

# Walking in the CIO's Shoes

Tim Schmidt, Acting CIO

January 11, 2013



# One DOT

**\$70 billion budget**

**56,700 employees**

## **Focus**

- » Safety
- » Livable Communities
- » State of Good Repair
- » Economic Competitiveness
- » Environmental Sustainability
- » Organizational Excellence



**Federal Highway Administration (FHWA)**

**Maritime Administration (MARAD)**

**Pipeline and Hazardous Materials Safety Admn. (PHMSA)**

**Office of the Secretary (OST)**

**Federal Railroad Administration (FRA)**

**National Highway Traffic Safety Administration (NHTSA)**

**Research and Innovative Technology Administration (RITA)**

**Federal Aviation Administration (FAA)**

**Federal Transit Administration (FTA)**

**Federal Motor Carrier Safety Administration (FMCSA)**

**Saint Lawrence Seaway Development Corporation (SLSDC)**

# DOT IT Portfolio Mix

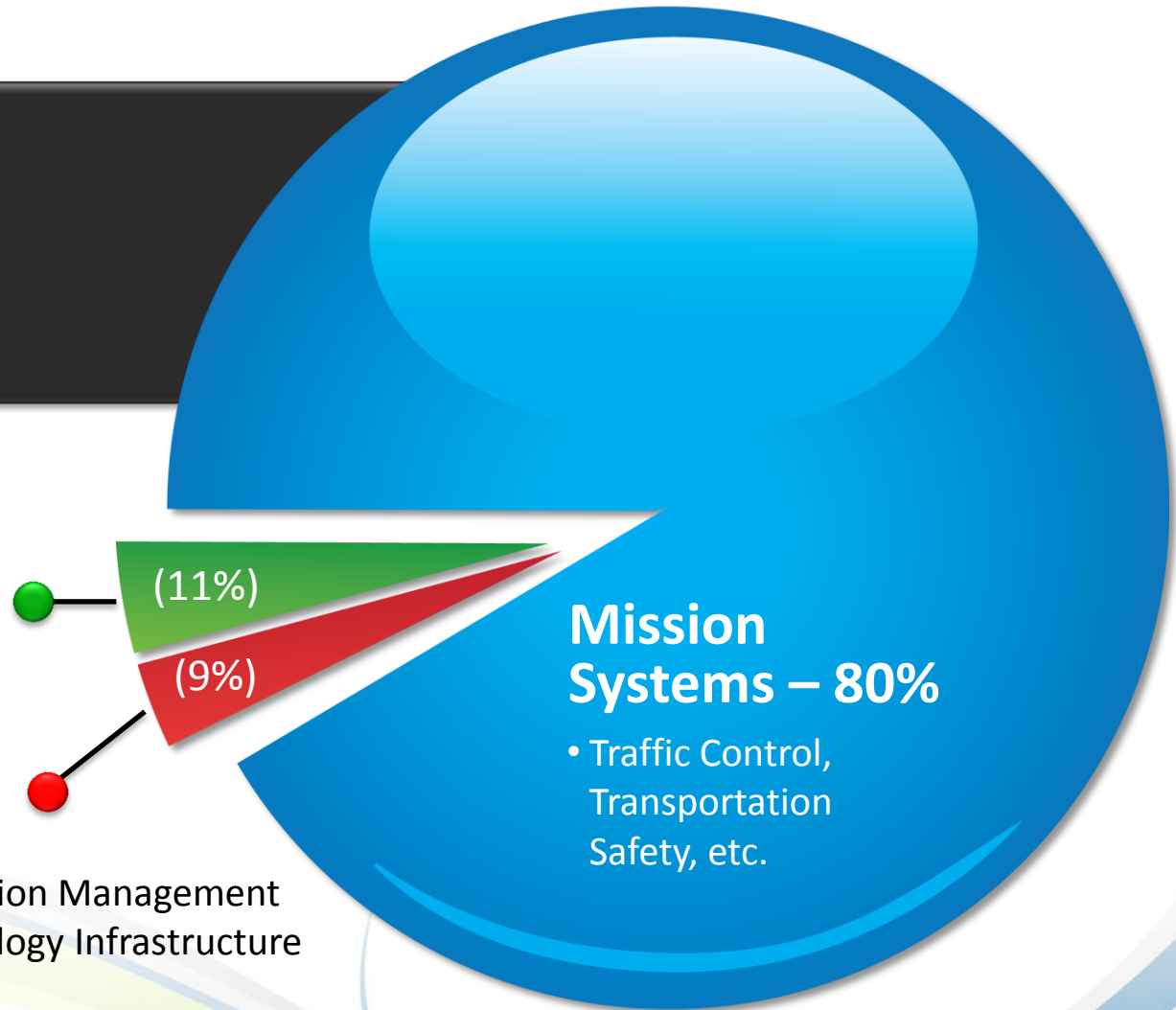
- \$3B+ IT Portfolio
- 6<sup>th</sup> largest in the Federal Government

## Business Support Systems

- Financial Management, Grants, Procurement, etc.

