

# **“The Future of Surface Transportation”**

U.S. House of Representatives

Subcommittee on Research and Technology

Committee on Science, Space and Technology

**Indiana Department of Transportation**

June 18, 2014



# INDOT Research Program

## ■ Joint Transportation Research Program (JTRP)

- 75-year collaboration with Purdue University
  - Research and implement transportation infrastructure innovations
- Annual funding for research
  - SPR funds
    - 25% required
    - 40% actual spending



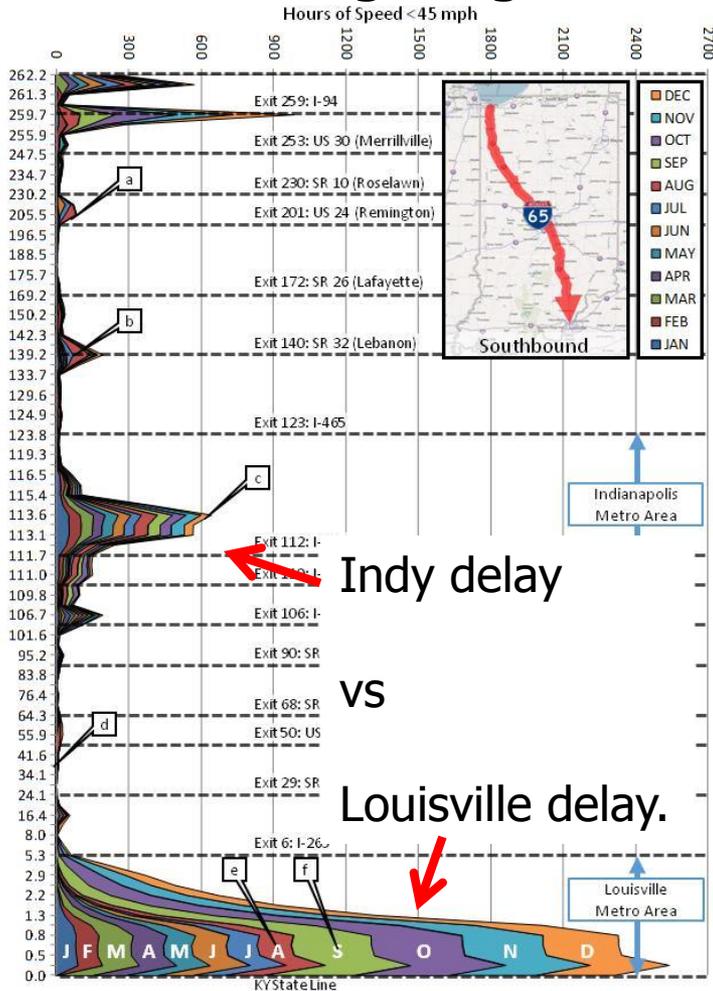
# INDOT ITS Research

- **Deliverable in near- to mid-term**
- **Better, faster, cheaper, safer**
- **Solutions for today's problems**
- **Measure vs. model**
- **Recent focus areas**
  - Data from Probe Vehicles
    - "Crowd sourced" data supplied by a 3<sup>rd</sup> party
  - Data from Infrastructure
    - High resolution data from traffic signal controllers
    - Partnered with manufacturers to change industry

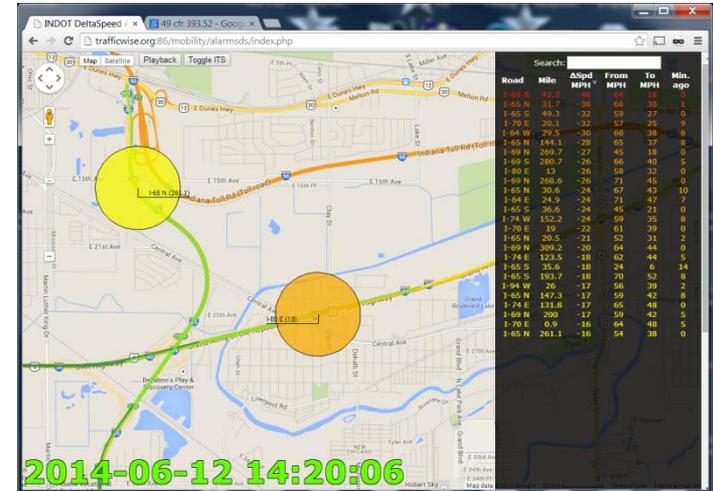


# Data from Probes

## Recurring Congestion



## Non-recurring Congestion



Real time decisions.

Dispatch Resources.

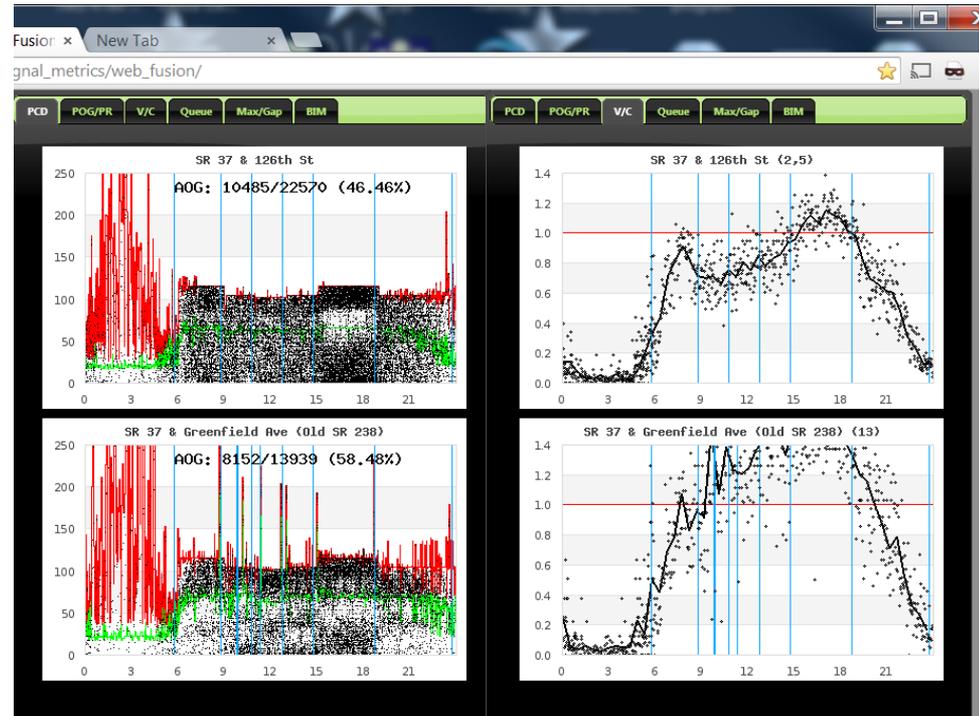
Measure response.

How well did we do?



# Data from Infrastructure

- Traffic signal equipment telling us how good our timings are – when they need maintained
- INDOT and Purdue leaders in this area
- Brought manufacturers into one room and agreed on metrics and capabilities without dictating HOW – i.e. partnering
- Now measuring instead of modeling



What % of vehicles arrive on green?  
Engineers can now optimize for this.



What is our volume vs. our capacity?  
Engineers can reallocate green time.

# Policy- Practical Innovation

- Flexibility in funding opportunities
  - Focus is short-to medium-term, well-defined implementable solutions
    - Have an immediate use
- Identify projects independently
  - Avoid higher risk, long-term conceptual projects
  - Successful partnership through JTRP
    - Proven success



Thank you.

