



Regional Operations Forum

Traveler Information for Operations

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

Traveler Information for Operations

- The Role of Traveler Information for DOTs and Transportation Management Agencies
- How Traveler Information has Evolved
- Core Components and Relationship to other Operations areas
- Key Trends Influencing Traveler Information
- The Customer

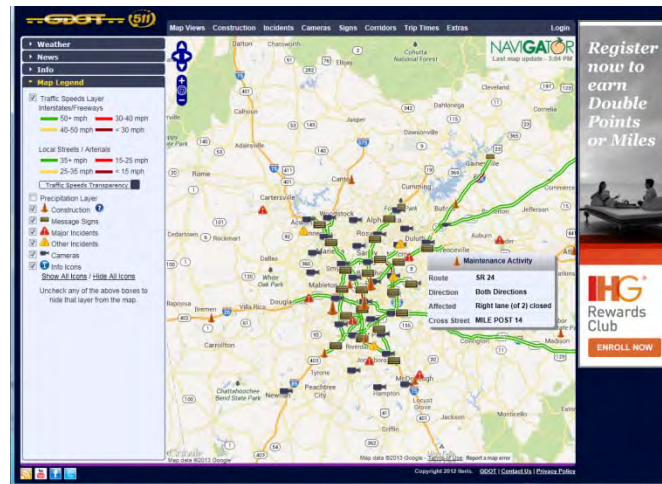
What Role Does Traveler Information Serve?

- A direct link to transportation users
 - Your customers
 - Your taxpayers
- An integrated and cross-cutting function
 - Traffic incident management
 - Emergencies and alerts
 - Planned events and work zones
- Extension of agency branding
- Strong potential for innovation – delivery and partnerships

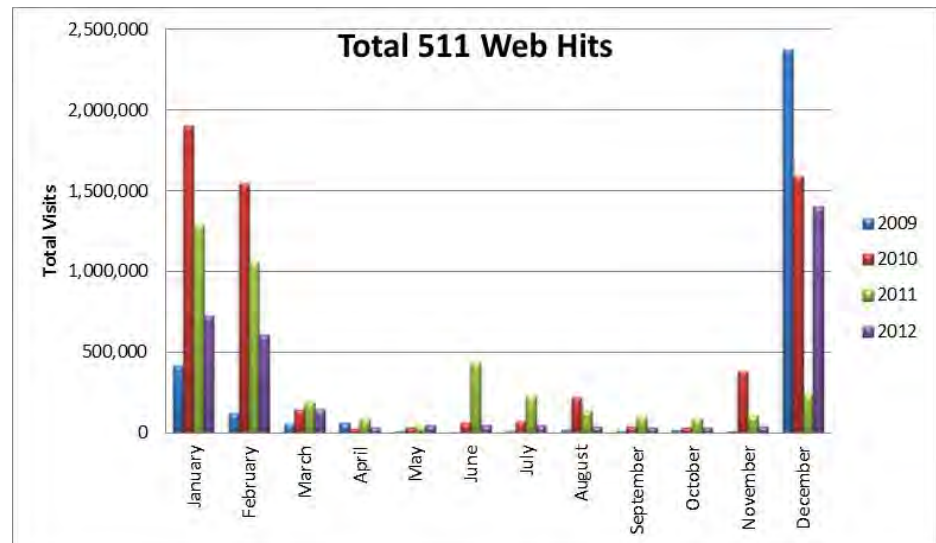
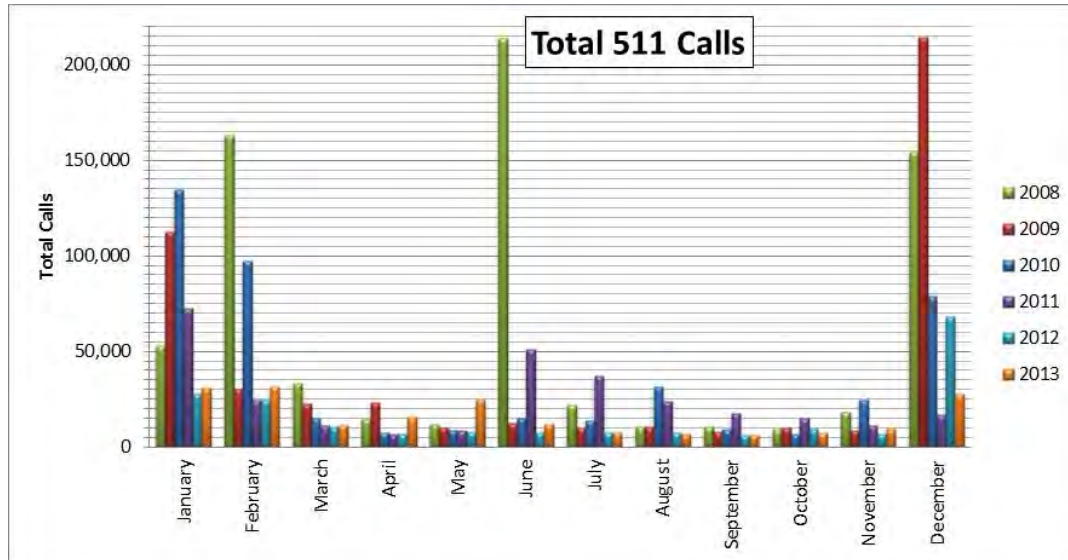
Evolution of Traveler Information



