

Lessons Learned in the U.S. about
Collecting, Using, and Delivering
Freight System Performance Information
in a Big Data World

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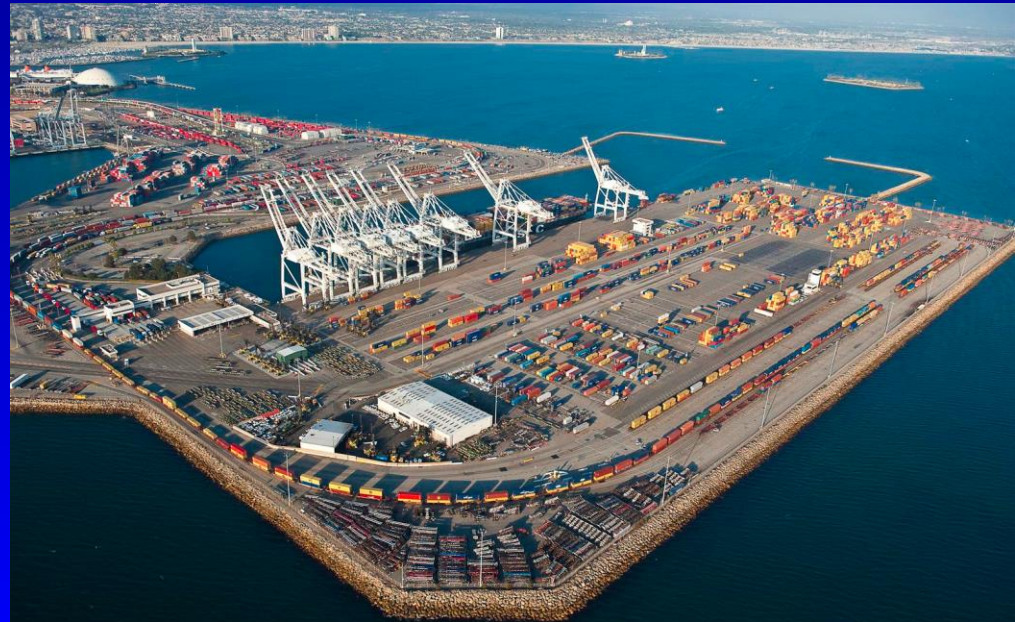
University of Washington

Introduction


- Large amounts of data are being generated
 - Ever growing thanks to new technology
- Public & Private sectors can provide many useful services with that data
- How do we help those services get built?

What We've Learned

- We are all in this together
 - Public agencies
 - Private technology service providers
 - Terminals
 - Shippers
 - Individual truckers



What We've Learned

- Partnerships are important
 - Required!
 - Public and private cooperation is needed
- Partnerships work when everyone wins
 - A losing partner stops participating
 - Remember this 

Private
Sector
View

Public
Sector
View

Public & Private Sectors Think Differently

- Return on investment
- Regional coverage
- National markets
- Political & constituent support
- Operation of specific facilities
- Regional policy goals
- Social equity



Private
Sector

Public
Sector

BUT....

- Public & Private Sectors both want to provide useful, information that improves freight movement

Lesson Learned

- We need to understand and respect these differences in motivations in order to work together

Lesson Learned

- What I see as valuable may not have the same value to you
 - This is true in both directions
 - The geographic scale at which outcomes must work

Moving Forward

- Information services (public or private) need information to provide (i.e., data)
- So sharing data is key to the public/private partnership

Big Data World

- Most of the new data sources are non-traditional in format
 - Vehicle probes versus fixed sensors
 - Monitored behavior versus surveys

Lesson Learned

- Most of the non-traditional data comes to us as a secondary use
 - It is collected for another purpose, but can be used for additional purposes, or transformed into a different statistic

Lesson Learned

- We always use the

Best

Available

Data

Lesson Learned

- Creating new uses for data requires creativity – and salesmanship

Lesson Learned

- Secondary use of data carries risk for the provider
- Depending on it also carries risk to the user of the secondary provider
 - It could go away
 - This use is of secondary importance

Why Salesmanship?

- Collection of many new data items requires consent
 - GPS data
 - Electronic transaction data
- Consent occurs when value \gg cost



Why Salesmanship?

- Secondary use can change the perception of “risk”
- Which can change the willingness to participate in the primary use
- So companies must be convinced to share their data

Lesson Learned

- Perception is more important than reality
 - Is privacy being violated?
 - Are company secrets being violated?
 - Is company trust being violated?

If secondary use changes these perceptions,
then $\text{Value} < \text{Cost}$ to the participant

Lessons Learned

- Understand real and perceived risks to the participants
- Develop creative ways to lower those (perceived) risks



Lesson Learned

- Also increase (and sell) the benefit (value) side of sharing data.

