Seattle Department of Transportation

University District Technology Safety Project

MICMA

Multimodal Integrated Corridor Management for All

Funding

FHWA

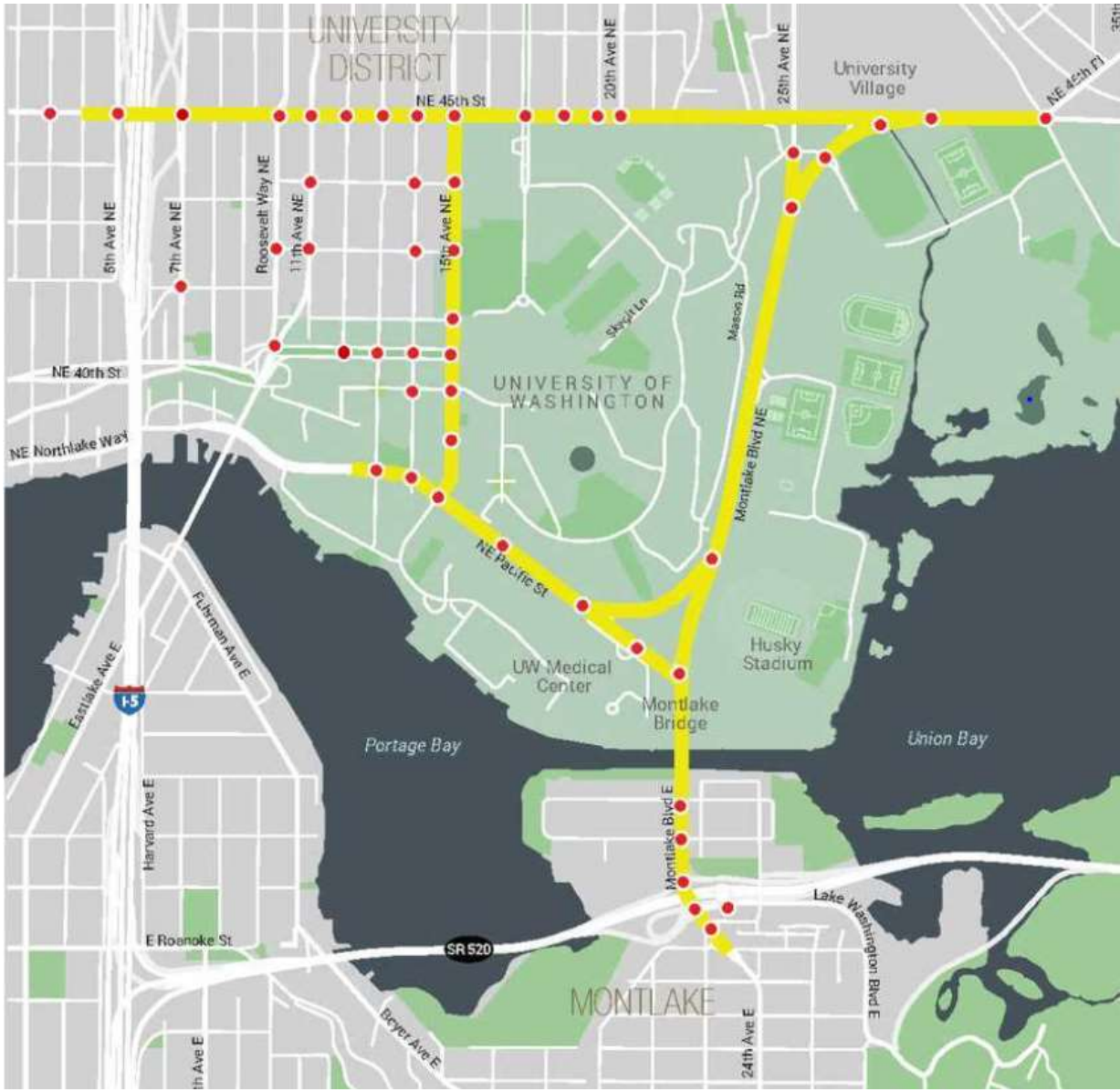
- ATCMTD Grant - $4M

Match

- SDOT Match $5M
- WSDOT In-Kind Match $3.5M (SR-520)
- Soft Match $580k (Private)

