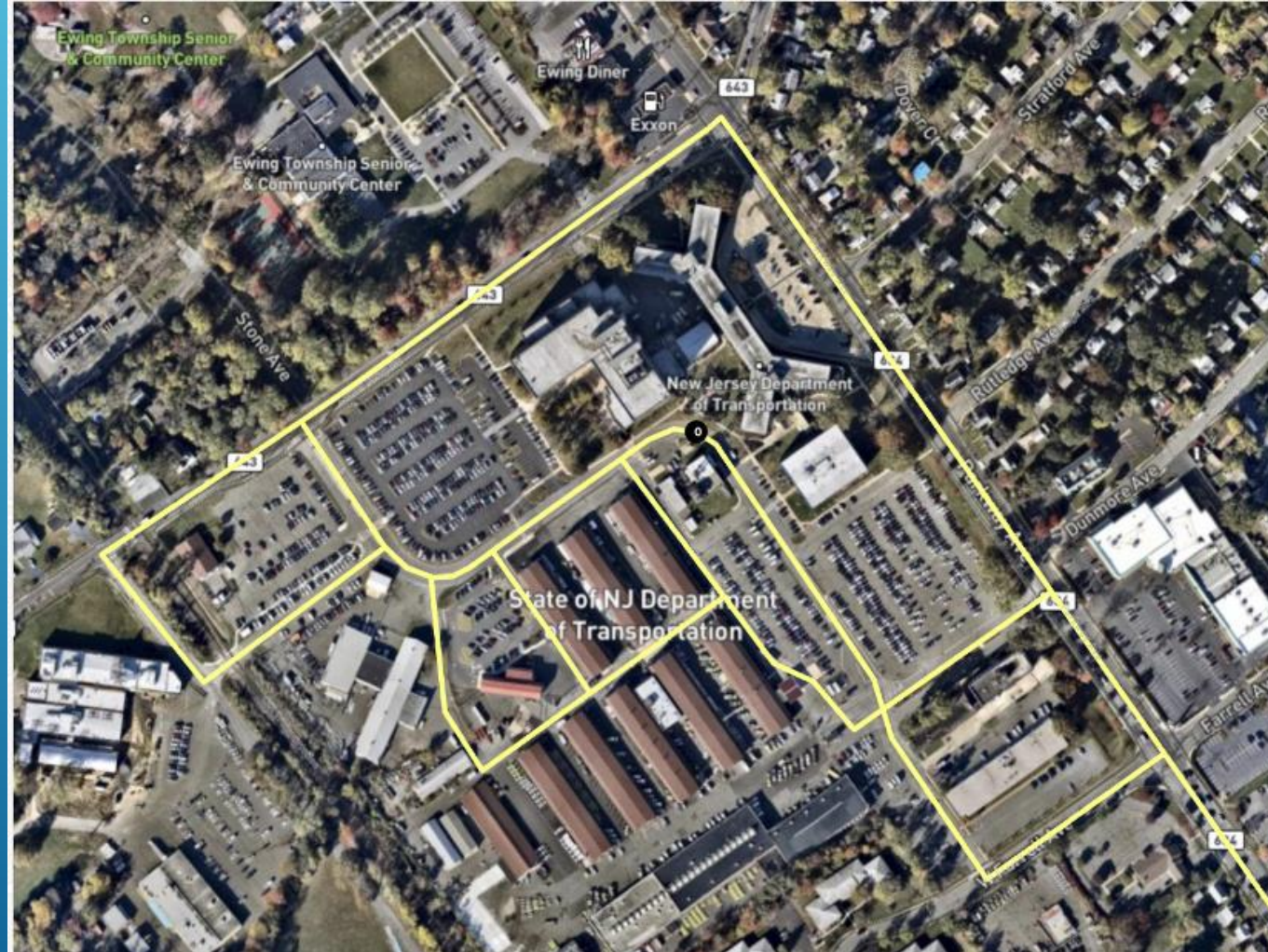
✓ Entice/select a feasible technology company

