Urban Air Mobility (UAM)
Thoughts on Vertiports

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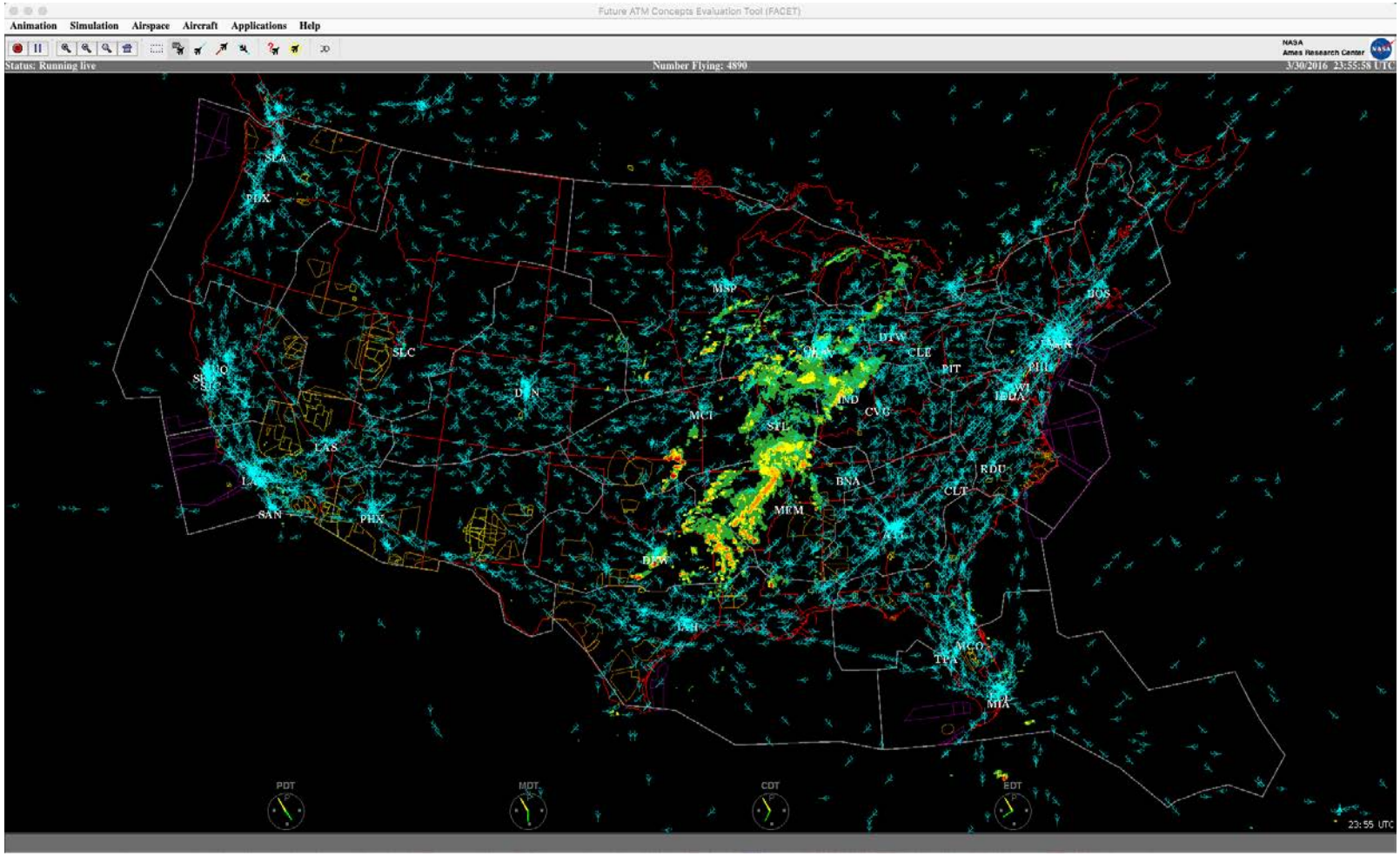
National Airspace System (NAS)



Conventional Traffic, Weather, SUA/TFR, Dynamic Sectorization, TMIs

Urban Air Mobility

- Research - viability, infrastructure, safety and convenience, scalability, traffic management, and public acceptance

- Benefits - mobility, commutes and deliveries, and decreased congestion, emissions, and noise

NASA

- ATM-eXploration Project, UAM Sub-Project

- ConOps, Technical Challenges, Reference Implementations, Interoperability

- Series of simulations for UAM airspace management, high-tempo information exchange, connecting partners, and preparation for flight tests

