Tackling Challenges with the Help of Data

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(part of the) Answer: Probe Data

- Holistically look at historical traffic data Statewide
- Identify areas of poor performance
- Quantify performance
- Understand traffic patterns
- Make data driven decisions
What is Probe Data?

Data that is generated by anonymously monitoring the position of individual vehicles (i.e., probes) over space and time.
Regional Integrated Transportation Information System (RITIS)

Probe Data Analytics Suite – Probe data visualization and retrieval tool

https://ritis.org/intro
RITIS Probe Data Analytics Suite

- Speed
- Congestion
- Comparative Speed

- Travel Time
- Buffer Time
- Planning Time
RITIS Probe Data Analytics Suite Use Case

I-495 SB to I-290 WB Improvements
I-495 SB to I-290 WB Improvements

Week after Thanksgiving
6:00PM

Before (2022)

After (2023)
I-495 SB to I-290 WB Improvements

Week after Thanksgiving
2022 vs 2023

52% reduction in 95th% Travel Time
RITIS Probe Data Analytics Suite Use Case

I-90 Acceler-8

Construction Impacts
Saturday June 20, 2021
Woodland Road WB Replacement

I-90 Acceler-8

Max Queue: ~5 miles At 7:00pm

Queue Duration: 9:00am – 10:00pm, 13 hours
How does data like this help us?
Covid Reporting - Volumes

MA Statewide Daily Traffic Volume Trends

COVID Impacts by District - 02/15/2021 - 02/28/2021

-18% to -3%
-17% to -14%
-26% to -12%
-28% to -6%

-44% to -24%

Source: M2 Traffic Dashboard

massDOT
Massachusetts Department of Transportation

U.S. Department of Transportation
Federal Highway Administration
Covid Reporting – Travel Time

Weekday Travel Times Along Corridors compared to 2020

<table>
<thead>
<tr>
<th>Highways in Boston</th>
<th>TravelTime Difference (min)</th>
<th>Percent Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NB/S</td>
<td>AM Peak</td>
</tr>
<tr>
<td>I-93 SE Expressway</td>
<td>11.6</td>
<td>1.1</td>
</tr>
<tr>
<td>I-93 north of the City</td>
<td>5.5</td>
<td>2.2</td>
</tr>
<tr>
<td>I-90 between I-95/128 and I-93</td>
<td>6.6</td>
<td>0.1</td>
</tr>
<tr>
<td>US 1 between Copeland Circle and I-93</td>
<td>1.8</td>
<td>0.8</td>
</tr>
</tbody>
</table>

I-93 North SE Expressway - Average Weekday Travel Times

I-93 North SE Expressway - Average Weekday Speeds
Traveler Information Systems
Project Specific Travel Times

Sumner Tunnel Detour Route Travel Times

STEP 1: View Prior Weeks
Week 1 - Week of July 5th

STEP 2: Select a Detour Route
- All Detours
- Alford St
- Chelsea St
- McKinnley Bridge
- Route 1
  - Route 16
  - Route 1A

STEP 2a: Select a detour s...
- Full Corridor
  - Rt 16 to I-93
  - Copeland Circle to Rt 16

STEP 3: Select Day(s) of Week
No category selected

STEP 4: Select a Time Period
- Full Day - 24 Hour

Travel Time by Hour with Selected Day of Week
(Dashboard is updated weekly with averages representing the past 7 days)

Travel Time North/East
Graph colors do not correspond to the delays associated with Travel Time.

Travel Time South/West
Graph colors do not correspond to the delays associated with Travel Time.

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Mobility Dashboard

https://mobility-massdot.hub.arcgis.com/
Statewide Speed Dashboard