

Connecticut's Traffic Records System

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Traffic Records Coordinating Committee

November 20, 2019

High-quality traffic records data is critical to effective safety programing, operational management, and strategic planning

Topics for Discussion

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- Introduction
- Recap of the TRCC Meeting To-Date
- What's Up with the Transportation Enterprise Data Program (TED)
- On-Going Highway Safety System Data Integration Initiatives & Upgrade of the Report Analysis Tool – Dr. Eric Jackson
- ECitation/Online Adjudication System Status Update
- Announcement
- TRCC Website
- Open Forum
- Meeting Adjourned

HAPPY HOLIDAYS TO ALL !!!!

TRCC Meeting Dates/News

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- TRCC Meetings To-Date

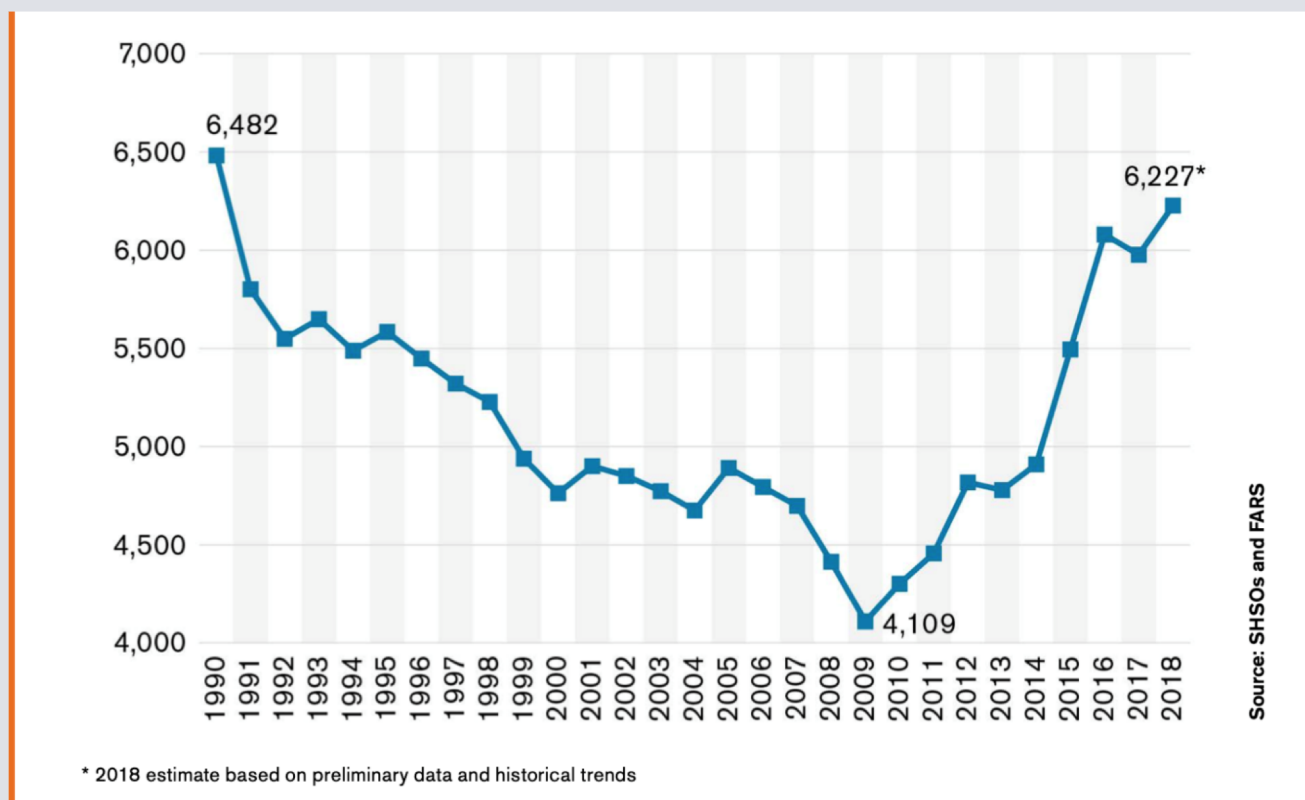
- Jan '19 (Middletown Court House) - Online Adjudication System
- Feb '19 (DOT) - Local Law Enforcement Perspective
- Mar' 19-21 (DOT) - Peer Review with Louisiana
- Apr' 25 (DOT) - What's New at DMV
- June 20 (DOT) - FY 2020 Plan and Section 405 (c) Grant
- August (Austin, TX) - Traffic Records Forum
- September 5 (DOT) - Data Driven Roadway Safety Management System
"Best Practice Award"