## Infrastructure

- Enterprise Information Management
- Information Technology Infrastructure

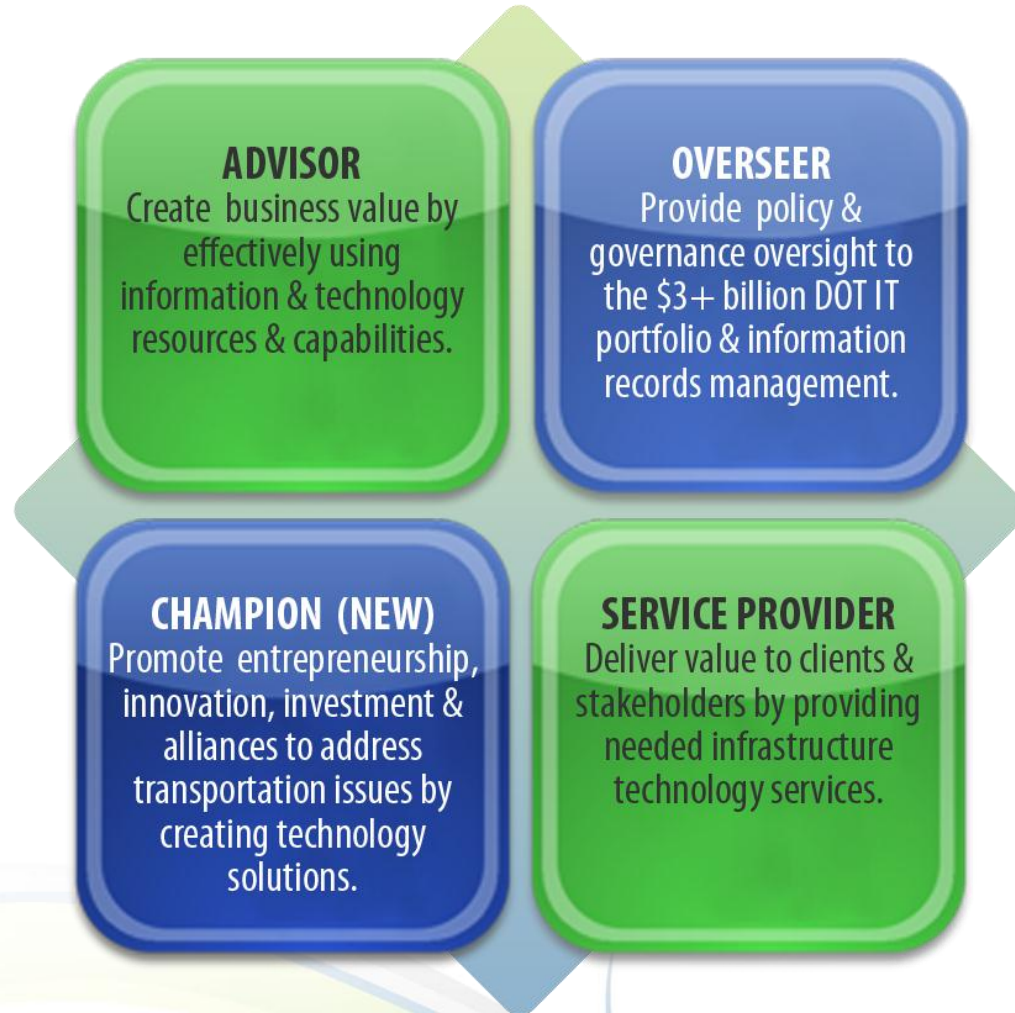


## Mission Systems – 80%

- Traffic Control, Transportation Safety, etc.

Source: BY14 Exhibit 53

# DOT CIO's Role



# DOT Leadership / OMB Priorities

## Cybersecurity / Privacy

Improve IT security & privacy across DOT

## Web Presence / Web Infrastructure

Build New Media / Web capabilities, content, & presence

## Governance / Business Process Streamlining

Standardization, consolidation, integration

## Project, Program, & Portfolio Management

Build capability centrally & in modes

## IT Contractor Management & Licensing

Develop IT contracting workforce & capacity

# Drivers for the Future

## OMB Goals

- **Cybersecurity**
  - Continuous Monitoring
  - PIV
  - Strong Authentication
  - TIC
- **Efficient Spending**
- **Enterprise Architecture**
- **Reducing Duplication**
- **IPv6**
- **IT Reform**
  - Cloud First
  - Digital Government Strategy
  - IT Work Force
  - Mobility
- **Open Government**
- **Shared Services**
- **Web**
  - .GOV Reform
- **"X" Stat**

## DOT IT Strategic Objectives

### Business Enablers

- **Business Intelligence**
- **Data Fusion**
- **Enterprise Governance**
- **IT Resiliency**
- **System Optimization**
- **Transparency**
- **Ubiquity**
- **Workforce Rationalization**

### Support Services

- **Collaboration**
- **Communications**
- **Customer Service**
- **Cyber Security**
- **Extreme Development**
- **Performance Enhancements**
- **Program Analysis**

## DOT IT Focus Areas

- **Agile & Modular Development**
- **Business Persona-Based Device Support**
- **Data-Driven Mission Assurance**
- **Data Management**
- **Enterprising Messaging**
- **Enterprise Collaboration and Web Platforms (internal and external)**
- **Telephony/Data Communications**
- **Mobility**
- **Portfolio Optimization**
- **Risk Management**
- **Virtualization**

# OMB Strategic Goals

## Cybersecurity

- Risk management is the new norm
- Focus on data authentication & identity protection

## Efficient Spending

- Prepare for budget cuts of approximately 10% per year
- Portfolio Optimization

## Enterprise Architecture

- Introduce more scope and content to accommodate evolving EA
- Leverage roadmaps
- Shift to OMB EA Assessment Framework 3.1

## Reducing Duplication

- Consolidate data centers
- Resilient, secure data accessible from anywhere at any time

## IPv6

- Transition from IPv4 to IPv6

# OMB Strategic Goals (continued)

## IT Reform

- Effective reforms based on *25-Point Plan to Reform Federal IT*
- Examples: Transition to the Cloud, sponsor and embrace the next generation IT Workforce

## Open Government

- Develop an Open Government plan & update it every two years

## Shared Services

- Institute a “shared first” culture initially focusing on commodity IT
- Complete migration of two shared services by Dec. 2012