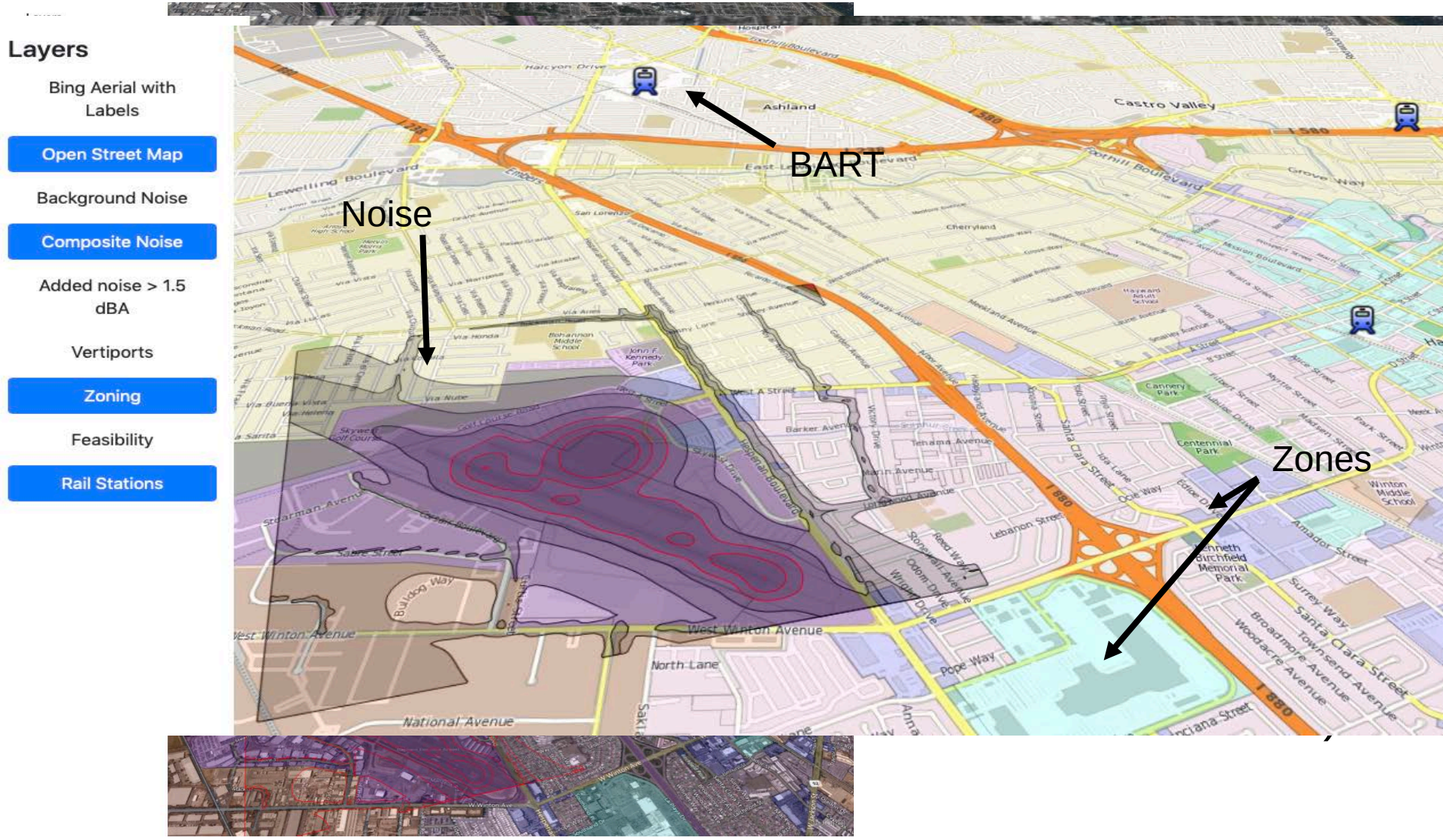
Regional Modeling UAM Planning Tool

- Region/city and attributes selection
- Environmental, zoning, transit systems, hospitals, etc.
- Algorithmic aggregation of attributes
- Grid-based location suggestions and vertiport selection
- Route structure design (weather, noise, battery, etc.)
- Frequency/density impact assessment

Planning Tool (Continued)

- Properties
  - Environmental, demand, multi-modal
  - Open source
  - Open architecture
- Needs
  - Attribute selection
  - Tool structure/design
  - Demand profiles

We're on our way!



Demo

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- industrial, commercial, residential, downtown, open space, airports, mixed use
- BART, CalTrain,
- Distance to BART
- Parameters for the vertiport
- Animate pictures
- Aggregation function, Criteria used to aggregate with a weighting function