Evolution of Traveler Information



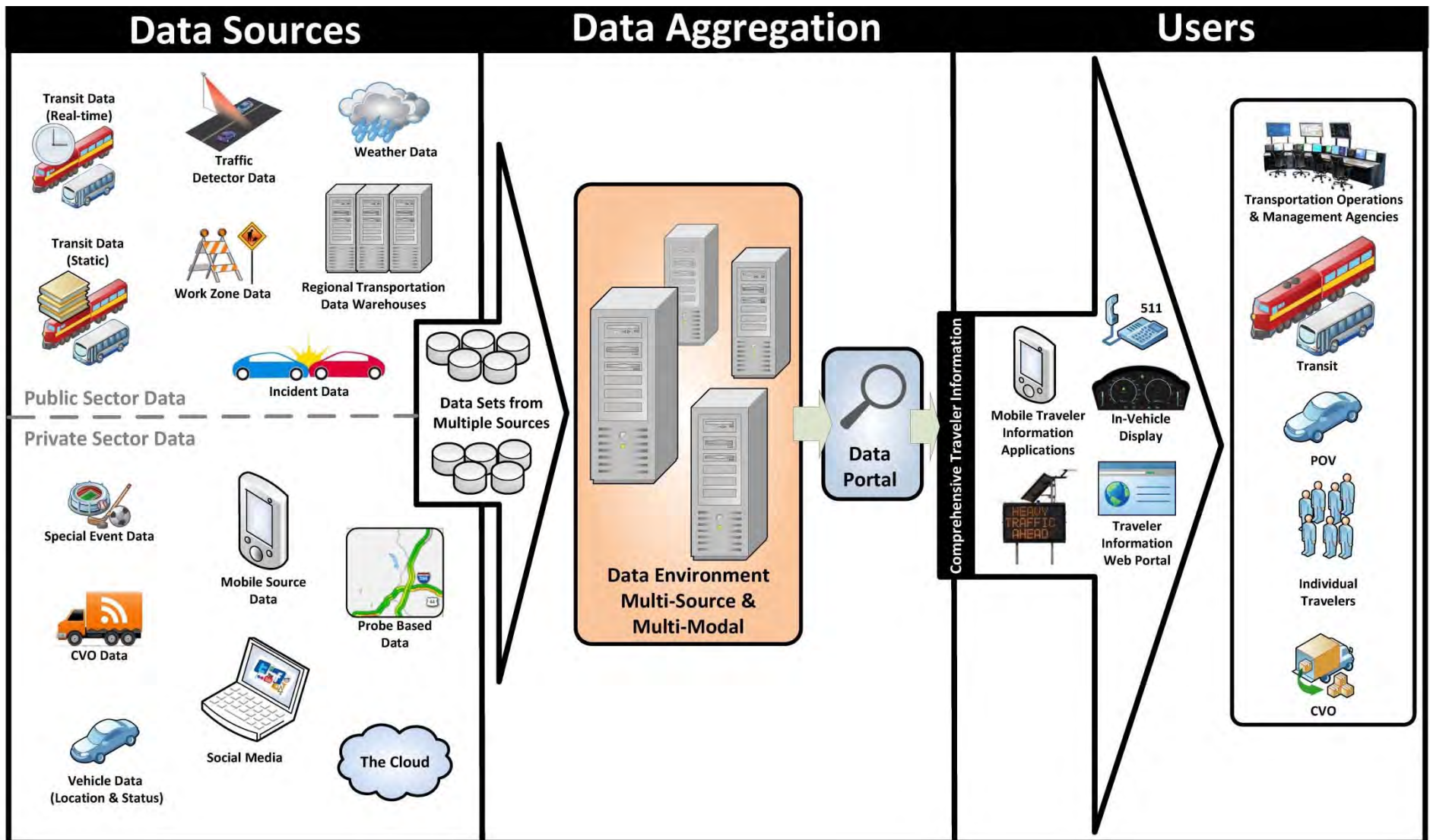
Iowa's 511



Today's Mobile Environment



Core Components



Discussion

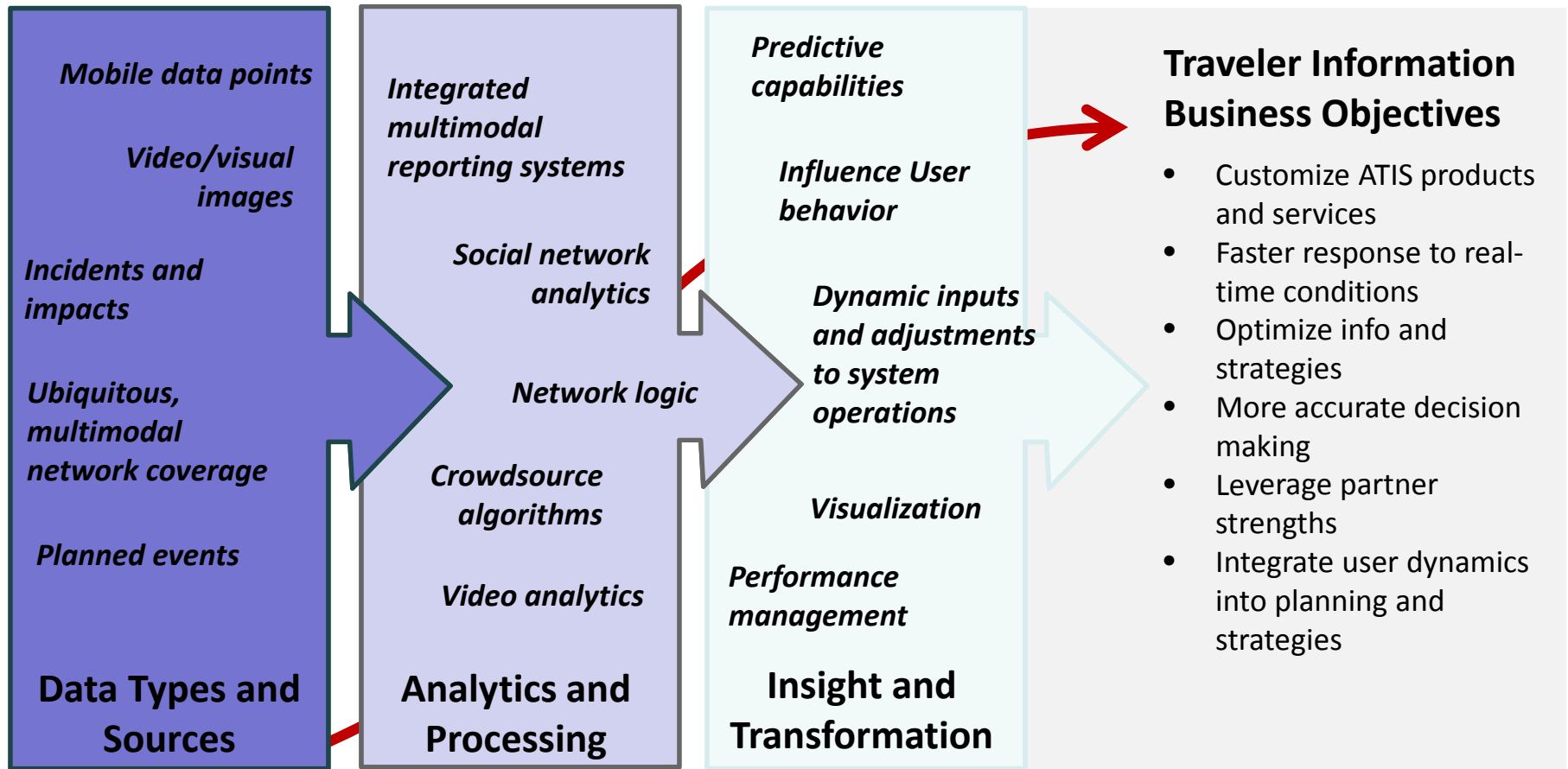
- Back to our corridor and bridge replacement...
- After the initial traveler information blitz that was discussed in the incident management/emergency operations exercise, how do the agencies continue to keep motorists informed of the situation with the bridge collapse and replacement