## Customer Service & Web Reform

- Reform DOT “.gov” websites to provide a better customer experience
- Improve services to all stakeholders

## “X” Stats

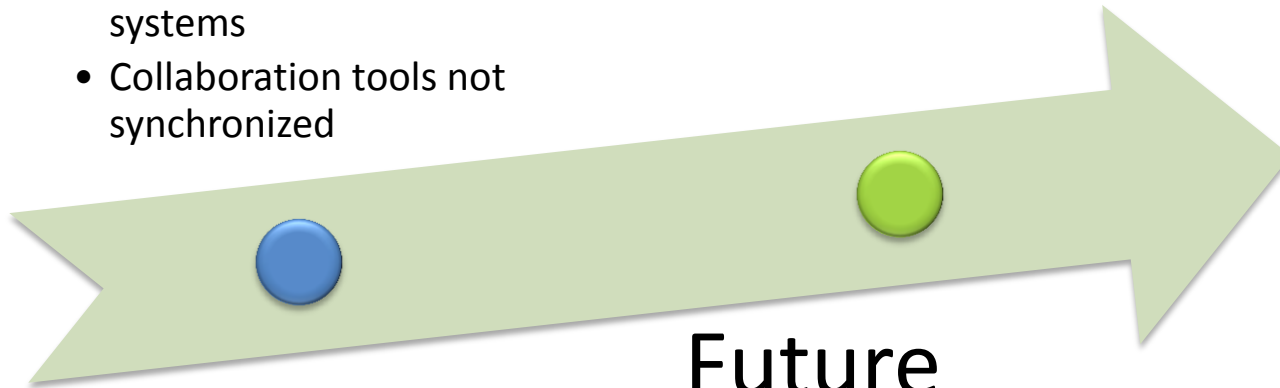
- Create a culture of accountability and efficiency via frequent TechStat, PortfolioStat, and CyberStat assessments



# EMS (Enterprise Messaging System)

## Current

- Multiple non-integrated email systems
- Disparate directory systems
- Collaboration tools not synchronized



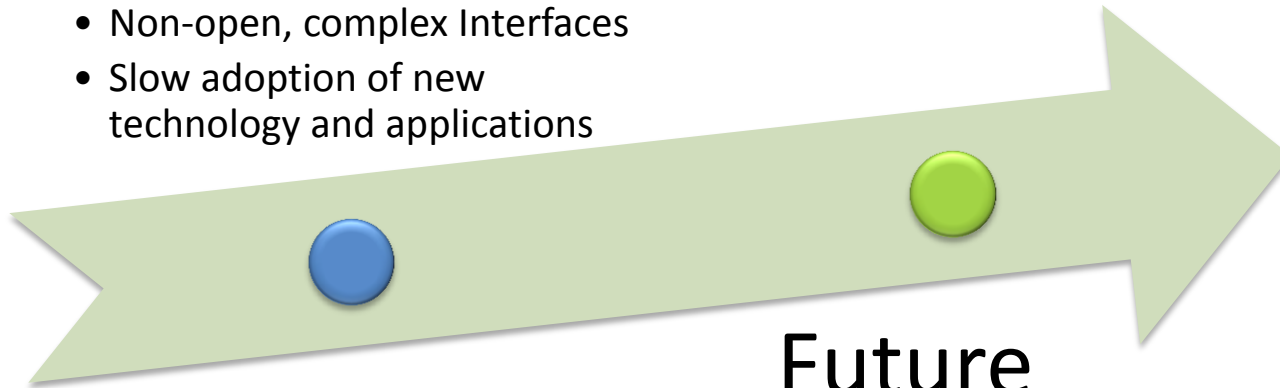
## Future

- Single integrated enterprise-wide messaging system
- Leverage commercial Cloud
- Adaptable to technology innovation and growth

# Supporting the Mobile Workforce

## Current

- Non mobile & static deskbound devices
- One size fits all
- Non-open, complex Interfaces
- Slow adoption of new technology and applications



## Future

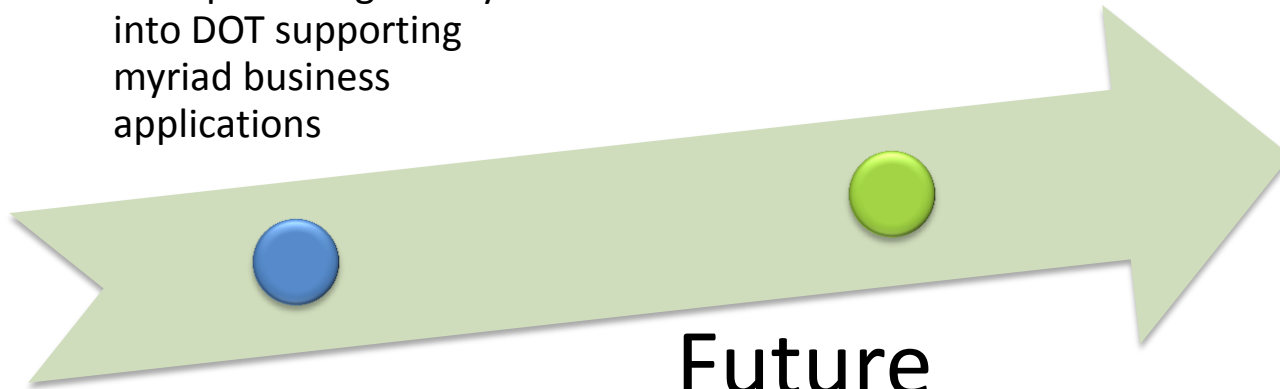
- Reduced Lifecycle
- 1-2 Persona-Based Devices
- Access Anywhere
- Simple Interfaces
- BYOD Option

