Hillsborough Shared Data Portal & Analytical Tool

2020 FLPRITE Winter Workshop
February 28

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Data & Analytics Portal – Why?

- Many datasets floating around HC
- Some are duplicates, others are *almost* duplicates
- Efficient data collection/production processes
- Common & shared data means less analytical variance
- Instills confidence in our agencies
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.
<table>
<thead>
<tr>
<th>Goals for the Data &amp; Analytics Portal</th>
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</thead>
<tbody>
<tr>
<td>Aggregate datasets originating in agencies across HC</td>
</tr>
<tr>
<td>Provide analytical capabilities related to safety &amp; congestion</td>
</tr>
<tr>
<td>Acquire/develop multimodal long-range planning tool</td>
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<tr>
<td>Rapid deployment</td>
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<td>Proven platform</td>
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</table>
ClearGuide

Real-time contextual mobility intelligence
### Route Performance

**Time Range:** 2019-02-07 to 2020-02-09

**Metrics:**
- Metric 1: Average Speed
- Metric 2: Average Travel Time
- Metric 3: None

**Keywords:**
- My Routes Only

**Routes:**
- Hidden River/Telecom Park to New Tampa Commercial
- New Tampa Commercial to Hidden River/Telecom Park
- Hidden River/Telecom Park to Port Redwing & Big Bend

<table>
<thead>
<tr>
<th>Route Name</th>
<th>ID</th>
<th>Average Speed (mph)</th>
<th>Average Travel Time (mins)</th>
<th>Length (mi)</th>
<th>Tags</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hidden River/Telecom Park to New Tampa Commercial</td>
<td>241</td>
<td>49.2</td>
<td>7.77</td>
<td>6.33</td>
<td>commuter route, kes</td>
</tr>
<tr>
<td>Hidden River/Telecom Park to Port Redwing &amp; Big Bend</td>
<td>239</td>
<td>56.4</td>
<td>26.58</td>
<td>23.92</td>
<td>commuter route, kes</td>
</tr>
<tr>
<td>New Tampa Commercial to Hidden River/Telecom Park</td>
<td>240</td>
<td>56.7</td>
<td>6.17</td>
<td>5.73</td>
<td>commuter route, kes</td>
</tr>
<tr>
<td>TIA North/Anderson Rd to Greater Downtown</td>
<td>243</td>
<td>34.6</td>
<td>11.6</td>
<td>6.5</td>
<td>commuter route, kes</td>
</tr>
<tr>
<td>Westshore District to Greater Downtown</td>
<td>242</td>
<td>50</td>
<td>5.51</td>
<td>4.47</td>
<td>commuter route, kes</td>
</tr>
</tbody>
</table>

Showing 1 to 5 of 5 entries

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Current Use Cases
Speed and Traffic volume

- Identify mobility and safety priorities
- Report/Visualize mobility and safety performance
- Identify solutions
- Bottleneck analysis
- Corridor Delay reports
Future Use Cases
Crash, Incident, Volume, more modes

- Evaluate project options
- Prioritize project options
- Predict Outcome
- Incidents by corridor/intersection report
- High crash locations
- Corridor Delay reports
- CAV
CLEARGUIDE SERVICE FEATURES

• Map
• Map Animations
• Custom Route Selection Tool
• Reports
  5 minute, 15-minute, Hourly, Daily
Quantity selections (Speed, Travel Time, Travel Time Index, Free flow speed, Samples, High Quality Samples).
Reliability statistics that make sense for links and routes like percentiles, min/mean/max and standard deviations.
CLEARGUIDE SERVICE FEATURES

• Alerts and Trend Analysis Bundle
• Regional Dashboard
• Data Downloader
• Route Alerts
• Trend Map
CLEARGUIDE SERVICE FEATURES

- Incidents and Social Media
- HERE Incident Feed
- Waze Incident Feed
- Local Agency Incident Data
- HERE Traffic Safety Warning Feature
CLEARGUIDE SERVICE FEATURES

• Integration of Volume Data
  • Vehicle hours of delay
  • Person hours of delay
  • Vehicle miles and person miles traveled
  • User delay & wasted fuel reports

• Bottleneck Detection and Reporting

• Iteris ClearPath Weather

• Custom Free Flow Speed

• Truck Data
Planning Use Cases

- Performance Reports
- Preparing for Public Relations
- Project Selection & Resource Prioritization
Performance Reports

Inform planning and design studies

Meet reporting requirements

Create materials to support grant applications

Identify mobility and safety priorities

Develop performance reports and visualization

Meet Federal requirements (MAP-21)

See number of anomalies over the past month, year etc.

Before & After Studies

Changes in Mobility and Safety Conditions over Time

Top 10 Reports

Congestion Contributors

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Public Relations Reports

- Prepare press releases for public outreach
- Inform citizens, legislators etc. on project impacts
- Generate statistics and content for media consumption
- Prepare actionable reports for legislators and federal agencies; prepare corridor delay reports
Project Selection & Resource Prioritization

Generate Key Performance Indicators to evaluate requests for funding and select projects that meet best bang for the buck

View entire district or state with data combinations to highlight mobility and safety issues
ClearGuide

Top 20 Most Miserable Commutes – Countywide

15x15 OD pairs
6 measures of congestion for AM&PM peaks
Operations Use Cases

ICM Management

Maintenance of Work Zone traffic

Manage network traffic

Emergency Operations (weather, fires)

Incident Management

Special Event/Holiday Management

Before and After Analysis

Signal Synchronization

Justify need for signal system upgrades
Real Time Operations

- Monitor bottlenecks and anomalies in real-time
- Overlay Waze, incident, and weather data on the map
- Receive alerts on custom routes
I-275SB @ Sligh for 3&4 Feb 2020
Route: I-275 (S) to I-275 (S) To EXIT: 47

MON 02/03/2020 TO MON 02/03/2020

Average Speed (mph)

Delay in Minutes (FF) (mins)

12 AM 06 AM 12 PM 06 PM 12 AM

Closed

Average Speed
Delay in Minutes (FF)

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Next Steps

• Incorporating new datasets
  • Crash
  • Incident
  • Transit
  • OD
  • Waze
Next Steps

• Supplementing LOS maps in HC Comp Plan
• Building dashboards on website
FAQs

• What is the data source?
  • HERE through FDOT

• Who has access?
  • Hillsborough Partners = FDOT, County, City of Tampa, Plant City, THEA, Temple Terrace

• How do I get access?
  • Contact Johnny Wong
Thank You

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