Total Funding $13.1M

Awarded in 2019



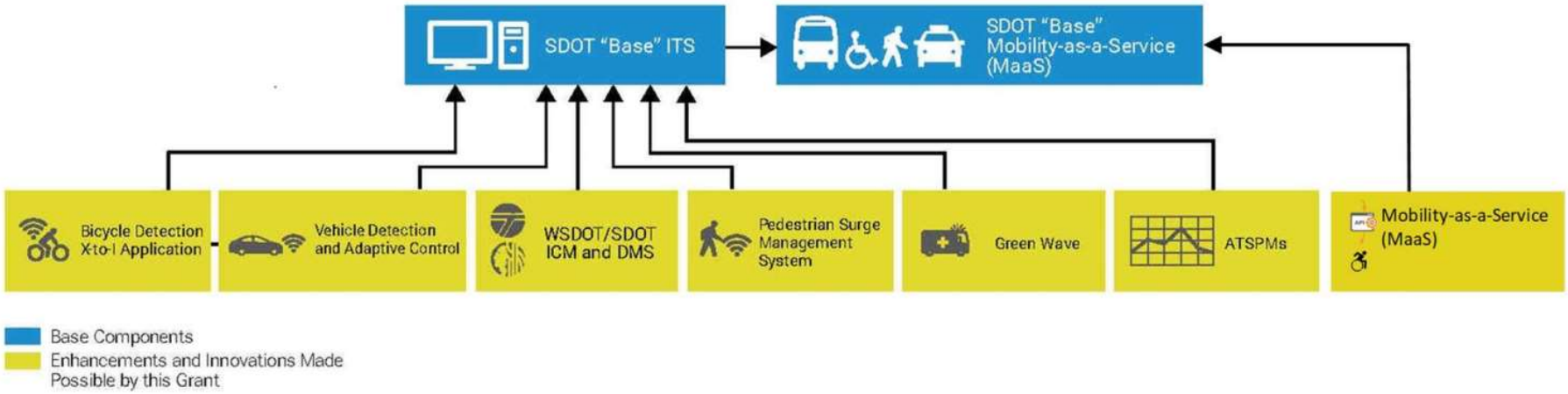
Project Goal

Upgrade existing traffic signals to current ITS standards and integrate data management solutions to improve multimodal operations.

Existing Traffic Challenges

- High Vehicle, Pedestrian and Cyclist volumes
- Major Transit Hub
- Emergency Vehicles
- Freeway Incidents
- UW Special Events and Games
- Construction
- Bridge Openings

Project Components



- Base ITS Enhancements/Adaptive Signal Control
- GreenWave
- ATSPMs (Advance Traffic Signal Performance Measures)
- Ped Surge Management
- Cyclist X-to-I Detection
- WSDOT-SDOT Incident Corridor Management (ICM)
- Mobility-as-a-Service (MaaS) – Including Incident Management Software/SRT App with open API, and Data Portal

GreenWave

Cloud-Based Emergency Vehicle Pre-emption

- Center-to-Center Solution
- Integration with SFD's Computer Aided Dispatch
- Advance Traffic Clearing for Emergency Vehicles
- 2-year Grant Funded Pilot Project

LYT Turn-Key Solution

LYT will provide the Seattle Department of Transportation (SDOT) with an installation and service period of LYT's cloud-based centralized system for emergency vehicle pre-emption