# Business Intelligence



## Current

- Multiple data gateways into DOT supporting myriad business applications



## Future

- Efficient enterprise-wide licensing
- Consolidated business system entry points enabling structured planning, architectures, governance, and collaboration

# Ubiquitous Systems Access

## Current

- Location-Bound Systems
- Limited Network Access
- Limited Mobile/Teleworking Capability



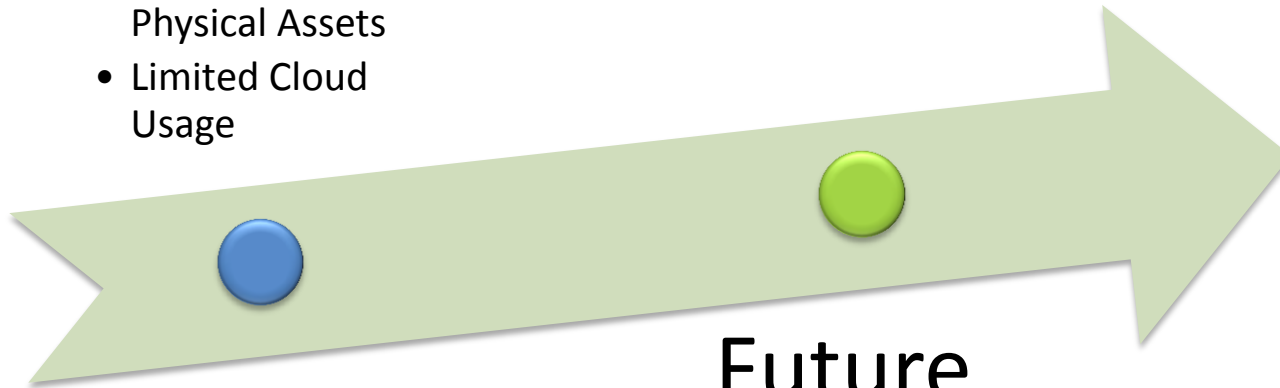
## Future

- Secure Access from Anywhere
- Device-Agnostic
- Full Remote Usability

# Conditioning our IT Environment for Change

## Current

- Local Hardware
- Upgrade Costs of Physical Assets
- Limited Cloud Usage



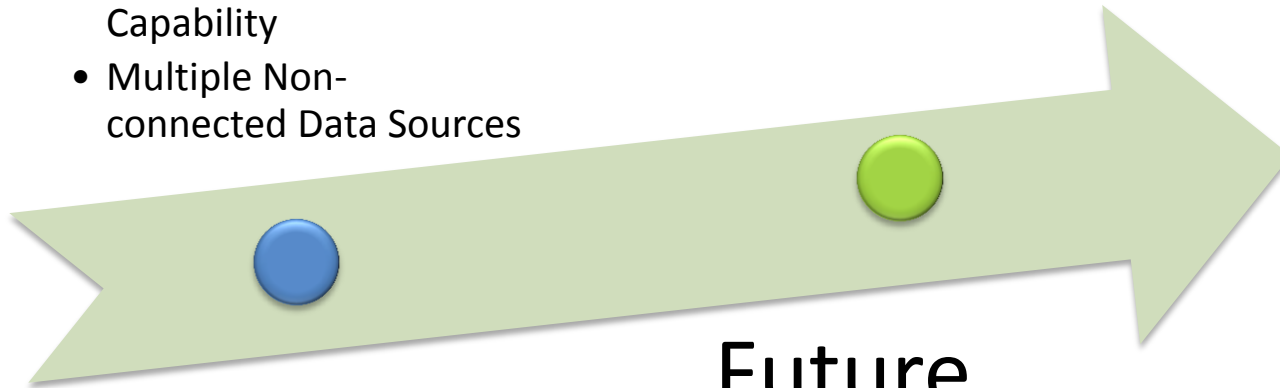
## Future

- Department-wide shared use of modular components
- Ubiquitous Access
- Reduced hardware and software burden
- Everything as a service
- Large scale enterprise data center cloud designs

# Fusion Data (Big Data) Supporting Business Applications

## Current

- Large Volume of Existing Data
- Limited Data Analysis Capability
- Multiple Non-connected Data Sources



## Future

- Easily Shared Standardized Analytics
- Search Functionality
- Crowdsourcing Search Terminology
- User-Defined Cross-Referencing Data Sets

# Portfolio Optimization



## Current

- Multiple Systems Serve Similar Functions
- Duplicative Costs
- Outdated Systems



- Retire Outdated Systems
- Re-Engineer Systems that Need Improvement
- Grow Successful Systems
- Consolidate platforms

# Risk Management

## Current

- “Compliance-Driven”
- Siloed Decision Making
- Inflexible & Reactive Incident Response
- Fragmented Identity Management



## Future

- “Manage Risk”
- Agile Threat Response
- Pro-active, Adaptive Focused, Threat-Driven Response
- Role-Based Access Control



# Traditional CIOs

**Business and IT plans  
are poorly correlated.**

**IT culture is  
introverted and  
reactive.**

**IT focused on  
supplying technical  
support.**

**Captive to the  
design-build-operate  
model.**

**Legacy structure with  
siloed processes.**

**Budgets are built from  
ongoing costs plus ad  
hoc requests.**

# Emerging CIOs

**IT becomes a business expert and business partner.**

**Leads in addressing business needs using technology.**

**Transform from delivering projects to delivering valued services**

**Use technology as a solution (strategic) not a tool (reactive)**

**Become a leader, motivator, manager, trainer and mentor of people.**

**Visionary implementer of new technology.**

# DOT Intranet Before/After

United States Department of Transportation | Search

**DOTNET**

Home | About DOT | News | Library | Work Tools | Employee Information | Help & Support | Communities | DOT.gov