- Hot Topics

Hot Topic - Pedestrian Traffic Fatalities

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- Based on the preliminary number of pedestrian fatalities during the first six months of 2018 along with historic data regarding the annual numbers and proportions of pedestrian deaths that occurred during the first and second halves of the year, **GHSAs project there were 6,227 pedestrian fatalities in 2018, an estimated four (4) percent increase from 2017.**



Hot Topic - Pedestrian Traffic Fatalities By State

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2018 PRELIMINARY DATA

Table 2

Pedestrian Fatalities by State, Jan-June 2017 & 2018

Source: State Highway Safety Offices

Sorted by State

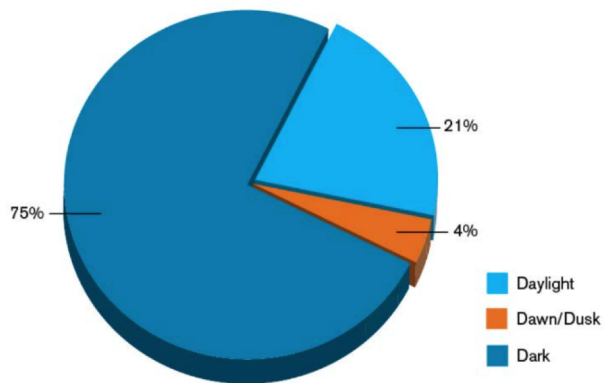
| State | Jan-June 2017 | Jan-June 2018 (Preliminary Adjusted) | % Change from 2017 to 2018 | |
|--------------------|---------------|--------------------------------------|----------------------------|------|
| | | | # | % |
| Alabama | 59 | 40 | -19 | -32% |
| Alaska | 7 | 5 | -2 | -29% |
| Arizona | 112 | 125 | +13 | +12% |
| Arkansas | 25 | 23 | -2 | -8% |
| California | 468 | 432 | -36 | -8% |
| Colorado | 37 | 34 | -3 | -8% |
| Connecticut | 19 | 29 | +10 | +53% |
| Delaware | 13 | 7 | -6 | -46% |
| DC | - | 8 | +1 | +14% |
| Florida | 330 | 334 | +4 | +1% |
| Georgia | 133 | 165 | +32 | +32% |

CT Pedestrian Fatalities

Light Level

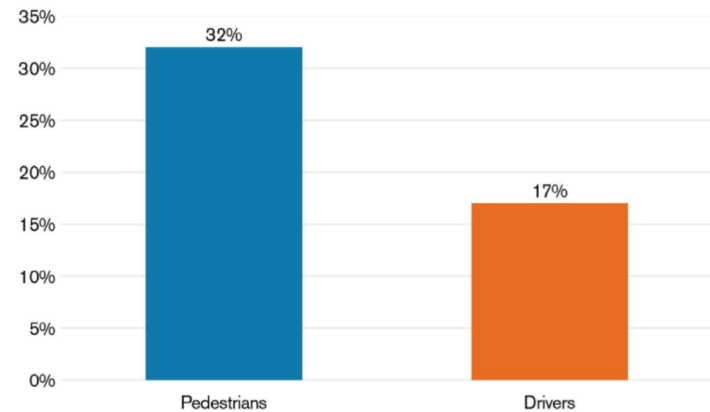
Darkness poses an especially high risk for those traveling by foot. On a national basis, about 75 percent of pedestrian fatalities in 2017 occurred after dark (Figure 5).

Figure 5 2017 Pedestrian Fatalities by Light Level



Source: FARS

Figure 10 Percent of Pedestrians and Drivers with BACs ≥ 0.08 g/dL in Fatal 2017 Pedestrian Crashes



Source: FARS

Hot Topic - What States Are Doing

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Every state is addressing pedestrian safety using a combination of engineering, education and enforcement. Specific SHSO-reported activities are provided. This list does not represent the full spectrum of activities happening across the country.

Alaska

Engineers have adopted internal policies on the **use of refuge islands and divided traffic ways when applicable** to new road construction. Some jurisdictions have adopted the Complete Streets concept.