Examples

- No speeding tickets can be issued from point-to-point travel times from CVISN tags
- Origin/destination travel times will be reported only at the traffic analysis zone level

Value Increase Example

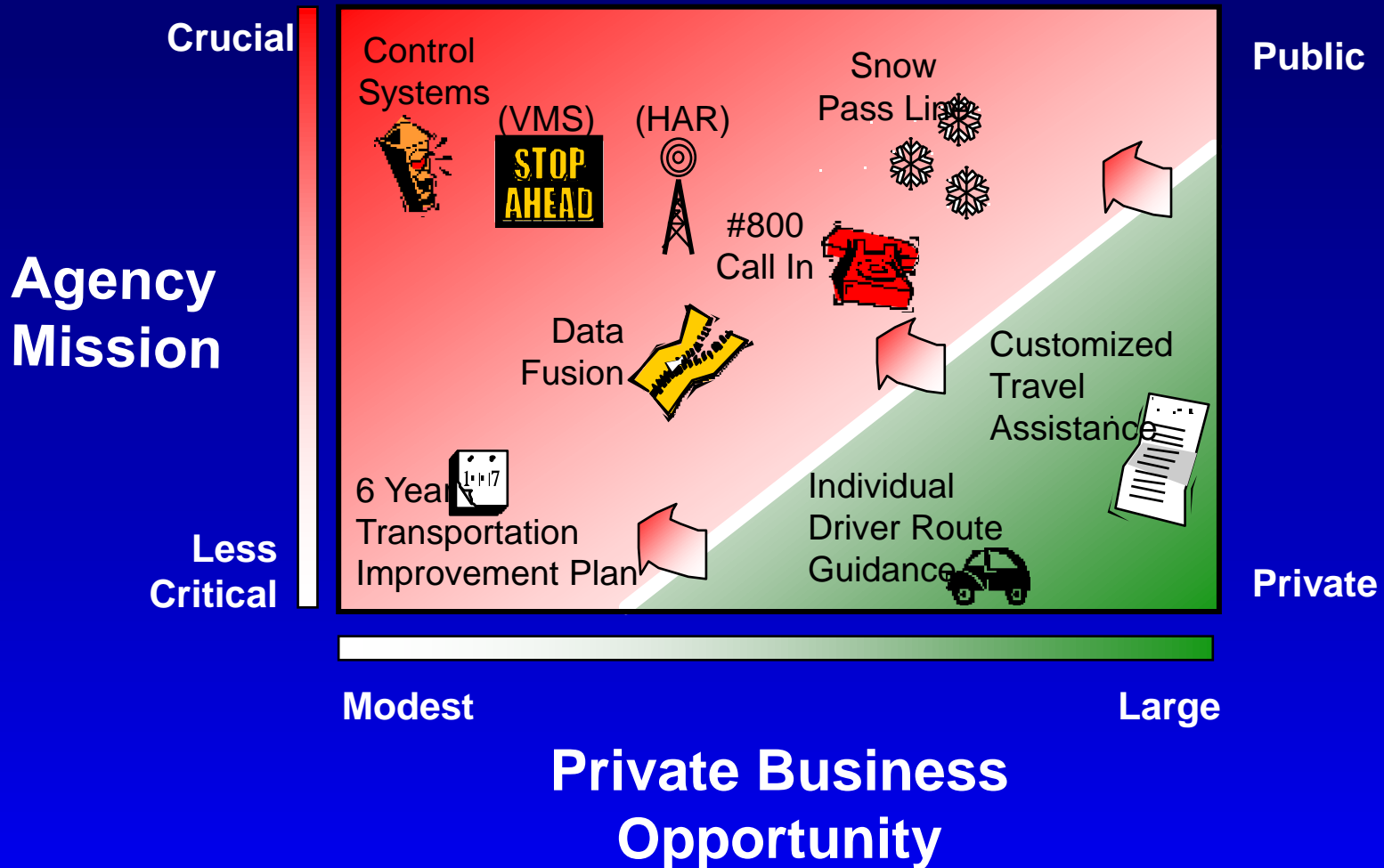
- If trucking firms want to have their concerns raised up the project selection ranking, they need to share data
 - Given the previous safeguards

<u>2013 Rank</u>	<u>2013 Rank Truck</u>	<u>Roadway</u>	<u>From</u>	<u>To</u>	<u>Annual Hrs of Delay per Mile</u>	<u>Annual Hrs of Truck Delay per Mile</u>	<u>TCI</u>	<u>Truck Congestion Cost (Millions)</u>
1	2	IH 35	SH 71	US 183	788,649	74,955	2.47	\$52.88
2	7	US 59	IH 10	SH 288	743,006	49,170	2.44	\$11.29
3	8	US 59	SH 288	IH 610 W	730,665	47,433	2.01	\$19.78
4	5	IH 35W	IH 30	SH 183	685,043	63,353	2.25	\$16.47
5	4	IH 635	IH 35E	US 75	674,537	63,771	1.87	\$38.98
6	11	IH 610	UA 90	IH 10 W	613,897	31,942	2.02	\$21.50
7	14	US 75	IH 635	Woodall Rodgers Freeway	590,059	31,319	1.67	\$21.92