**DOT Connection**

Celebrating the Women of DOT  
(5/14/2010)



**DOT Highlights**



Health and Fitness Expo Gets DOT Up and Running  
(5/18/2010)

Merchant Marine Academy grad helps lead evacuation of Deepwater Horizon  
(5/11/2010)



**REVIEW & COMMENT on the U.S. DEPARTMENT OF TRANSPORTATION'S**

**What are you looking for?**

- Report an IT Security or Privacy Incident
- Open Government Initiative
- New Website Registration Form
- Emergency Information
- Online Training with eLMS
- Modal Intranets
- Phone Books
- DOT Headquarters Parking/Transit Information
- Electronic Official Personnel Folder (eOPF)

**Live Events**

TIGER Seminar  
Tuesday, May 18 at 1:00 pm

**DOT News & Announcements**

DOT Headquarters Parking Facility Recertification [05/12/2010]

Upgrade to Cisco Network Access Control (NAC) Agent [05/03/10]

Training Seminar on Asian American Pacific Islander Employment and Cultural Assimilation [04/26/10]

Upgrade to Cisco Network Access Control (NAC) Agent [04/19/10]

Earth Day, Thursday, April 22, 2010 [04/19/10]

More >>

**Transportation News**  
Press releases, speeches, and news clips from the

United States Department of Transportation | Select One | Library | Communities | Help & Support | DOT.gov

**DOT NET**

Search this site

Home | About DOT | Employee Services | Work Tools | News Center | Add Mode

**IdeaHub**  
Join the conversation!  
2,756 Ideas  
37,048 Ratings  
8,483 Comments  
Submit an Idea

**Action Center**

**HQ Links**

- Conference Rooms (HQ)
- Cafeteria (HQ)
- Facilities (HQ)
- Parking / Transit (HQ)
- HQ Employee Services (M)

**DOT Links**

- CASTLE (Leave Requests)
- Phone Books
- Payroll/Holidays [PDF]
- eOPF (Personnel File)
- Employee Express (Pay Stubs)
- Career Opportunities
- Transportation Federal Credit Union (TFUC)
- Online Training (TMS)
- Computer Assistance / 5-HELP
- Emergencies
- Report a Security Incident

**Upcoming Events**

- April 4-8 National Work Zone Awareness Week
- April 5 Professional Development Day Conference Center 9 a.m.-2 p.m.
- April 6 RITA Technology Transfer Day HQ West Atrium and Conference Rooms 9:30 a.m.- 2 p.m.
- April 10-16 National Volunteer Week
- April 13-14 HQ Blood Drive West Building Conference Rooms 8-10 9 a.m.-3 p.m.

**Announcements**

- Tips On How To Handle Workplace Conflicts April 27, 2011 How to resolve conflicts is the subject of an all-day course...
- Take Our Daughters And Sons To Work@ Day April 28, 2011 Bring your kids ages 8-16 to work on Thursday, April 28, to celebrate...
- Discounted Nats tickets, food, drink and entertainment May 1, 2011 You can buy Nats baseball tickets for \$16 for the Sunday, May 1st game at...

**Messages from the Secretary**

- Please Participate in the 2011 Employee Viewpoint Survey March 30, 2011
- Improving DOT March 2, 2011
- IdeaHub Challenge: Can DOT Reduce Its Own Transportation Costs? February 23, 2011
- Thank You for Your Generosity January 18, 2011

**tell us: what would make this website better?**

**DISTRACTION.GOV**

**FAST LANE** The Official Blog of the U.S. Secretary of Transportation

Texas launches Talk. Text. Crash. campaign to encourage safer driving  
As I mentioned earlier this week, April is National Distracted Driving Awareness Month. And last Wednesday the Texas Department of Transportation kicked off their April ...  
2011-04-05, 01:38:57

As Work Zone Awareness Week Begins, road safety is more important than ever  
First you see the warning signs, Road Work Ahead. Then the orange cones. And then the orange vests of the crew who are grading. ...  
2011-04-05, 07:09:19

Pipeline Safety Action Plan a first step to prevent future tragedies  
When we turn on our heat, stoves, or hot water, none of us expects an explosion in our front yard that might endanger our families ...  
2011-04-04, 01:46:59

Miss South Dakota Works To Reduce Distracted Driving  
The Rapid City Journal (4/5, Nettinga) reports on Miss South Dakota Loren Vaillancourt's work against distracted driving. Last week, she gave ...

Hyundai To Sell Sonata As Plug-In Hybrid In 2013.  
Reuters (4/3, Jin) reports that Hyundai is planning to launch a plug-in hybrid version of its Sonata sedan for 2013.

California Applies For Full Amount Of High-Speed Rail Funds.  
The San Diego Union-Tribune (4/5, Hawkins) reports, "California is going after the \$2.43 billion in high-speed rail funding rejected by the state of Florida. The state...