Arizona

Arizona law enforcement agencies concentrate on **enforcement, education and awareness** when it comes to pedestrian safety, focusing on the habits of the pedestrian and the driver. Pedestrians are reminded to walk on a sidewalk facing traffic, cross at intersections or within crosswalks, be visible at night by wearing light colors, and avoid distractions like cell phone use. Drivers are reminded to look for pedestrians everywhere, always stop for them in crosswalks, never pass vehicles stopped at a crosswalk, and slow down around pedestrians, especially in neighborhoods and school zones.

What States Are Doing

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- **Targeted law enforcement efforts.**

For example, **Massachusetts** provided funding to 84 local police departments across the state to conduct overtime enforcement patrols aimed at reducing pedestrian and bicyclist injuries and fatalities.

- **Public information campaigns.**

For example, **Connecticut** introduced the “**Watch for Me CT**” campaign, which is a statewide educational community outreach campaign that involves media components and community engagement in partnership with CT Children’s Medical Center. Section 402 funds were used for the “Watch for Me CT” campaign, law enforcement training and the development of public information and education rack cards.

The first **non-motorized safety course for law enforcement was held in 2018.**

A statewide signage project was recently completed to ensure pedestrian signage was up to date with current standards, including near schools and bus stops.

On the public information and education front, track cards were developed with CT laws and safe driving tips related to pedestrian safety.

Hot Topic - What States Are Doing Cont..

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- **Educational outreach in high-risk areas.**

For example, **the Georgia Office of Highway Safety** has grantees in cities with significant increases in pedestrian fatalities that are working on educational programs. These programs have been focused on areas where there are significant numbers of people who walk as a primary form of transportation.

Every state is addressing pedestrian safety using a combination of engineering, education and enforcement.

Transportation Enterprise Data warehouse

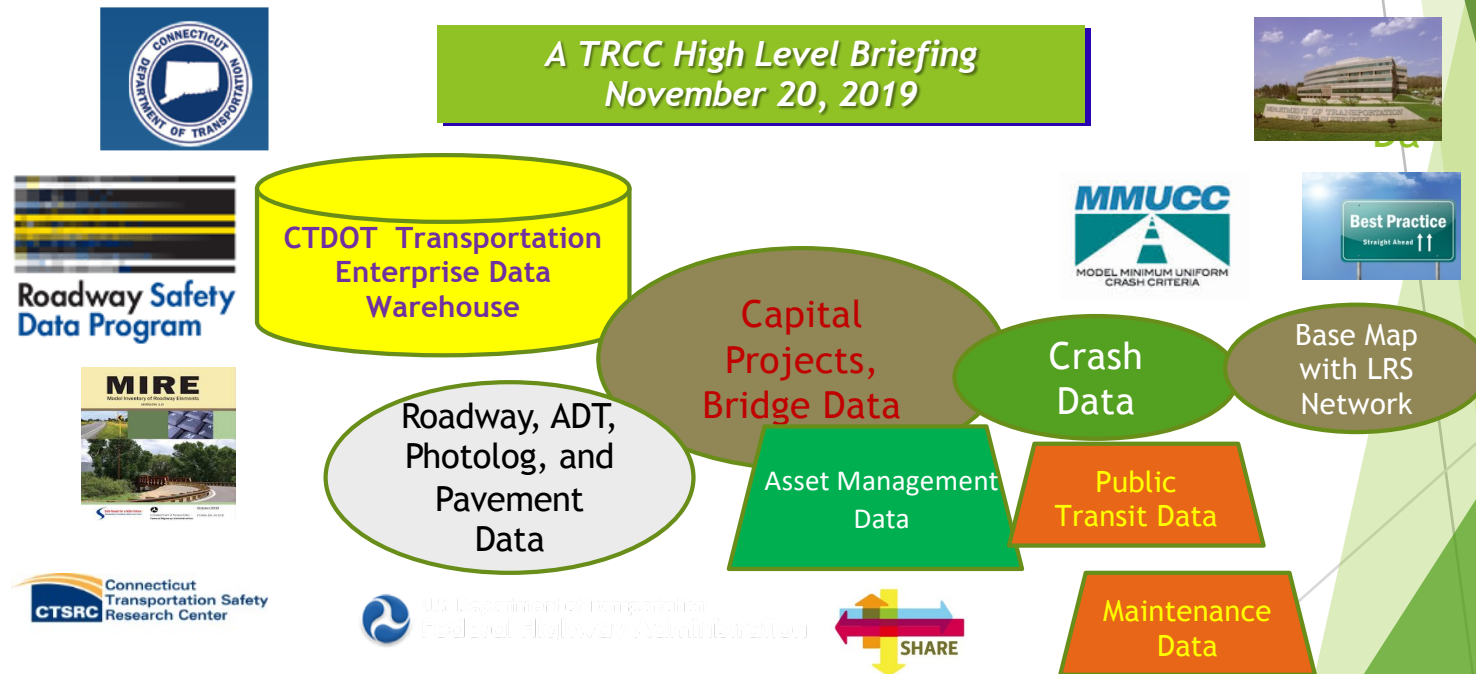
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What's Up
with
TED