Key Trends Influencing Traveler Information

- Big Data
- Social Media
- Business Models and New Roles
- Industry, Market and Social influences

**What comes to mind when you
think of
*BIG Data??***





terabytes

petabytes

exabytes

zettabytes

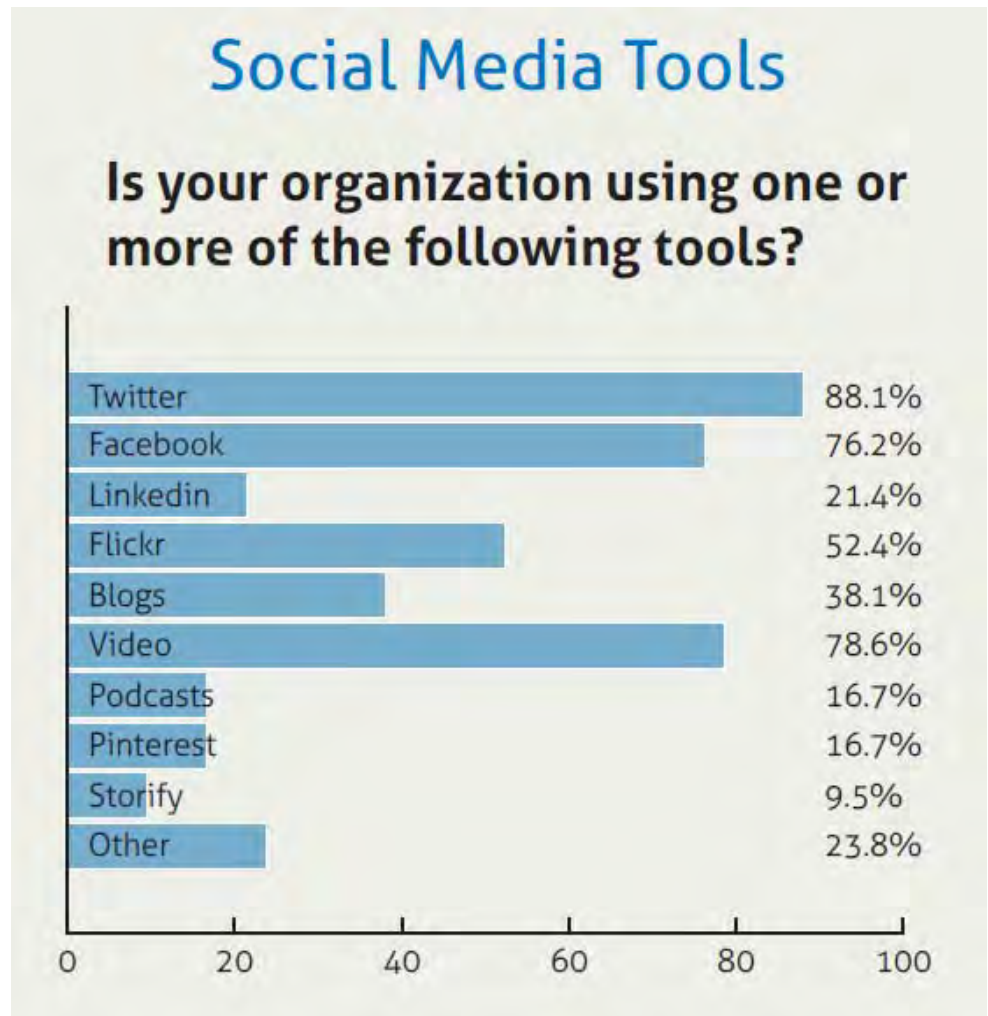
Operations Program Challenges for Big Data