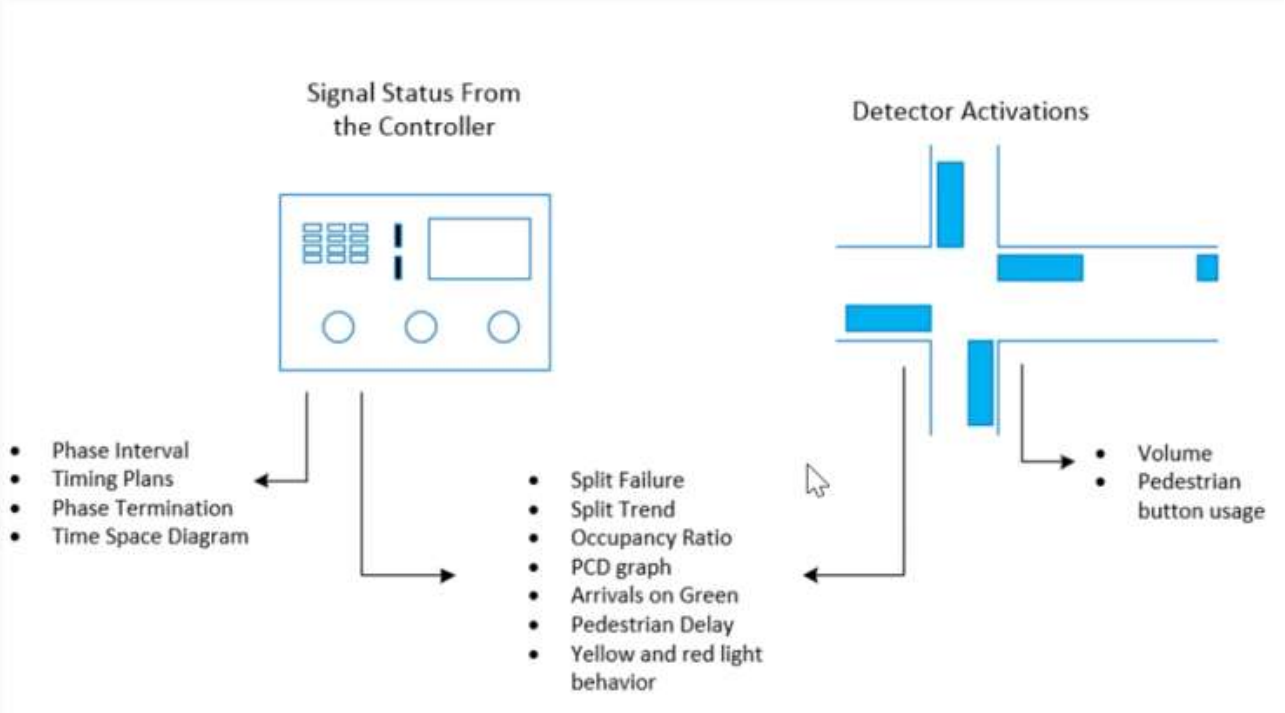
LYT's signal pre-emption solution will provide traffic flush patterns (Green Wave) for emergency vehicles during times of high traffic

LYT will also provide SDOT with user access to the LYT web portal to view live operations and reporting of emergency vehicle pre-emption

LYT shall use SDOT's networks, SFD vehicles, and other Seattle information systems to provide conditional pre-emption to City vehicles

Automated Traffic Signal Performance Measures

- Metrics from 40 intersections

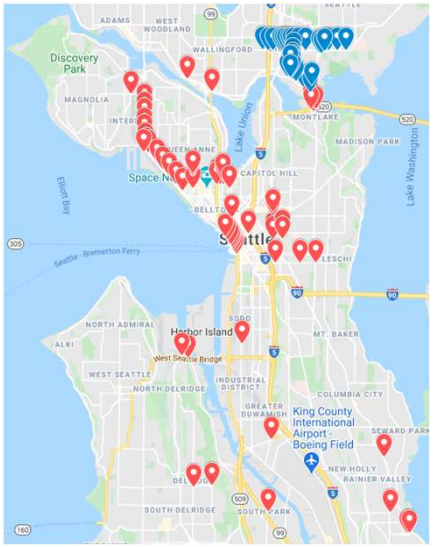


Pedestrian Surge/Bicyclist Detection

- Goal: Treat people on bikes and people walking just like people driving
  - Each user will feed into the controller as a detection
  - Surges of detections will be given longer signal times