Building And Governing A Modern Transportation Enterprise Database

How DOT Is Building The Tools, Processes, and Capabilities For Managing Enterprise Data





**ALCS Final Game
Astros-Yankees**

<https://video.search.yahoo.com/yhs/search?fr=yhs-Lkry-SF01&hsimp=yhs-SF01&hspart=Lkry&p=you+tube+tv+altuve+home+run#id=9&vid=42b0982580bbfda0359a8f0bb7d166c0&action=click>

**Latest Standings
Patriots 7-0
Giants 2-5
Jets 1-5**

Breaking News!

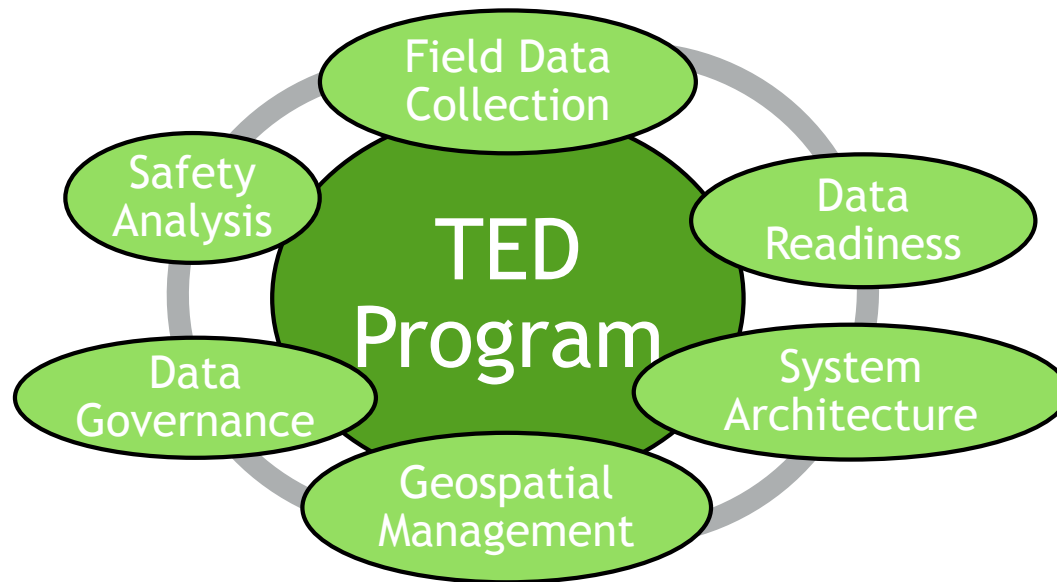
The NFL has announced that the Super Bowl has been renamed the "New England Patriots Invitational"

Agenda

- ▶ What is TED?
- ▶ Why TED? Why Now?
- ▶ Why Is TED Important?
- ▶ Guiding Principles
- ▶ What TED has accomplished to date?
- ▶ The New TED Vision and Delivery Strategy - Growing Scope and Complexity
- ▶ Goals and Deliverables for UCONN MOU
- ▶ Where Are We Today with TED

What is the Transportation Enterprise Data Program?

- ▶ A single transportation enterprise database, fed and maintained by authoritative data sources, which supports the analysis of Agency-wide transportation data using multiple assessment tools and methods.



Why A Project Like TED? Why Now?