- Legacy technology environments
 - Expansion and consolidation challenges
 - Siloed environments
- Just now talking about “the cloud”...
- Managing unstructured data in a structured environment
- Resources to manage and innovate
- Changes to “business as usual”
- Data security and liability
- Others?

Key Trend: Social Media

- Impact of social media on traveler information
- Emphasis on the end user has raised the profile for social media tools within state DOTs
- AASHTO Annual Survey
- Trends, new tools, 'fading' tools

AASHTO 2012 State DOT Social Media Survey



Using Social Media for Traveler Information

- Alerts – closures, incidents, lanes blocked
 - Hazards, including weather and disasters
 - Road conditions
 - Special event traffic advisories
- AMBER Alerts
 - Project information
 - Announcements – public and project meetings, milestones, achievements
 - Safety messages and alerts
 - Public service announcements

- Tweets >
- Following >
- Followers >
- Favorites >
- Lists >

Tweet to Washington State DOT

@wsdot

Photos and videos



Who to follow - Refresh - View all

- 
Phoenix Fire Dept. @PHXFire ×
 Follow
- 
Jon Sorensen @ITSWorld ×
 Follow
- 
PHX Business Journal @phxbizj... ×
 Follow

Popular accounts - Find friends

United States Trends · Change


#WritersRoom  Promoted





11,609 TWEETS 8,125 FOLLOWING 37,987 FOLLOWERS  


Tweets All / No replies

 **Washington State DOT** @wsdot 2h
 Both directions of US 2 btwn SR 9 and SR 204 at the trestle will be closed overnight: 1.usa.gov/11qE8zq
 Expand

