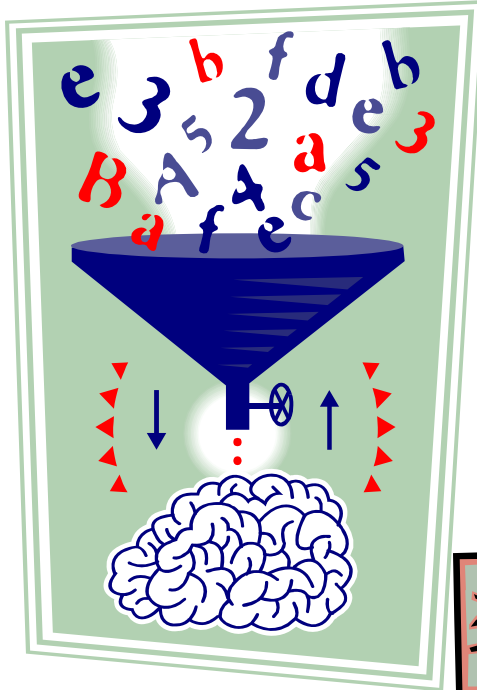




Everyone Wants Data



A Private Data Services Perspective



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Make your Investments Count



There are Compelling Demands for more Data!



Introduction

- Many groups within DOT's use traffic data for a variety of purposes
 - System planning (e.g., long range planning)
 - Program development (i.e., Engineering and Construction)
 - System operations groups (e.g., Traffic Management Centers)
- Each group has historically owned, specified, located and operated traffic data collection investments independently of one another
 - Traffic Monitoring groups have existing statewide network of sensors
 - Program Development groups conduct project specific traffic surveys on an *ad hoc* basis
 - System operations groups have installed many traffic surveillance devices in (mainly) urban corridors
- A Business framework focused on quality leads to changing the paradigm
 - National impetus to use operations (i.e., ITS) data for planning purposes
 - Can also realize the potential of using planning data investments for system operations purposes to meet multiple business needs
- The challenge: Find a way to leverage existing data monitoring investments and meet more needs of multiple user groups



Needs Vary by Business Function

Attribute	Planning	Operations
Data Type	V, Axle Class, Wt., S	V,O, S, Travel Time
Accuracy	High	Less critical
Consistency x Time	Critical to purpose	Less important
Consistency x Location	Critical to purpose	Less important
Temporal Availability	Not required	Real or near-real time
Spatial Availability	Representative sample	Focused areas
Sensor locations	Few, dispersed	Many, Concentrated
Completeness	Critical to purpose	Gap tolerant

Many sensors can serve multiple purposes if located/installed appropriately.



Statewide Infrastructure Strategy: An Institutional Challenge & Opportunity

- How can we do more...with less?
- Institutional Challenges - Silos
- Installation & Maintenance Challenges
 - Wide coverage area – mobilization costs, time to respond
 - Many available technologies
- Need to maintain investments
 - for peak operational performance
 - maximize reliability in order to support more assets
- Establish key metrics for optimal system performance
 - Specifications, procedures: Installation and Maintenance
 - ensure that in-house staff have the right skill sets
 - If one decides to outsource:
 - creates an opportunity for “performance” based contracting
 - performance all based upon this “baseline” set of standards
- Deliver maximum utility from investments made





Climbing the Ladder, starts with the first rung!