3. Up-front / "Infrastructure" Funding



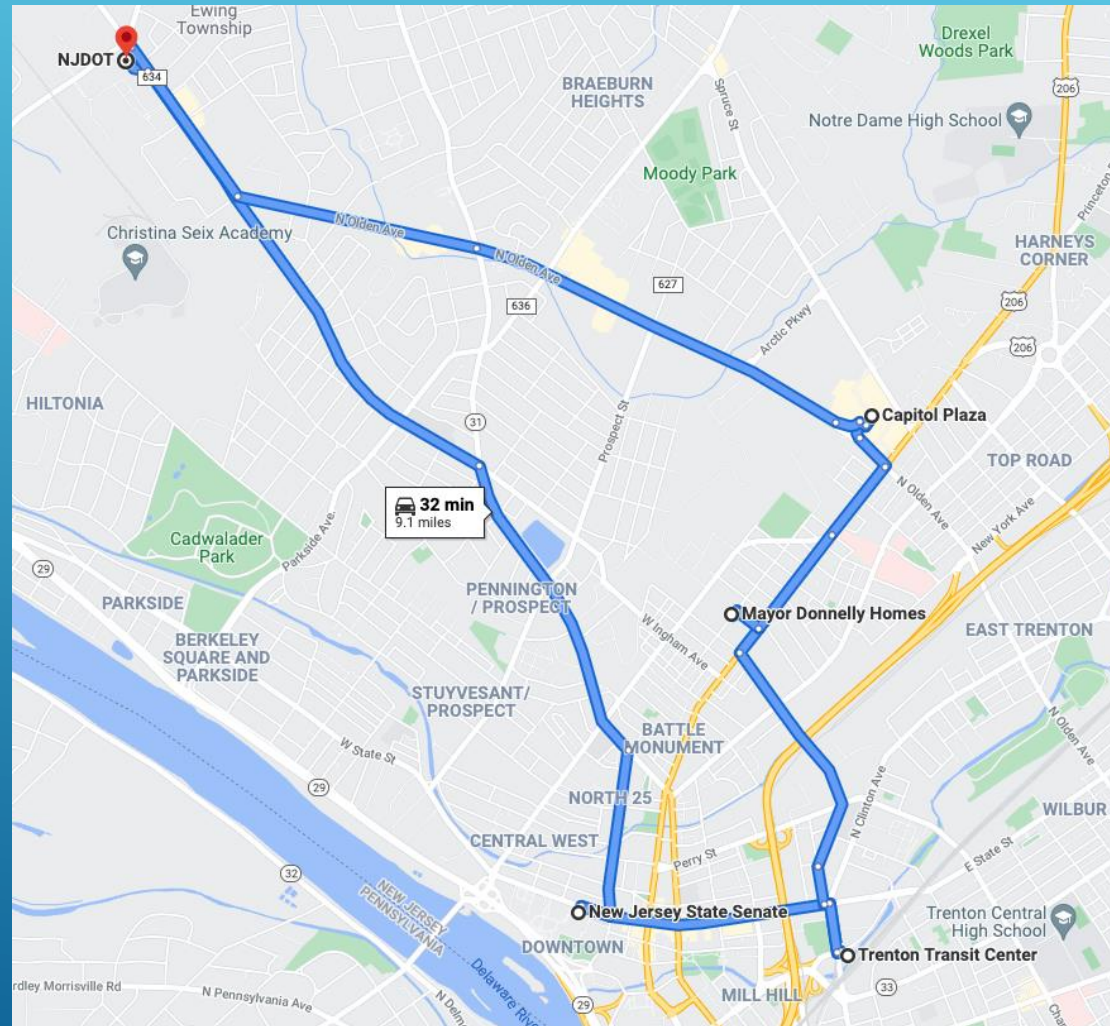
THE EVOLVING ODDS

PHASE I.0 NJ DoT HQ: *Verification* of Concept



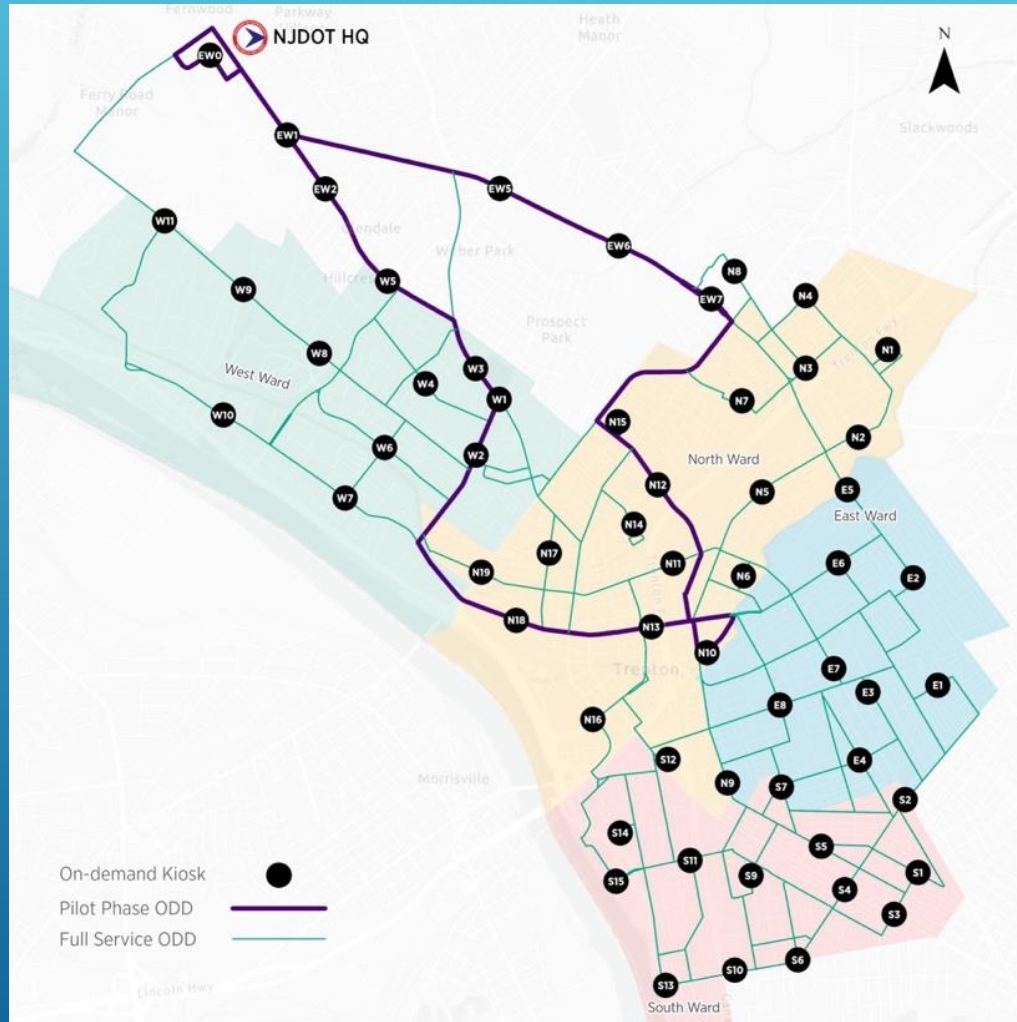
THE EVOLVING ODDS

PHASE I.1 *Initial Pilot ODD: **Proof** of Concept*



