The Past, Present and Future of Data for Traveler Information

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Act I
New technologies are changing transportation data
We can use these changes to meet travelers’ needs.
Existing practices—and inertia—make it difficult to see opportunities
There are creative and safe ways to explore the possibilities.

Private Sector

Licenses Data to

Public Sector
Focus on needs and match the data source to those needs
Act II, Scene 1
Transportation data collection is based on available technologies
Traffic counts were first done manually, and then with tubes.
Inductive loops represented a significant leap forward
New technologies—GPS, cell phones, and more—expand the options
Uses of data have been driven by the available data, not by needs.
Traffic Management Systems are built to use what loops provide.
By extension, traveler information systems were built to use that data

\[ p = \frac{\left( x_{k+N_k+1} + \sum_{j=k}^{k+N_k} x_j \right) - d}{x_{k+N_k+1}} \]  

Finally, travel time is estimated as:

\[ T_k = p \cdot \tau_{k+N_k+1} + \sum_{j=k}^{k+N_k} \tau_j \]
Or, radio reports used helicopters (another form of “technology”)
Act II, Scene 3
We can now start to provide what people really want and need
Most people want to know “How long will it take to get there?”
Information can now come from cars
Instead of this...

\[
p = \frac{\left( x_{k+N_k+1} + \sum_{j=k}^{k+N_k} x_j \right) - d}{x_{k+N_k+1}}
\]

Finally travel time is estimated as:

\[
T_k = p \cdot \tau_{k+N_k+1} + \sum_{j=k}^{k+N_k} \tau_j
\]
We can do this…

\[ T_b - T_a = TT \]
Creative partnerships, rights, and institutional structures are needed
How can agencies take advantage of these opportunities?

Ownership not needed
Act III
Travelers want better information than they have been getting.
Focus on needs and match the data source to those needs
Traveler Information—when and where travelers want it

The car with Dash Express reached its destination on time.

Option 1: 12 minutes
Option 2: 16 minutes
Option 3: traffic! 38 minutes
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