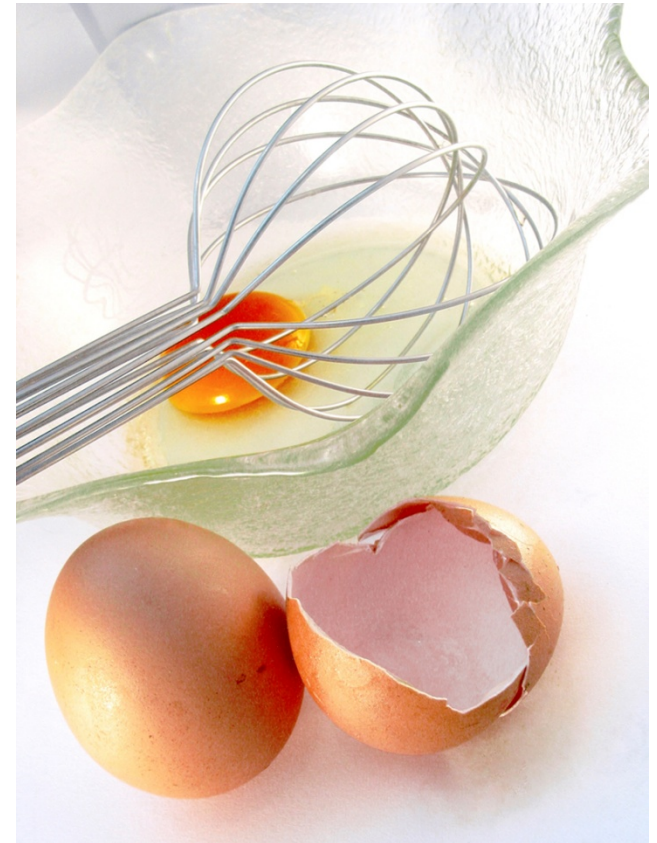


Building a robust program

Build IT right before IT Breaks

Design, Install & Maintain

- The “ilities”
 - Suitability
 - Dependability
 - Usability
 - Availability
 - Reliability
 - Portability
 - Accessibility
 - Maintainability



Dispersed Field Devices

- In-Road sensors
 - Loops
 - Axle sensors
- Non-Intrusive devices
- Communication Systems
- Power Systems





Manage and Optimize the System

- Analyze Requirements
 - Traditional Uses
 - Emerging Uses
- Prioritize Needs
- Document Activities
 - Specifications and Procedures
 - Implementation roadmap
- Analyze Staffing/Procurement Requirements
- Develop Installation Program
- Develop Maintenance Plan