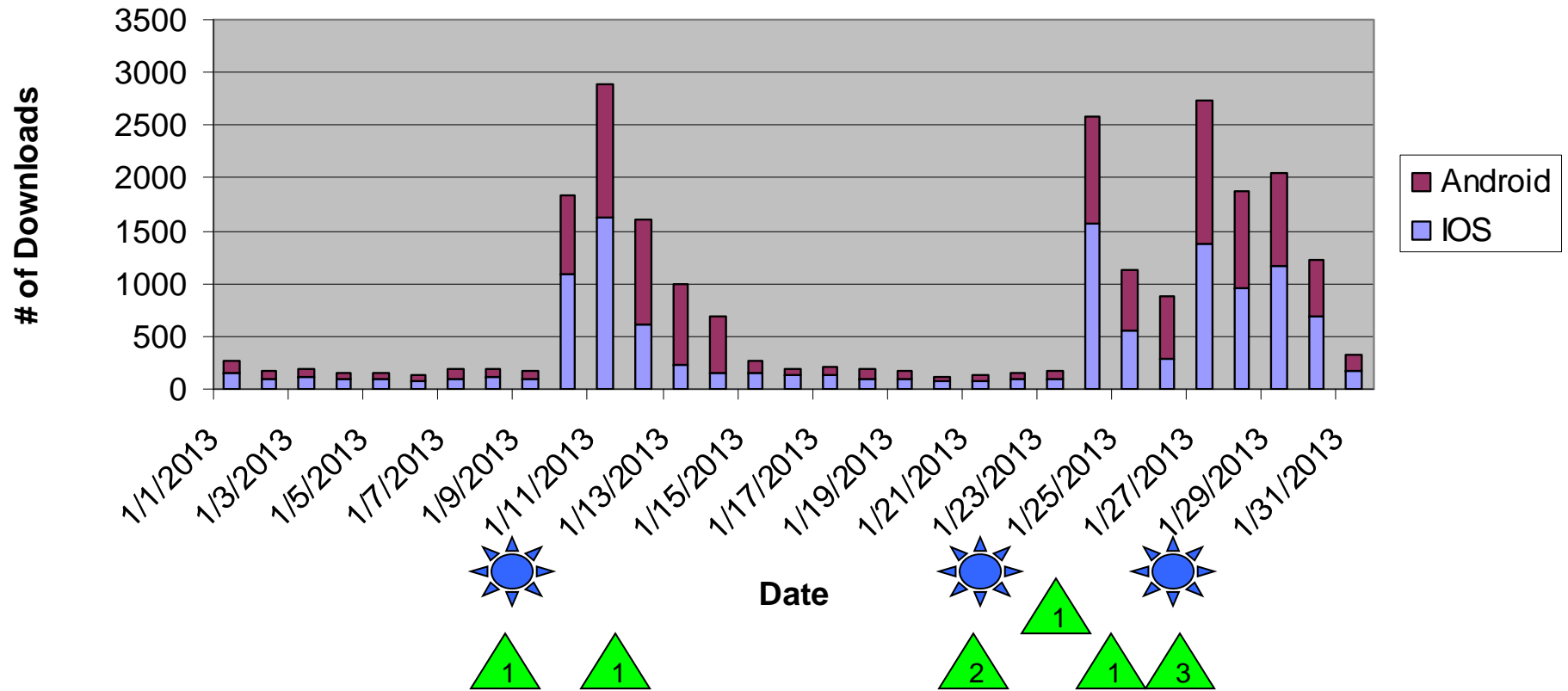
 **Washington State DOT** @wsdot 2h
 EB SR 18 at the Green River (Neely) Bridge will close to all traffic from 10pm tonight to 5am tomorrow. Alt route avail.
 Expand


 **Washington State DOT** @wsdot 4h
 Get the latest on road closures caused by the #MileMarker28 fire by calling 509-577-1617. US 97 is still closed.
 Expand


 **Washington State DOT** @wsdot 26 Jul
 EB SR 18 will close btwn SR 167 and just east of the Green River bridge from 8 pm Fri - 5 am Mon.
 Expand

 **WSDOT - SW Region** @wsdot_sw 26 Jul
 Why is US 97 closed? Those aren't tree snags you see - that's crispy-fried guardrail. #milemarker28fire pic.twitter.com/wNRnjaHvLB
 Retweeted by Washington State DOT