▶ Because It's The Right Thing To Do

- ▶ *CTDOT data needs to be timely, relevant, authoritative, and accessible to keep up with 21st demands*
- ▶ *"Organizations that do not understand the overwhelming importance of managing data and information as tangible assets will not survive"- Peters.*

▶ TED Aligns With the Governor's Strategic Goals To Streamline Data Management

- ▶ *Modernize and digitize state government. Moving transactions from manual to online to reduce costs*
- ▶ *Supports CT State Open Data Plan to improve data stewardship, use, and access*

▶ TED Positions Us To Meet Data Driven Federal Planning and Reporting Requirements

- ▶ *Geo spatial LRS Reporting, Asset Management Goals, Strategic Highway Safety Plan, Safety Analysis Tool*
- ▶ *Supports FHWA Every Day Counts Innovation Programs and expands capacity to secure research and demonstration funding*

▶ TED Will Help To Create A More Efficient and Accessible Transportation System

- ▶ *Reduce transportation-related fatalities and serious injuries; Invest in infrastructure to ensure mobility, accessibility and to stimulate economic growth; Lead in the development of innovative practices and technologies to improve safety and performance on the network*

▶ TED Will Enhance Transparency and Accountability to Our Stakeholders

- ▶ *Increased ability to deliver projects, faster, smarter, better; more customer focused approach in sharing data for optimum efficiency and productivity*

Why Is TED Important?



- ▶ The Perfect Antidote To Data Silos
 - ▶ TED represents a *change in philosophy and mind set* in how we manage transportation data
 - ▶ Data will be managed, maintained and supported as a *shared and integrated asset*
 - ▶ Reduces *costly, time intensive* efforts to find and transform data to meet core business needs
- ▶ Offers One Stop Shopping For All The Data You Need
 - ▶ TED provides a venue for authoritative business data assets to be *readily available and accessible* from a *common enterprise platform*
- ▶ Will Reduce Data Collection and Management Costs
 - ▶ TED offers opportunities to link and integrate different business datasets to *improve efficiency*
 - ▶ Minimize duplication of effort
 - ▶ Collect once, use many times
- ▶ Will Improve Business Intelligence and Analytics
 - ▶ More *data driven decisions* on making investments in infrastructure, safety, and asset management
 - ▶ Easier ways to visualize and consume data
 - ▶ **Most importantly, TED is helping to create a new data culture of collaboration, cooperation, and communication**

Our Guiding Principles



A collaborative, transparent, consensus driven approach will be implemented to achieve cooperation and support

Reaching out and adding value to organizational units' business processes is imperative to optimize multiple benefits from integrated tools and systems.

Common sense reasonable standards will guide data stewardship, readiness, maintenance, and sharing without disruption to business processes

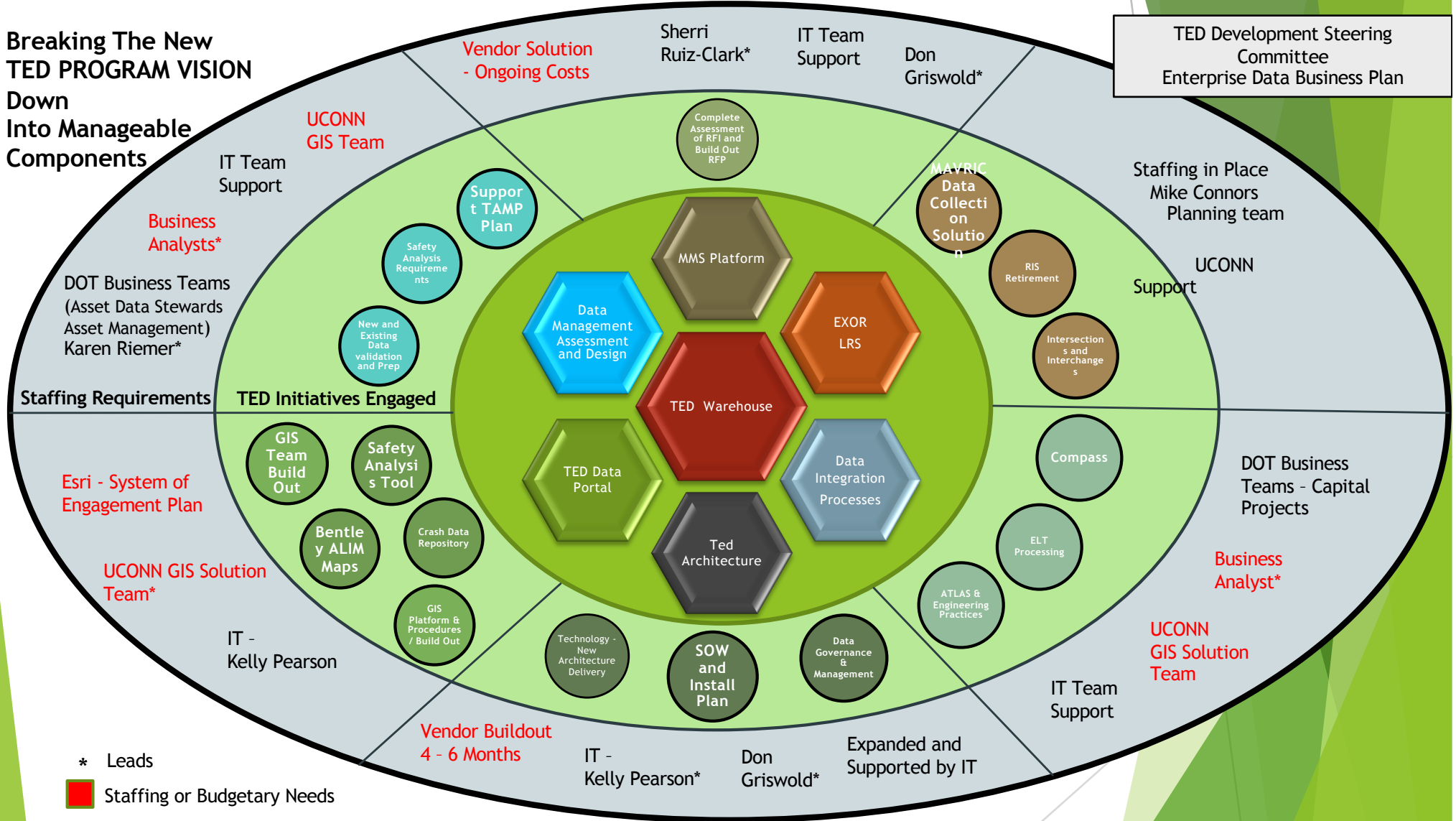
Our data will be managed in a way that meets the needs of individual business owners as well as the collective needs of the Department and outside stakeholders

