National Rural ITS Conference

Turing Data into a Better Rural Transit System

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Leveraging Data

• Do you get real value from your data?

• Does your data help you identify your issues?

• Does more data just lead to more confusion?
Do you get real value from your data?

- A common problem in all industries is that we don’t put our data to work to for us.

- We invest in collecting data and reporting on data but we often don’t act on what the data is telling us.
Does your data help you identify your issues?

• When a rider calls and complains about being picked up late, do we know why it happened?

• Does our data help us to understand the problem and can we ensure the riders that we are managing their issues?
The data tells us a lot…

Riders Complaint
- We arrived 13 minutes late for our pick up

Why it happened
- Took 49 minutes for a 6 minute trip and we drove an additional 7.45 miles to get to our destination
Does more data just lead to more confusion?

• Random pieces of data just lead to inconsistent management decisions.

• To manage effectively, we must manage trends and we must avoid using one piece of information to form our opinions.
Steps to Leveraging your Data

1. Define your Goals / Objectives / KPI’s
2. Establish your trends
3. Determine where your issues are
4. Track your issues
5. Establish procedures and processes to ensure you’re taking action on the “right” issues
6. Monitor the results and watch your performance improve
Establish Trends

- Automated tools like RouteMatch Management Console makes it easy to get your results for the trend period. In this case, we will look at the month of May and OTP is 83%
Our trend is 83% OTP – Can it be better?

- Drill down by date, route, driver, day of the week, etc..

<table>
<thead>
<tr>
<th>Date</th>
<th>Scheduled</th>
<th>Actual</th>
<th>Difference</th>
<th>Scheduled</th>
<th>Actual</th>
<th>Difference</th>
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We’ve identified a problem day - Let’s look by route

<table>
<thead>
<tr>
<th>Route</th>
<th>On Time Performance</th>
<th>Trip Count</th>
<th></th>
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<tbody>
<tr>
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<td>Difference</td>
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<td>21.08</td>
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<tr>
<td>816 - ZONE D</td>
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<td>71.43</td>
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<tr>
<td>803 - ZONE B</td>
<td>100</td>
<td>73.33</td>
<td>26.67</td>
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<tr>
<td>806 - ZONE C</td>
<td>100</td>
<td>77.78</td>
<td>22.22</td>
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<tr>
<td>812 - ZONE E</td>
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<td>807 - ZONE F</td>
<td>100</td>
<td>85.71</td>
<td>14.29</td>
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<tr>
<td>815 - ZONE G</td>
<td>100</td>
<td>89.47</td>
<td>-9.47</td>
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<tr>
<td>810</td>
<td>100</td>
<td>90.91</td>
<td>9.09</td>
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<tr>
<td>811</td>
<td>100</td>
<td>92.31</td>
<td>7.69</td>
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<td>901 - ZONE D</td>
<td>100</td>
<td>92.86</td>
<td>7.14</td>
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<tr>
<td>804 - OLIVE VIEW - AM &amp; Mid</td>
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<td>4.55</td>
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<tr>
<td>805 - Zone H</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>813 - Zone A</td>
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<td>100</td>
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</table>
We’ve identified a problem route - What are the issues?

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<tr>
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<th>Time 1</th>
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<th>Time 3</th>
<th>Time 4</th>
<th>Time 5</th>
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<td>03:15:25 PM</td>
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<td>-</td>
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<td>03:23:58 PM</td>
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<td></td>
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<td>5:26 PM</td>
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<td>-</td>
<td>3:50 PM</td>
<td>06:00:23 PM</td>
<td>3:50 PM</td>
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</tbody>
</table>

RouteMatch Software
We’ve identified a portion of the route where we varied from schedule - What happened?
Leveraging Data

• We can identify trends and find variances but we need more. We need a workflow that monitors the issues and tracks them through resolution.

• By utilizing systems such as RouteMatch Management Console, issues can be automatically identified for you and put in a queue for follow-up.