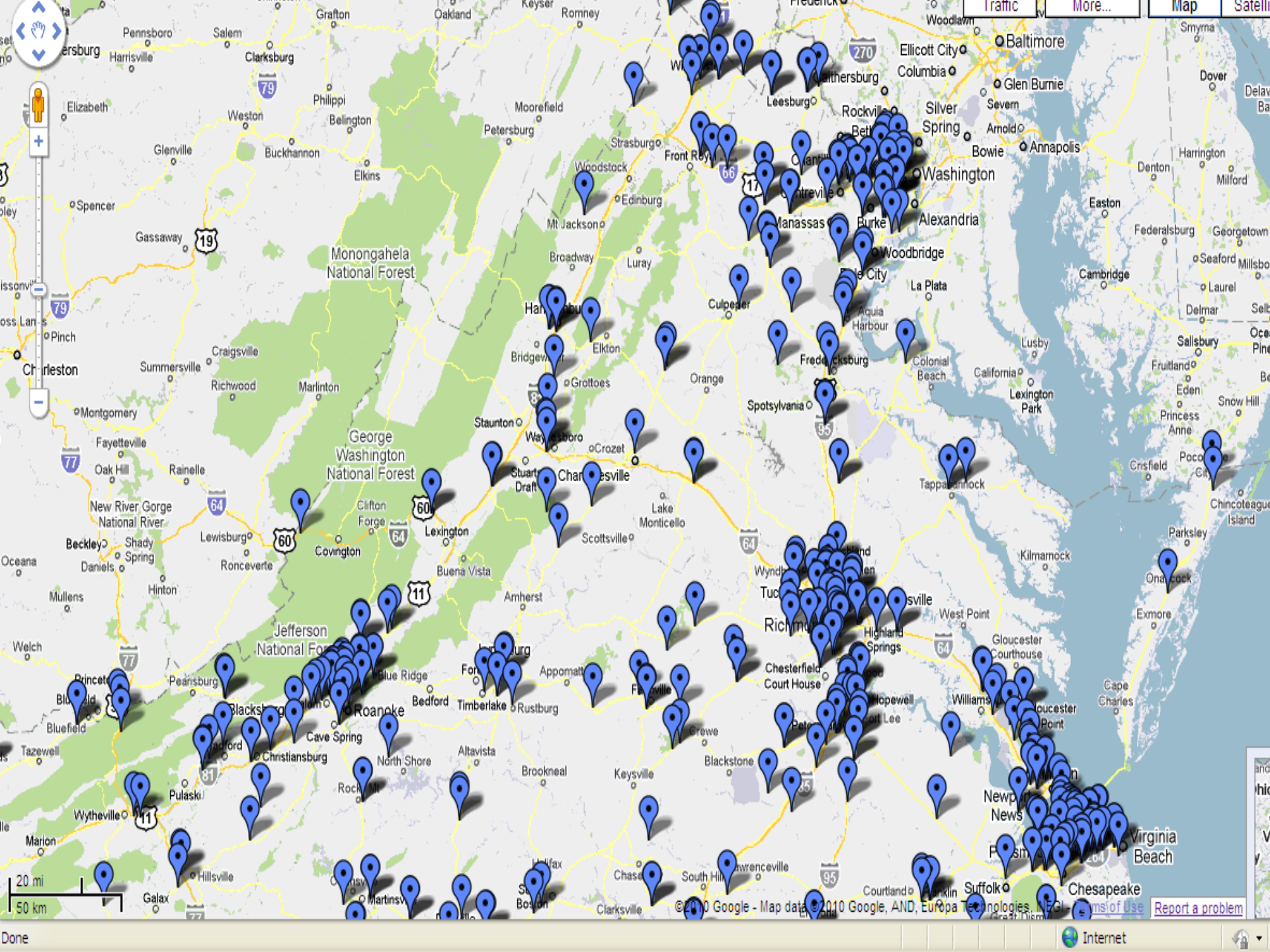




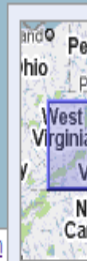
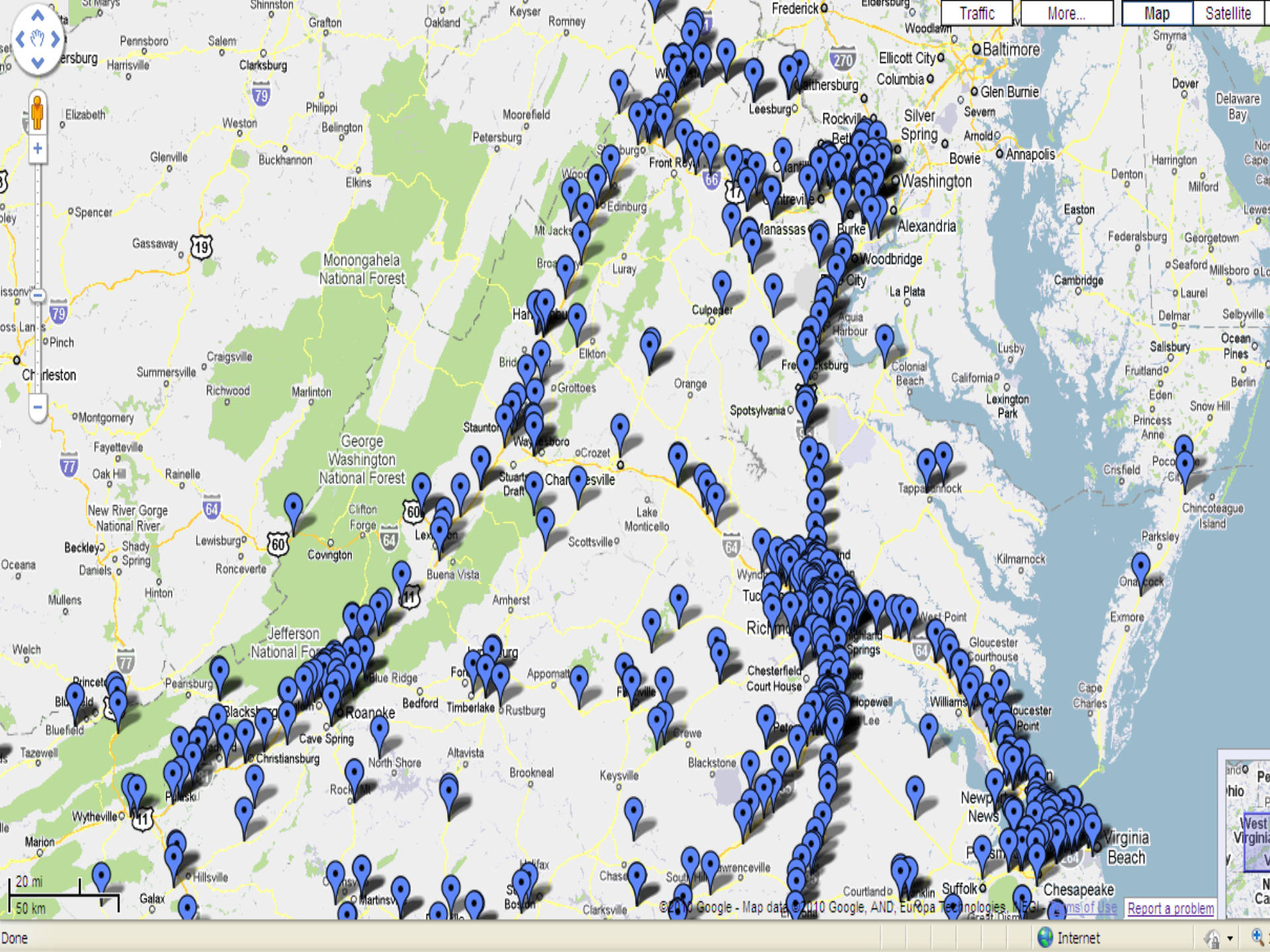
Create A Virtuous Circle