Lesson Learned

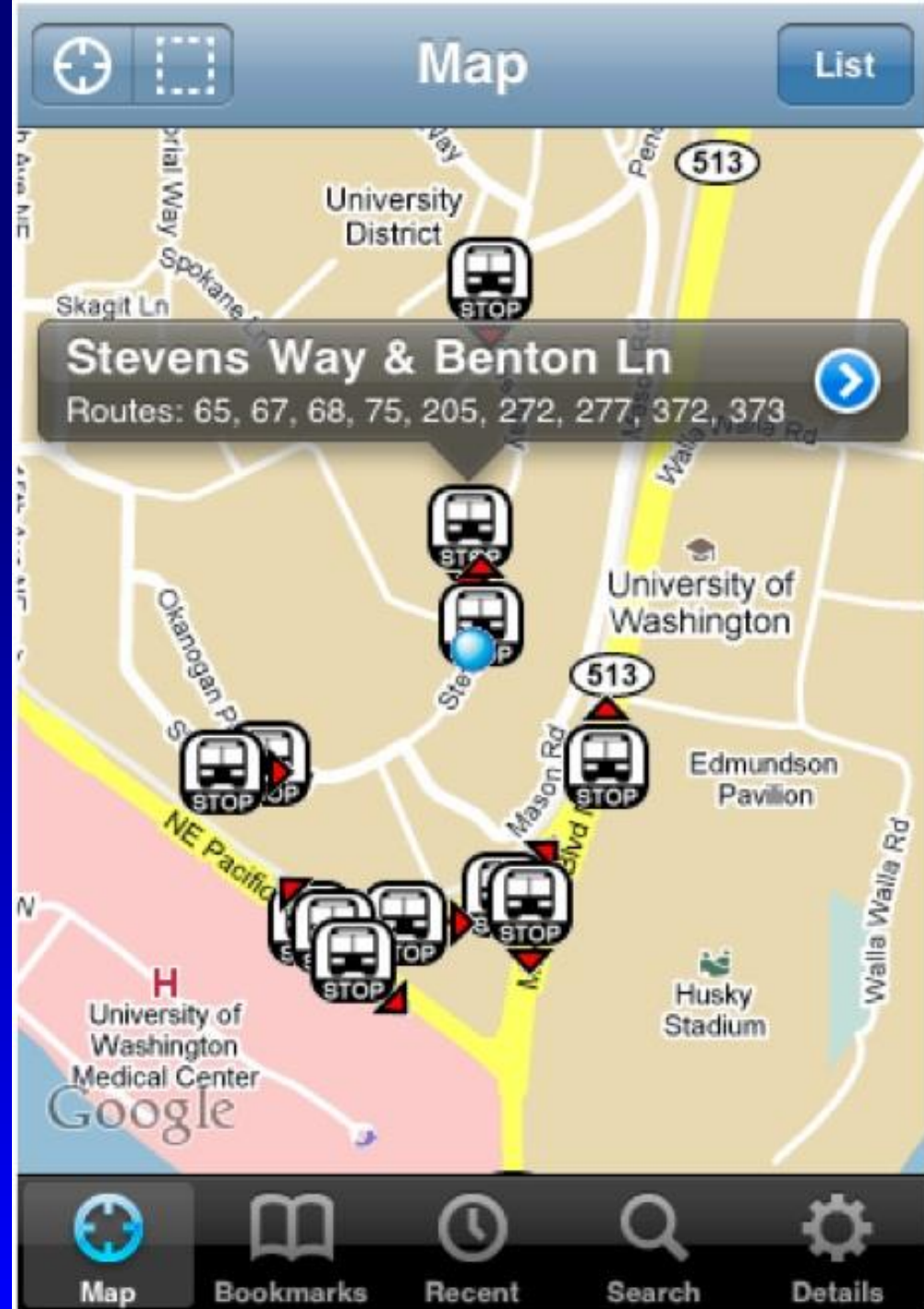
- The proposed project must make business sense
- Private sector
 - Does it make money?
- Public sector
 - Is it within my core responsibilities?

Public Interest vs Private Interest



OneBusAway

- Sometimes agency priorities change
- Who leads this change?



Summary

- We need win/win/win propositions
- Data sharing needs to be viewed positively from each participant's perspective
- Creativity and salesmanship are needed to develop and sell ideas
- Perception is often more important than reality