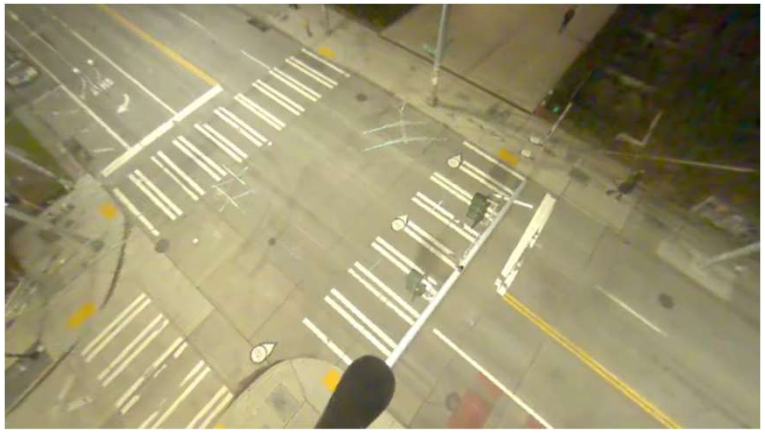
Intersection Analytics

- Near miss analysis
- Red light running (Car and Ped)
- Lane compliance
- Wrong way driving
- Stopped vehicle detection
- Near Miss heat maps



Illegal Crossing Detection

IC
3,649 EVENTS



Pedestrian Signal Violation Detection

PSV
17,036 EVENTS

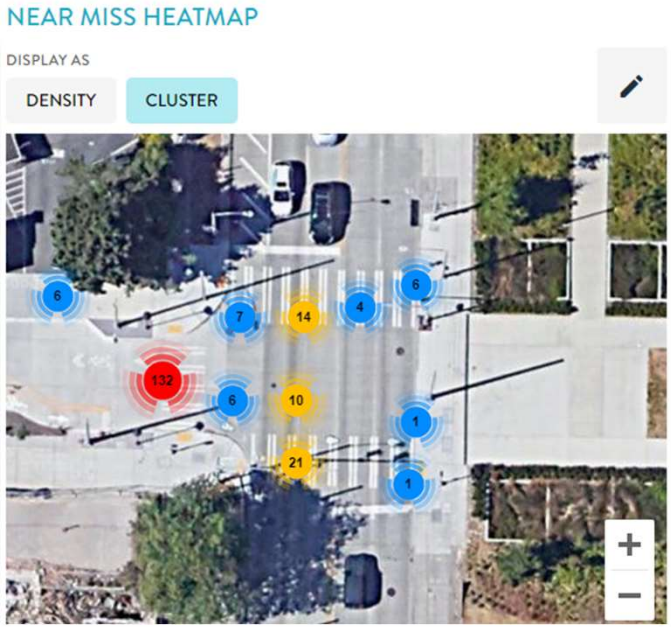
Near-Miss Detection (Vehicle-VRU)

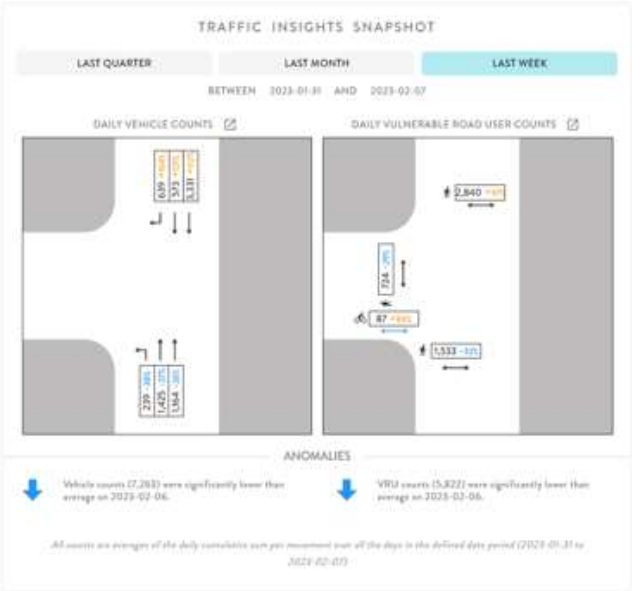
NM-VRU
93 EVENTS

Near-Miss Detection (Vehicle-Vehicle)