- Look for small victories
- Maximize Utilization of existing resources
 - Assess and use relevant product feature sets
 - Make Incremental improvements
 - Implement Improved Maintenance practices
 - Seek out new data users – broader audience
 - Serve Planning **and** Operations applications
- Select Appropriate technologies for new sites
 - One size doesn't fit all
 - Use best practice installation techniques
 - Reinvest in your infrastructure
 - Be the “go to” team – ***Doing More Gets You More***



Navigation controls including a compass, a person icon, a zoom-in (+) button, a zoom-out (-) button, and a scale bar showing 20 miles and 50 kilometers.



■ Design


- For Multiple Apps.
- Sensor Selection
- Installation methods
- Calibration standards
- Communications options
- Robust Power Design
- Surge Suppression
- Remote access/diagnostics
- Remote quality monitoring
 - Sensor Health
 - Data quality
- Think outside the box
- Embrace change
- Continuous Improvement

■ Operating

- Establish performance metrics
- Close coordination with data users and contractor
- Build in robust performance
 - Installation practices
 - Commissioning procedures
 - Document “as-built”
- Staff equipment qualified (training/certifications)
- Develop needs based timely service strategy
 - Remote monitoring
 - periodic maintenance
- Spares provisioning - stores and on vehicles
- Leverage use of technology
- Staged equipment and staff



Recommendations

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- A vertical collage of four images on the left side of the slide: 1) A close-up of yellow and black striped road markings. 2) A bundle of multi-colored fiber optic cables (red, blue, green, black). 3) A row of cars parked in a lot. 4) A close-up of a white traffic light housing with a lens. 5) A close-up of a traffic light showing the red and green lights.
- Leverage All DOT Assets (ITS/Operations focus) & (Long Term Count)
 - All data should be a 2-way street
 - Upgrade Traffic Monitoring sites for real-time data
 - “If you build it they will come!” - *Field of Data Dreams*
 - Statewide scope supports many programs (e.g. 511, Sec. 1201)
 - Increases program visibility and funding opportunities
 - Fosters increased cooperation/breakdown institutional barriers
 - Better understanding of data quality needs vs. purpose
 - More efficient resource utilization
 - The Opportunity:
 - Better data
 - More quality data
 - Leveraging of resources

BOTTOMLINE:

Cost Savings Opportunities

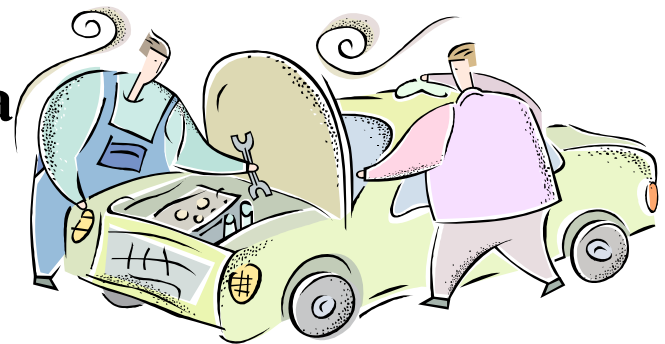
Summary



**Timely, Quality Data
For Informed Decisions**



Wins New Advocates for your Data



And +++\$\$\$\$\$\$