Modal Intranets: FAA • FHWA • FMCSA • FRA • FTA • MARAD • NHTSA • PHMSA • RITA • SLSDC • STB  
Contact Us  
Last Updated 04/05/2011

# Agility: Efficient and Effective

Save time by leveraging known, tested solutions



Tweak existing tools rather than build new solutions



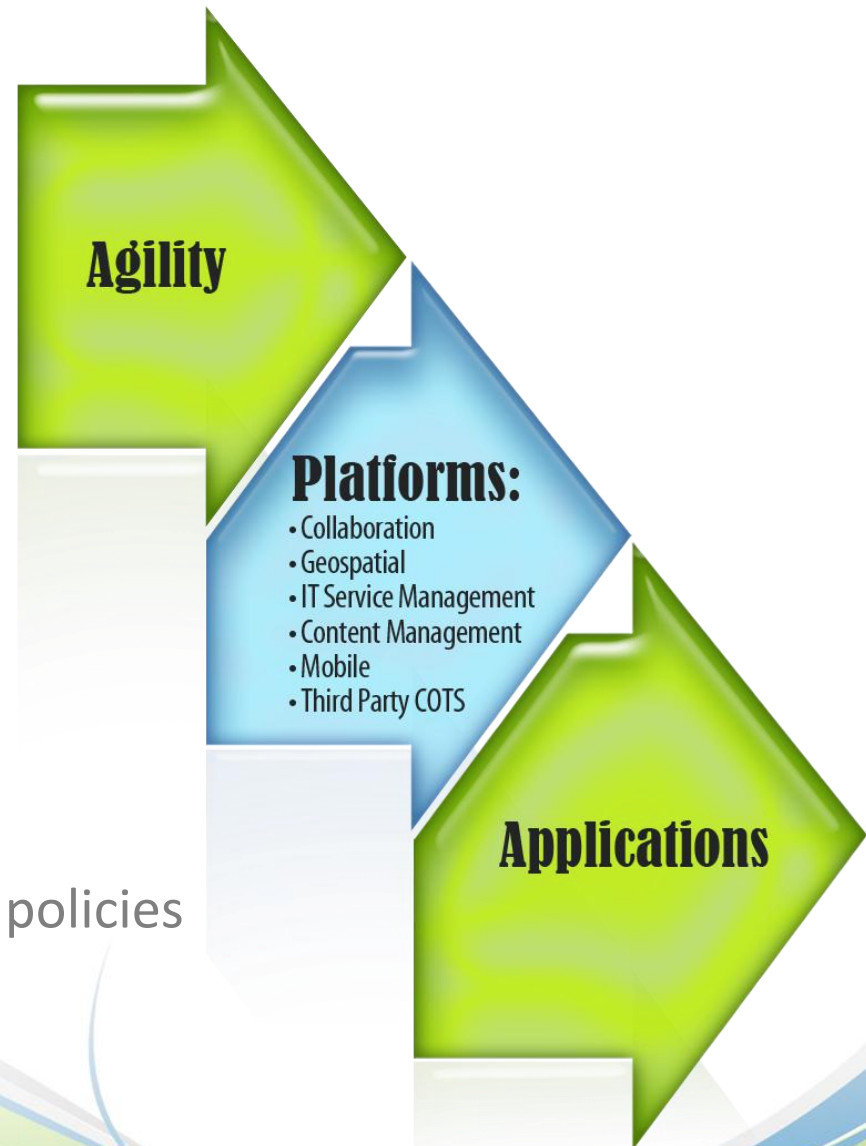
Saves users time and money

# Agility Platform

Standardized Agility Platforms will streamline the process to take advantage of enterprise efficiencies to obtain funding for rapid application development and deployment.

## Platform Strategy:

- Govern the platforms
- Direct connection to IT Security policies
- Department-wide use
- Establish Standards