• Roles are set up in your organization to manage the queues. As issues are created, they are automatically put in the proper queue which is assigned to the appropriate role.
Leveraging Data

Some of things that can be automatically identified are:

• Late leaving the depot
• Variance from time or mile for each leg of the route
• Performing the pick or drop at a different location than expected
• Long dwell times
• On board equipment issues
• Many, many more…
| Route Pull Out | Warning | Pending Review | 5/19/2007 | 816 - ZONE D |
| Route Pull Out | Warning | Pending Review | 5/23/2007 | 816 - ZONE D |
| Route Pull Out | Warning | Pending Review | 5/10/2007 | 816 - ZONE D |
| Route Pull Out | Warning | Pending Review | 5/15/2007 | 816 - ZONE D |
| Route Pull Out | Warning | Pending Review | 5/19/2007 | 808 |
| Route Pull Out | Warning | Pending Review | 5/18/2007 | cover route 100 |
| Route Pull Out | Warning | Pending Review | 5/19/2007 | 808 SAT-SUN |
| Route Pull Out | Warning | Pending Review | 5/14/2007 | 806 - ZONE C |
| Route Pull Out | Warning | Pending Review | 5/18/2007 | 815 - ZONE G |
| Route Pull Out | Warning | Pending Review | 5/17/2007 | 815 - ZONE G |
| Route Pull Out | Warning | Pending Review | 5/9/2007 | 806 - ZONE C |

**Description:** Miles Variance Greater than 5 Miles

- **Trip Pickup**
  - Date: 5/18/2007
  - Route: 802 - ZONE G

- **Trip Pickup**
  - Date: 4/2/2007
  - Route: 813 - Zone A

- **Trip Pickup**
  - Date: 5/25/2007
  - Route: 802 - ZONE G

- **Trip Pickup**
  - Date: 5/10/2007
  - Route: 806 - ZONE C

- **Trip Pickup**
  - Date: 5/16/2007
  - Route: 802 - ZONE G

- **Trip Pickup**
  - Date: 5/29/2007
  - Route: 810

- **Trip Pickup**
  - Date: 5/3/2007
  - Route: 809

- **Trip Pickup**
  - Date: 5/31/2007
  - Route: 815 - ZONE G

- **Trip Pickup**
  - Date: 5/11/2007
  - Route: 811

- **Trip Pickup**
  - Date: 5/31/2007
  - Route: 804-OLIVE VIEW - AM & Mid

- **Trip Pickup**
  - Date: 5/15/2007
  - Route: 810

- **Trip Pickup**
  - Date: 5/8/2007
  - Route: 812 - ZONE E

- **Trip Pickup**
  - Date: 5/17/2007
  - Route: 815 - ZONE G

**Issue ID:** 5251

**Trip Date:** 10/23/2007

**Status:** Open

**Issue Type:** Warning

**Queue:** Driver

**Lookup Type:** Trip Pickup

**Vehicle:** 422_802_815CorSau_A_NH_P

**Route:** 802 - ZONE G

**Customer:**

**Location:** 27732 Sumner Ave

**Description:** Miles Variance Greater than 5 Miles

**Notes:**

[Add Note...]
Key Performance Indicators (KPI’s)

- Pull In / Out Time
- On Time Performance
- Trips / Passengers per hour
- Trips / Passenger per mile
- Customer Service
- Contract Requirements (Client & Contractor)
- Call Center / Dispatch Metrics (ASA, Talk Time)
- Miles – Service, Revenue, Deadhead
- Hours – Service, Revenue, Deadhead
- Billing / Verification (Timely & Accurate)
Leveraging Data - Summary

- Performance improves dramatically when issues are consistently identified and managed. The key is tracking the issues all the way through to resolution.
- By identifying your trends regarding performance, you identify the need for action.
- By identifying issues affecting performance, you isolate the problems.
- By managing the issues through a systematic workflow, you consistently resolve problems and put the data to work for you.
Contact Information

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