NM-VV
10 EVENTS

Intersection Analytics

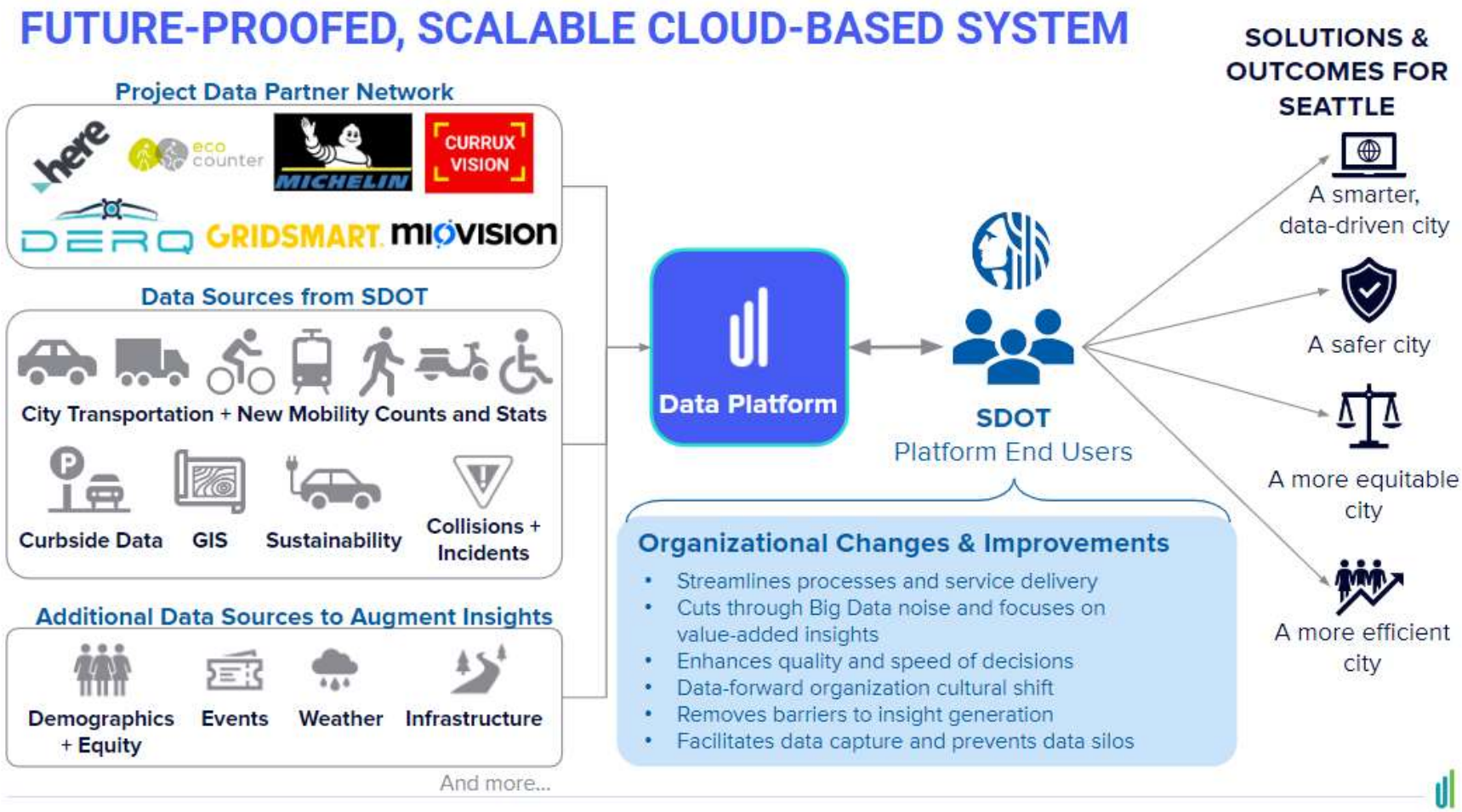




Available snapshots to quickly review quarterly, monthly and weekly trends:

- Safety performance scores for vehicles, VRUs and the overall intersection
- Changes (increases or decreases) in the various safety event types
- Fluctuations in vehicular and vulnerable road user counts

Mobility-as-a-Service Data Strategy



MaaS Data Portal: UrbanLogiq

- TOD purchased 2-year subscription 2023-2024
- All data in the cloud
- API access
- Public access
- Internal reporting
- Collisions, Traffic Volumes, Speeds, Classifications, Bike Volumes, demographic data, probe data, etc.
- External data can be added a-la-carte