THE EVOLVING ODDS

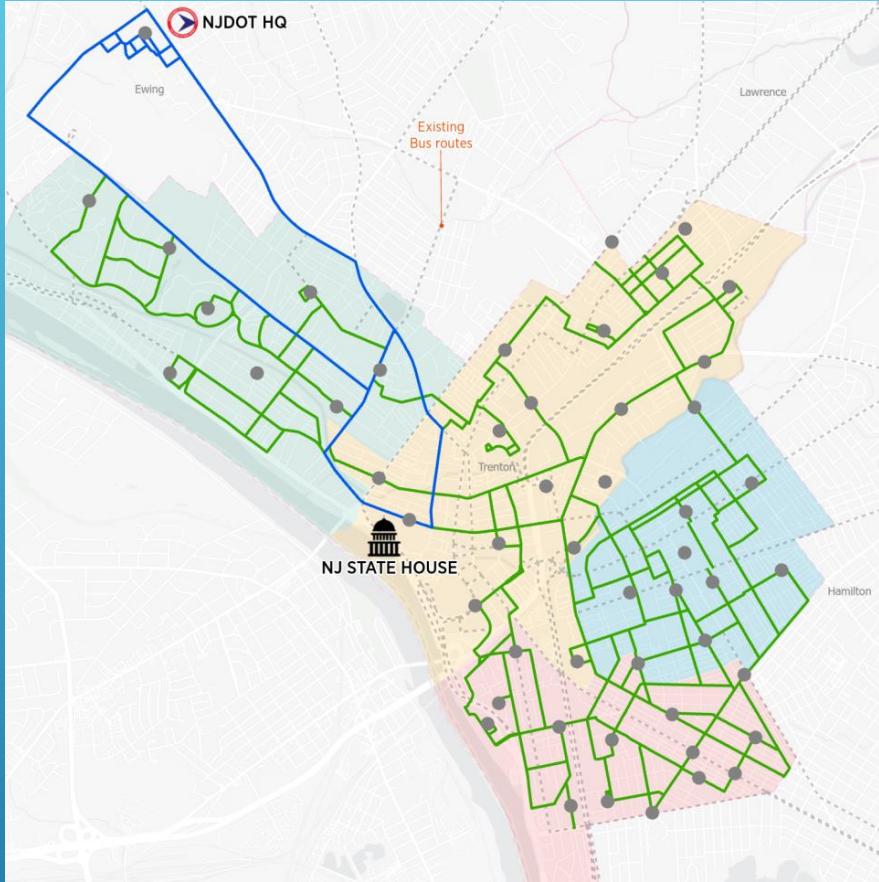
PHASE I.2 *Trenton Area ODD: Proof of Societal Value*



THE EVOLVING ODDS

PHASE IV *Replication Throughout NJ: Proof of Network-Scale Economics*





THANK YOU!