UDOT Traffic app downloads - Jan 2013

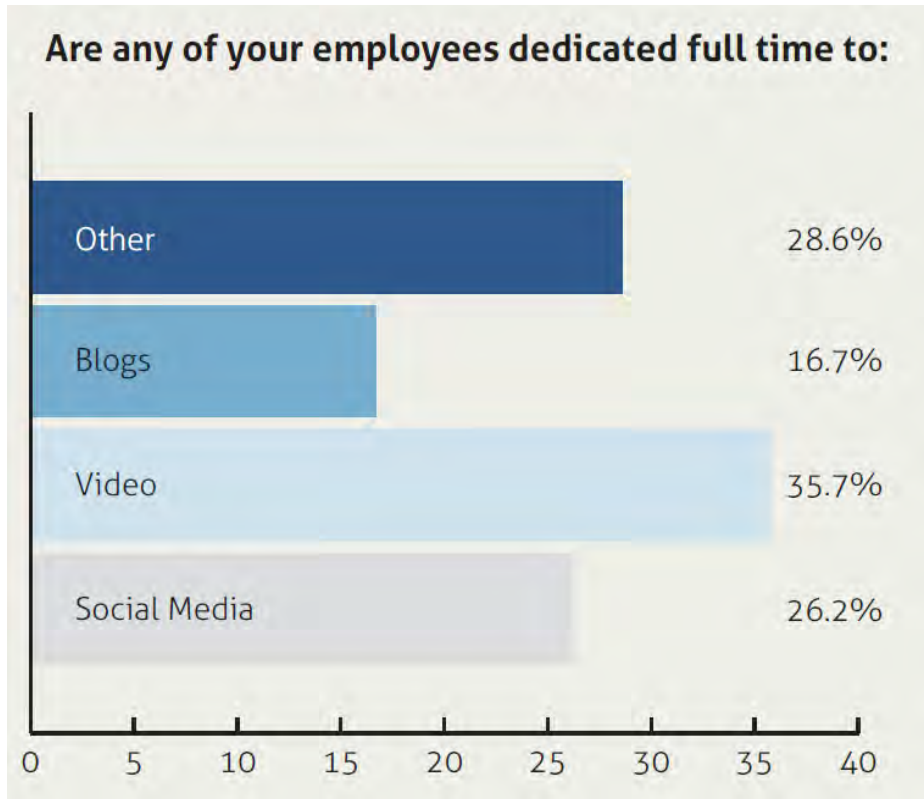


 Major Winter Storm

 UDOT Traffic tweet recommending UDOT Traffic app download (# indicates the number of tweets sent on each day recommending download)

New Roles for Agency Social Media Staff

- Extension of PIO/ Communications Office
- Redistributing duties to meet need for social media expertise in agencies
- Balancing traditional communications roles with demand for new social media tools
- Size of communications teams not growing in scale with need



Key Trend – Changing Roles for Public and Private Partners

Traditional Roles

- Well-defined and distinct roles and strengths
- Focus on urban area markets and commuters
- Contracted roles for private sector in ATIS
- Geographic limitations of agency infrastructure