The TED Enterprise draws on multiple consistently changing authoritative data sources to integrate, store, and display data. Transparency and communication will be key to how data is managed and shared

What Has TED Accomplished Thus Far?

- ▶ Since 2016, created a collaborative Department wide team committed to managing data as a shared enterprise for the first time; stood up an original TED platform as a proof of concept
- ▶ Assembled data from a variety of sources around the Agency and made authoritative business data assets available from a common platform (*26 layers of data in current TED platform*)
- ▶ *TED Web Portal* <http://www.ct.gov/dotsi/cwp/view.asp?a=4941&q=604252>
- ▶ *Created a geospatial transactional data base (ATLAS) to support the planning and tracking of Capital Projects*
- ▶ Developed TED Architecture Report and Assessment to document specific recommendations:
 - ▶ Metadata, ATLAS modifications, ETL processing, security and access, cloud server solutions, business intelligence
- ▶ Recruited UCONN Transportation Safety Research Center and VHB to build out a new TED and Web Portal supported with GIS data collection and maintenance tools and apps for four targeted assets-ADA systems, Guiderail, Signals, and Roadway

**Breaking The New
TED PROGRAM VISION
Down
Into Manageable
Components**



* Leads
■ Staffing or Budgetary Needs



UCONN/VHB Deliverables and Other TED Components



• UCONN MOU-Detailed Project Plan (Through September 2020)

- TED architecture
- New ATLAS data base and capital project management Web site
- Documented business and technology requirements (for pilot assets); Roadway, ADA, Guiderail and Signals
- GIS solution, tools and apps and publishing standards
- TED Web Portal
- Use Case Scenario of safety project decision making



➤ Other TED Components

- Asset Data Management for legacy TED data sets, TAMP priorities, and emerging ESRI data
- CMMS RFP and Grant Application
- EXOR/LRS: Migration from RIS, MIRE development, MAVRIC
- Data Integration-ATLAS Enhancement
- IT Technical Support Tasks
 - ESRI Licensing and Azure Cloud Support
- TED Management
 - Asset Data Stewards and GIS User Groups



New TED

New ATLAS

GIS Tools and Apps

TED Web Portal
GIS Data

Enterprise
Business
Requirements

Use Case Scenario

MAVRIC and MIRE
GIS SME Team

Automated Maintenance
Management Work Order System



TED Initial Requirements Analysis from UCONN and VHB

10.31.2019



Four Key Initiatives For The New TED

- ▶ Meet CTDOT asset data steward and enterprise business needs
- ▶ Provide an integrated, customizable, and sustainable technology ecosystem
- ▶ Develop a suite of tools iteratively to assure small and continuous wins
- ▶ Assist in growing GIS Management capabilities at the CTDOT