# Public Engagement

Working with Stakeholders to Identify and Solve Problems

# Key Stakeholders

## ➤ Citizens

- Want an easily searchable, engaging portal
- Want trustworthy, vetted products

## ➤ Experts/Developers

- Want work to be seen, used, shared
- Want trustworthy data as a resource

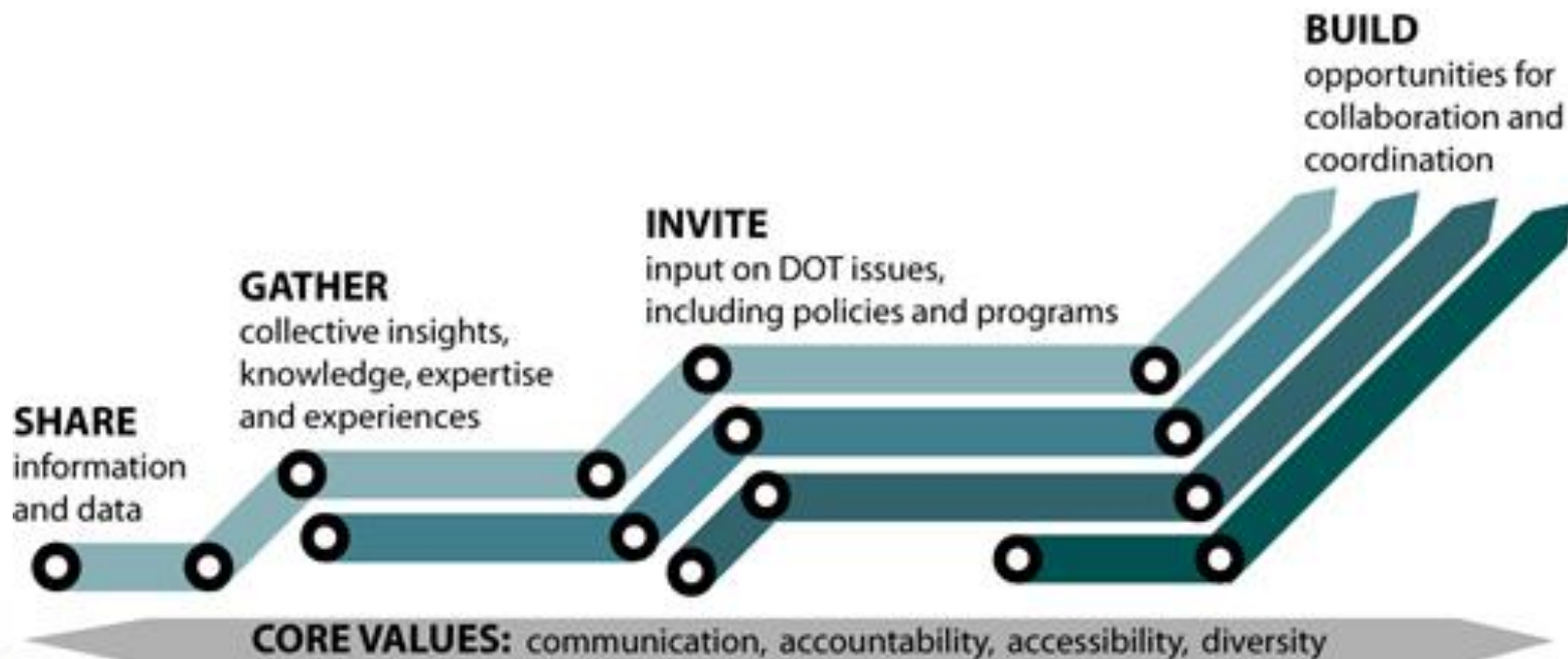
## ➤ Entrepreneurs

- Want to build new companies and products
- Want access to talented developers, investors

## ➤ Investors

- Want to fund solvable transportation problems
- Leverage, nurture potentially lucrative solutions

# DOT'S PUBLIC ENGAGEMENT MODEL





# Public Engagement

- Conducted over 170 roundtables around the country with stakeholders representing industry, business and advocacy communities interested in transportation initiatives.
- Led Safety.Data.gov Initiative by hosting in-person and online conversations with external stakeholders relating to how expanded digital options can benefit our users.
- Hosted webinars and conversations related to new authorities and opportunities under MAP-21.
- Continued outreach with online dialogues, webinars, and town hall meetings.

# What We Heard

- Bring services and information to people anytime and anywhere
- Empower users with data to make better decisions and create innovative tools
- Enable people to directly connect using web-based and mobile applications

# DOT Internet Before/After

United States Department of Transportation

Home About Briefing Room Services

U.S. celebrates 100 Open Skies Agreements

Faces of Distracted Driving: Eric Okerblom, 19

St. Lawrence Seaway opens for 2011 navigation season

PHWA launches new bridge safety initiative

**NHTSA releases new child seat guidelines**  
Age-focused recommendations help parents make more informed choices

**FAST LANE**  
The Official Blog of the U.S. Secretary of Transportation

STAY CONNECTED

Retrospective Review of Rules

DISTRACTION.GOV

buyAmerica

THE RECOVERY ACT and the U.S. DEPARTMENT OF TRANSPORTATION

DOT Operating Administrations & Offices

Select an Operating Administration/Office

Special Features

- Resources for Tribes and Tribal Government
- Strategic Sustainability Performance Plan
- Stranded Passengers
- Future of Aviation Advisory Committee (FAAC)
- TIGER II Discretionary Grants
- High Speed Rail Plan
- DOT's Disaster Recovery
- DOT Women and Girls
- Frequently Asked Questions

Highlights

- Budget, Performance & Accountability
- DOT Recovery
- Distracted Driving
- Open Government

Top Requests

- Motor carrier companies – get a DOT number
- Find your state transportation department
- Drug and alcohol testing rules
- File a complaint against a trucking company

United States Department of Transportation

About DOT Our Activities Areas of Focus

On the Go with Ray LaHood - September 2012

Resources for INDIVIDUALS

Resources for PARTNERS

Resources for GOVERNMENT

THE BRIEFING ROOM

CONNECT WITH US

TOP REQUESTS

- Motor Carriers - Get a DOT Number
- Veterans Transportation Career Center
- Moving Ahead for Progress in the 21st Century Act (MAP-21)
- Find Your State Transportation Department
- 5 Star Automobile Crash Test Ratings
- Office of Drug & Alcohol Policy & Compliance
- File a Complaint Against Trucking Company
- DOT and 2012 Drought
- Call 811 Before You Dig
- Careers in Motion

WHAT ARE YOU INTERESTED IN?

- AUTOMOBILES
- ROADWAYS AND BRIDGES
- PIPELINES AND HAZMAT
- TRUCKING AND MOTORCOACHES
- AVIATION
- PUBLIC TRANSIT
- RAILROADS
- MARITIME AND WATERWAYS
- RESEARCH
- BICYCLES AND PEDESTRIANS

# SaferBus (FMCSA)

## SaferBus

By Federal Motor Carrier Safety Administration

Open iTunes to buy and download apps.



View In iTunes

This app is designed for both iPhone and iPad

Free

Category: Travel  
Updated: Mar 18, 2012  
Version: 1.01  
Size: 6.1 MB  
Language: English  
Seller: Federal Motor Carrier Safety Administration (Apps)  
© n/a  
Rated 4+

Requirements: Compatible with iPhone, iPod touch, and iPad. Requires iOS 4.1 or later.

### Customer Ratings

Current Version:  
★★★★ 7 Ratings  
All Versions:  
★★★★ 7 Ratings

[View More By This Developer](#)

### Description

SaferBus App provides the general public an efficient way to view and access the safety performance of commercial motor carriers including motor coach and bus companies.

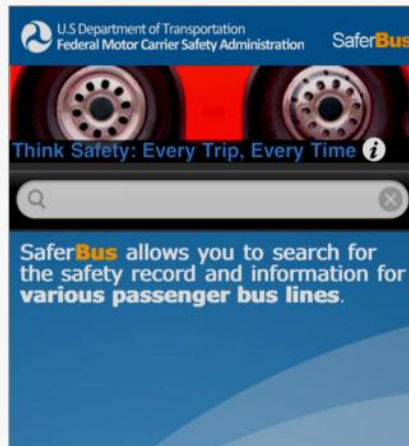
[SaferBus Support](#)

### What's New in Version 1.01

Added FAQ page.  
Usability Improvements.  
Bug fixes.