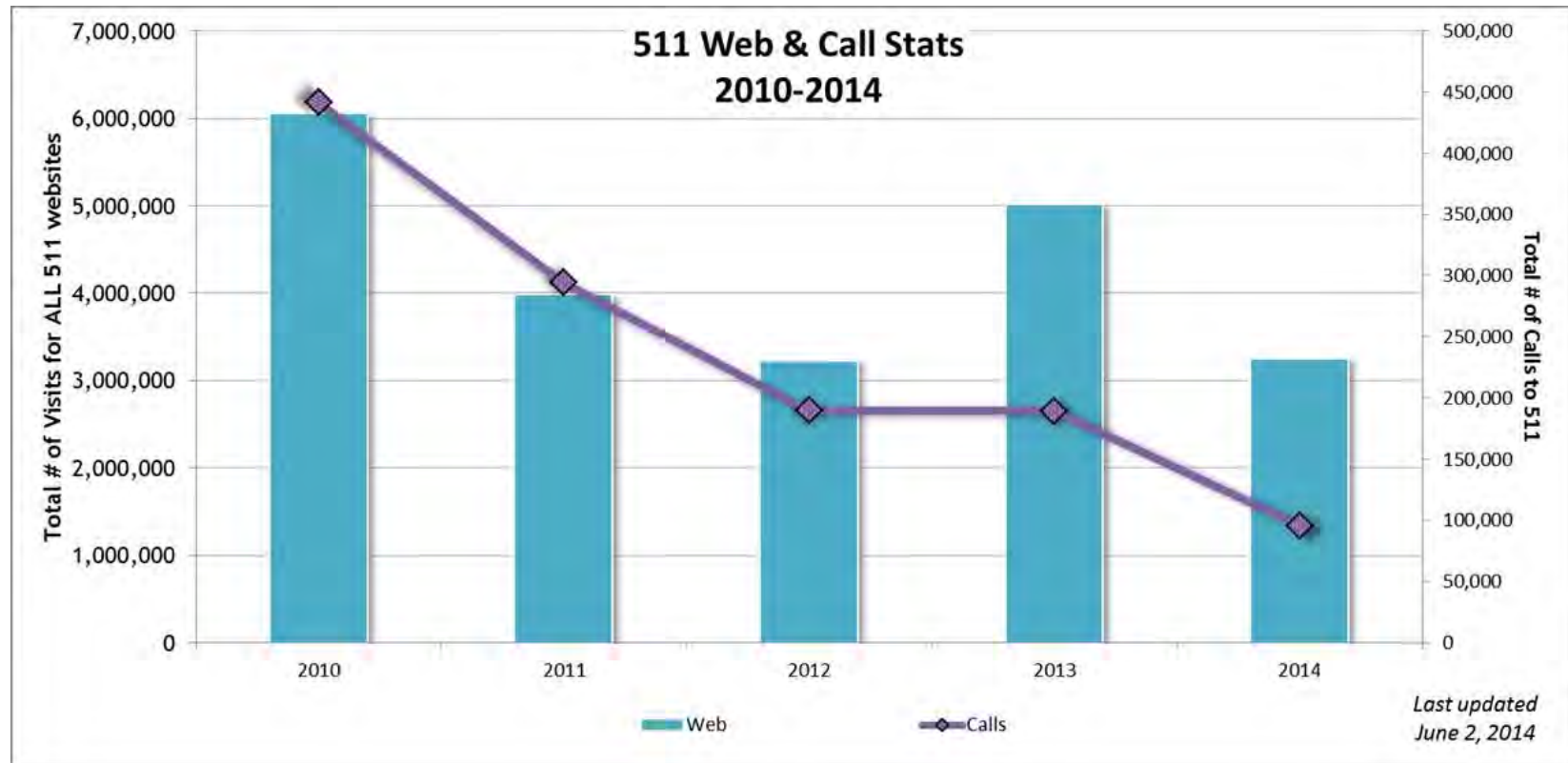
Today's Roles

- Overlap for several functions
- Capability for corridor and multi-state information
- Self-sustaining private sector models
- New technologies can broaden coverage

Key Trend – Industry Market Influences

- Dynamic market requires nimble customer service approach
- Rapid technology turnover and short shelf-life of mobile devices
 - 10-15 years for typical DMS vs.
 - 1-2 years for mobile operating system
- Future connected vehicle capabilities
 - A lot still to be defined
 - Dependency on auto industry, technology suppliers
 - Aligning policy, need and resources
 - Opens up a wealth of potential ATIS data

Iowa 511 – Web/Phone comparison



Group Activity

- Small group/table activity to address 3 questions:
- *Where will future trends and influences have the most impact on agency traveler information programs?*
- *What steps would agencies need to take?*
- *What is the role of agencies in the future traveler information scenario?*

The Customer

- Customer needs and expectations for traveler information
 - Changing at the pace of mobile technology
 - Defining different customers and their needs
 - Direct personal impact and connection



Strategies for Assessing Customer Needs

- How to reach your target audience
 - Surveys and feedback mechanisms... “tell us how we are doing”
 - Social media: direct, can be two-way
 - Give them a positive experience with traveler information
 - Being responsive when feedback is received
 - Direct response
 - Adapting to customer needs
 - Marketing beyond road signs
 - Freight has driven need for multi-state information

Measuring Customer Satisfaction

- **Is usage the only metric of customer satisfaction with your traveler information system?**
- **Let's look at another industry: Airlines**
 - People fly every day. Flights are full. Does this mean customers are “satisfied”? There are other expectations:
 - Arrivals within 10 minutes of schedule
 - No cancelled flights
 - No lost baggage
 - Edible food
 - Comfortable seats

Homework to Take Back

- Think about what metrics YOU as a user place on traveler information
 - Accessibility and availability
 - Accuracy
 - Relevance
 - Easy to understand
- Does your traveler information program align?
- If not, what changes could be put in place?
- What are some impacts to implementing enhancements?

Additional Resources

- SHRP2 L11: *Evaluating Alternative Operations Strategies to Improve Travel Time Reliability* (Traveler Information System Performance Metrics)
- SHRP2 L14: Effectiveness of Different Approaches to Disseminating Traveler Information on Travel Time Reliability
- Real-Time System Management Information Program (1201)
- AASHTO Annual Survey on State DOT Social Media Usage
- *Communicating With the Public Using ATIS During Disasters: A Guide for Practitioners* (FHWA-HOP-07-068)
- Real-Time Traveler Information Market Assessment (FHWA-JPO-10-055)
- NCHRP Synthesis 399: Real-Time Traveler Information Systems