Revisiting our FHWA Data Business Plan

July 2020
Mapping the data landscape

• Who are the responsible parties?
• What datasets are being collected?
• What datasets are not being collected?
• How can each dataset support planning/management/operations?
• How can we collaborate?
• What are we working toward?
Who are the responsible parties?
Organizations invited to participate

• Approximately 20 agencies/organizations participated in stakeholder interview process
• Identifying data stewards within each agency
• Identifying the regard for data & organization within each agency
What datasets are being collected?
Data & gap assessment

• Revealed 50-ish sets of mobility data collected
• Questions about validity of these responses
  • Responses ranged from “all types of data” to “none”
  • Were we asking the right people? Did they do homework to answer the question correctly?
• Uneven landscape of data
• Novel datasets – CV pilot, Waze, LBS
What datasets are not being collected?
Data & gap assessment

• Few turn counts
• Bike/ped is extremely limited
• Origin-destination is desired
• Few ROI analyses
How can each dataset support planning/management/operations?
Opportunities for intersection(al) analyses

• Identifying ways to study relationships
  • Crash & speed
  • Infrastructure condition & demography
  • Health & bike/ped counts
How can we collaborate?
Forums to discuss topics regarding data & analyses

- Intelligent Transportation Systems committee
- Regional Big Data Working Group
- Smart Cities Alliance
- Intra-agency working groups
Data & Analytics Portal — Why?

- Working smarter, not harder
- Centralize datasets across entire D7
- Consistent analyses – error free
- Eliminate data duplicates
- Regional performance measures
Regional Data Platform - Overview

The fusion and analysis of data from across the region brought together in one platform to enable the maximum amount of insight to be gleaned and in doing so creates the opportunity to manage our transport networks more efficiently and enhance mobility for all.

Vision:
To use ‘big data’ to optimize mobility movement across the region, inform our future planning strategies and drive efficiency savings, this vision will be enabled by a proof of concept pilot project and then a series of projects as defined on the overall roadmap.
ClearGuide

Real-time contextual mobility intelligence
Route Planning

Key Economic Spaces Across Hillsborough County
Focus on commuter routes rather than corridors
Top 20 Most Miserable Commutes

- Based on KES
- 15x15 OD pairs
- Combining 6 measures of congestion for AM&PM peaks
- Future RLRTP integration?
Focus on commuter routes rather than corridors
Focus on commuter routes rather than corridors.
Supplement to traditional corridor-level LOS

Improving Travel Time Reliability 30% Countywide is Achievable with "Smart Cities" Treatments Applied to these County Road Segments*

<table>
<thead>
<tr>
<th>County Road?</th>
<th>Route Created?</th>
<th>Road Name</th>
<th>From</th>
<th>To</th>
<th>MEAN TRAVEL TIME INDEX SCORE</th>
<th>LENGTH</th>
<th>RELIABILITY FORECAST (scores above 1 indicate less reliability)</th>
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<tr>
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<td>Yes</td>
<td>12TH ST NE</td>
<td>19TH AVE NE</td>
<td>US 41</td>
<td>1.360</td>
<td>3.004</td>
<td>1.209</td>
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<tr>
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<td>Yes</td>
<td>30TH ST / BRUCE B DOWNS BLVD</td>
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<td>RIVERHILLS AVE</td>
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<td>40TH ST / MCKINLEY DR</td>
<td>BUSCH BLVD</td>
<td>BUSCH GARDENS</td>
<td>1.353</td>
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<td>Yes</td>
<td>46TH ST</td>
<td>FLETCHER AVE</td>
<td>SKIPPER RD</td>
<td>1.423</td>
<td>0.500</td>
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Supplement to traditional corridor-level LOS

<table>
<thead>
<tr>
<th>County Road?</th>
<th>Road Name</th>
<th>From</th>
<th>To</th>
<th>Length</th>
<th>TTI (2020)</th>
<th>Mean TTI (2045)</th>
<th>Reliability Forecast (2045)</th>
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<tr>
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<td>12(^{th}) St NE</td>
<td>19(^{th}) Ave NE</td>
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<tr>
<td>Yes</td>
<td>Big Bend Rd</td>
<td>I75 N Ramp</td>
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Traffic Management

Signal Retimings in Tampa
Retiming signals in downtown Tampa

- Step 1 – Define area for evaluation
- Step 2 – Create routes
- Step 3 – Use multi-route reports in CG = obtain before and after values for travel time and delay
- Step 4 – Use AADTs and average hourly distributions for downtown to assign volumes to each route = vehicle hours of delay and travel time
## Evaluation

<table>
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<tr>
<th>Time of Day</th>
<th>Travel Time Comparison</th>
<th>Delay Comparison</th>
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<tbody>
<tr>
<td></td>
<td>Total Change in Travel Time (veh-hr)</td>
<td>Percentage Change in Travel Time</td>
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<tr>
<td>AM Peak - 0700 - 1000</td>
<td>-93.7</td>
<td>-8%</td>
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<tr>
<td>Mid Day Peak - 1100 - 1300</td>
<td>-87.6</td>
<td>-9%</td>
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<tr>
<td>PM Peak -1600 - 1800</td>
<td>-176.8</td>
<td>-11%</td>
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<tr>
<td>Late Night - 2200 - 0000</td>
<td>-41.8</td>
<td>-17%</td>
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</table>
Next steps for data & analytics platform

• Building dashboards on website
• Continue data exploration
  • Transit
  • O-D
  • Micro-mobility options
• Predictive analytics
Lessons learned
Learn by doing

• Be willing to be flexible or break the rules
• Lesson in organizing/coordination
• Value must be intersectional
• Governance must add value for the agencies & the public
Best practices
Suggestions for others

• Draw connections to projects & programs and talk about what could be possible
  • Vision Zero, Smart Cities

• Never stop talking about governance & related topics
  • Create a forum to discuss issues

• Regularly update the Data Business Plan
  • Scale of issues becomes more granular over time
Thank you