TRAFFIC ENGINEERING AND DATA MANAGEMENT A VIEW OF MULTIDISCIPLINARY TEAMING FOR REDUCED PROJECT COST

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WHAT DATA ARE WE DISCUSSING

- TSM&O collects (or will be collecting) a multitude of data
  - Microwave Video Detection
    - Point Speeds, Volume and Occupancy
  - Automated Traffic Signal Performance Metrics
    - Signal Timing
    - Number of Pedestrian Calls
    - Demand Profile
  - Intersection Movement Counts
    - Turning Movement Counts, connected to phase (RTOR, Permissive Lefts)
  - Probe Data
    - Origin and Destination, travel time
  - Crash and Weather Data
WHAT DATA ARE WE DISCUSSING

• It is augmented by contextual data
  • Number of Lanes
  • Lane Assignment
Others can benefit from this data

- Demand model development
- Operational model development
- Corridor studies
- Traffic studies
SO LET’S SHARE IT

- Reduce costs to Department
- Avoid putting people in and around traffic
- Consistent data throughout the Department

Let’s do it
HOW WE STORE IT
CONNECTIVITY

• All of this is on the ITS Network
• Air gapped from OIT/users
• Requires ITS User to provide to others
COMPLICATIONS

• Handling requests takes away staff
• Many dimensions to consider
  • Batch size
  • Location
  • Filtering criteria
  • Data Type
• Sometimes you have to see the data to know what you want
• Pulling out of systems built to operate
• Each iteration takes time
SOLUTION

- To make data available asked VHB help
  - Dashboard to interrogate data
  - Way to make data accessible to others w/o an ITS Staff having to get involved
WHY ARE WE DOING THIS?

• **Data Collection is the Most Difficult Part**
• **Data Reuse and Consistency**
• **Data Needed by External Users**
• **Support For Real time systems**
  • ICMS - Operations
  • Route and mode choice – transportation users
RECENT DATA SHARING WINS

• TSMO Multi-Modal Dashboard
  • For MPOs, TPOs, Transit Agencies, Consultants, etc.

• Public Dashboard
  • For Citizens, Elected Officials

• Data for Analytics
  • For Universities, Consultants
WHAT ARE WE DOING NEXT?

• Bring in more datasets from Additional Agencies
• Continue sharing with additional Users
• Explore Additional Techniques
  • Analytics Platforms, Machine Learning
• Solve additional use cases
  • Traffic control
  • Incident Detection