### Screenshots

iPhone | iPad



First DOT Mobile App, designed for Apple operating systems

Open-source architecture reduces licensing costs

Streamlined public access to FMCSA safety performance data

# SaferBus Student Safety Data Challenge

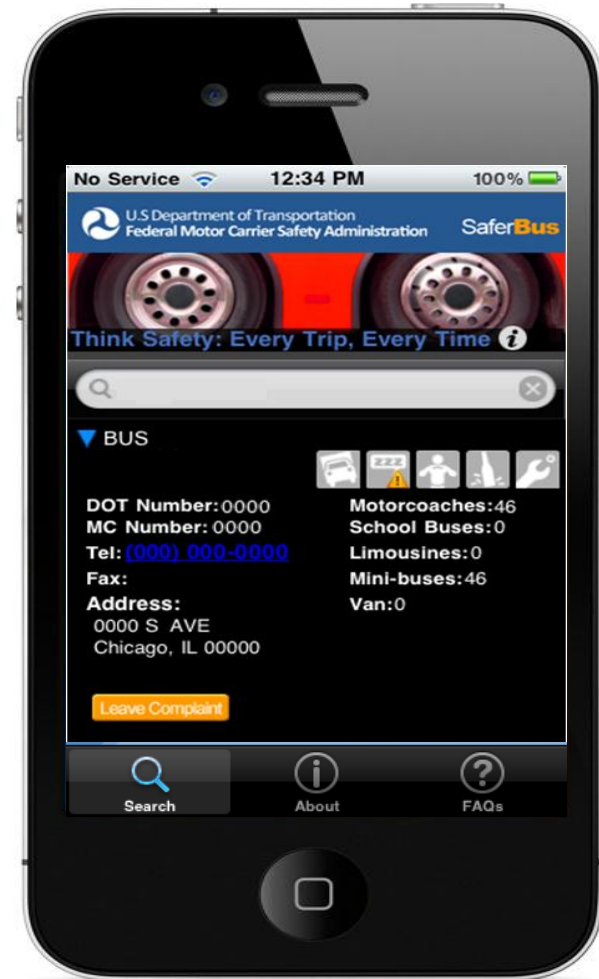
Build on SaferBus mobile application

Access the same data we used, add some of your own

Uncover actionable information to better inform decisions

Innovate and dramatically improve safety

<http://studentsafetydata.challenge.gov/>



# Safety.Data.Gov (DOT Safety Council)

Soft Launch  
(4/12/2012)

- 596 datasets, 4 apps, 18 resources live
- DOT and HHS data
- Non-federal data from NC

Official Launch  
(5/16/2012)

- White House Event for National Transportation Week.
- 100 additional datasets live
- Representing data from more than eight federal agencies
- Including non-federal state and local data

Upcoming Safety Datapalooza

The screenshot shows the homepage of Safety.Data.Gov. At the top, it says "An Official Website of the United States Government" and "Tuesday, April 24, 2012". The main header includes the logo "DATA.GOV / SAFETY" and navigation links for "Login" and "Sign Up". Below the header, there's a "Welcome to the Safety Community" section with a description of the site's purpose. To the right, there's a "Special Features" section highlighting the "Grade Crossing App" with a "VIEW MORE" button. Below this, there are three main content areas: "Blogs/News" with a "SHARE!" graphic, "Challenges" with a photo of construction workers, and "Forum" with a photo of a group of people. At the bottom, there's a footer with navigation links like "About", "FAQ", "Contact Info", "Data Policy", "Accessibility", "Privacy Policy", and "Sitemap", along with the "DATA.GOV" logo.

# Examples of Commercial Mobile Transportation Applications\*

## Title 46 Code of Federal Regulations

- The complete text of Title 46 CFR, Shipping, on your iPhone. Leave the heavy books at home!

## FlightLog Pilot's Logbook

- FlightLog makes it easy to log and analyze flight hours on iPhone and iPod Touch. Flight time is organized by aircraft and hour category tallies are visible at a glance.

## Citi-Go-Round Transit App Store

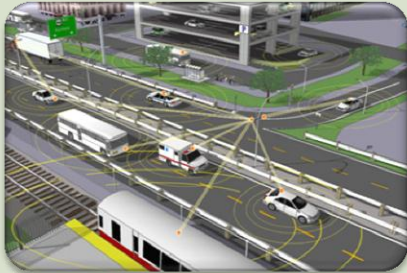
- 25 applications for train schedules, bus routes, flight delays and more in the DC area alone.

## ForeFlight

- Pilot Checklists, airport directories, weather reports and filing flight plans. Elegant aviation tools: Pixel perfect, exceptionally intuitive and precisely built.

\* Illustrative only. Applications not officially endorsed by the U.S. Dept. of Transportation.

# Examples of Web 2.0 Impacts on Transportation Networks



ITS data and systems architecture will become standardized and integrated

## Environmental Impact

- Gas consumption will decrease due to intelligent traffic routing

## NextGen Air Travel

- Intelligent flight paths
- More planes in the sky
- Safer flights

## Positive Train Control

- Trains interface with ground activity to prevent unforeseen problems



# Future Direction for Mobile Data

## National Level

Federal-level data will emphasize transportation planning and development

Example: Bridge maintenance data collected at the federal level

## Local Level

DOT is getting out of the business of reporting and aggregating data

States and local agencies will use mobile devices to collect and feed data to central databases

DOT is moving toward self-updating and “mashable” publicly available datasets

DOT will manage and publish datasets to easily accessible apps

# Questions ?

Open Discussion