Goal 1: Overhaul the Enterprise GIS Capabilities of the CTDOT

- ▶ **Requirement 1:** Develop a secure authoritative database that ensures business users reliable and timely business data **(New TED Architecture and Web Portal)**
- ▶ **Requirement 2:** Provide a scalable architecture for expanded usage as the DOT starts to fully leverage the ESRI ecosystem.
- ▶ **Requirement 3:** Create a database architecture that supports derivative analytics and enables spatially enabled software tools.
- ▶ **Requirement 4:** Assure that the DOT has the appropriate level and number of licenses to support CT DOT business needs by entering into an Enterprise License Agreement (ELA) with ESRI

Goal 2: Develop GIS Solutions for Targeted Safety Assets

Document business and technology requirements; create GIS tools and apps

- ▶ **Requirement 1:** Maintain a routable pedestrian network to identify obstructions which a pedestrian with limited mobility may face.
- ▶ **Requirement 2:** Create ESRI field applications to update asset inventories
- ▶ **Requirement 3:** Provide better access to the linear referencing system (LRS). While allowing for more real-time visualization through accessible tools
- ▶ **Requirement 4:** Create an inspection solution that allows CTDOT to maintain guiderails as a geospatial feature that more accurately reflects real world infrastructure.
- ▶ **Requirement 5:** Develop a workflow to track signal updates which are occurring by enabling field crews and contractors with field-based tools.

Goal 3: Document the Increased Capabilities of the Enterprise GIS

- ▶ **Requirement 1:** Build TED data models to support documented future projects and goals of CTDOT
- ▶ **Requirement 2:** Help the GIS SME Group transition into the ESRI ecosystem through training and on-site support
- ▶ **Requirement 3:** Continue to support the development of Atlas workflows (new ATLAS database)

So Where Are We With TED Today?

- ▶ *Meeting with IT to set up Azure cloud environment; setting up of Azure dev and testing at UCONN*
- ▶ *Continue defining new TED architectural requirements and how they will be met-begin to build out an ESRI based data ecosystem*
- ▶ *Smaller group iterative meetings with asset data stewards to discuss business needs and to develop data models*
- ▶ *Begin to think what new GIS tools and apps will look like*
- ▶ *Secure enterprise data licensing; developing coordinated internal GIS capabilities (GIS SME Group)*
- ▶ *Lots of education, training and buy in needed on data modeling as an enterprise development tool*
- ▶ *Kick starting an electronic work order system (CMMS)for capturing work done to assets (inspections, repairs, replacements etc)*
- ▶ *Begin process of separating transactional ATLAS database from TED*
- ▶ *Stand up a new internal Web Portal with new query and display capabilities by June 30, 2020*
- ▶ *Continue the transition to a new enterprise data culture*

Questions

Contact Information

- Mario Damiata, RDIP and TED Data Champion
Mario.Damiata@ct.gov
860-594-2024
- Don Griswold, TED Business Analyst and all round TED advisor
Donald.Griswold@ct.gov
860-594-3523
- Gregory Ciparelli, MAVRIC Coordinator and SME Group Team Leader
Gregory.Ciparelli@ct.gov
860-594-2108



Data Integration & Report Analysis Tool

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On-Going Highway Safety Systems

Data Integration Initiatives

&

Upgrade of the Report Analysis Tool

Dr. Eric Jackson

ECitation Project Update

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ECitation/Online Adjudication System Status Update



Online Adjudication Of Traffic Of Offenses

Completed Tasks 18/19 Grant Year

- Completed integration of remaining regional courts
- Mailers to all person's pleading not guilty modified to include on-line adjudication option
- Expanded Adjudication Alternatives
 - Charitable Contributions
 - Public Service Announcements not currently operational
- Expanding case information available to prosecutors
 - Pending Case Information
 - Case Nolled within 13 months
 - Out of State License Suspensions not currently operational
- Ability for Law Enforcement to submit documents post issuance
- Combined databases to increase efficiency
- Completed Focus groups to determine future priorities



Online Adjudication Of Traffic Of Offenses

Changing Driver Behavior and the Impact on Highway Safety

Defendant Participation Rate 76%



■ Total Requests of Online Disposition

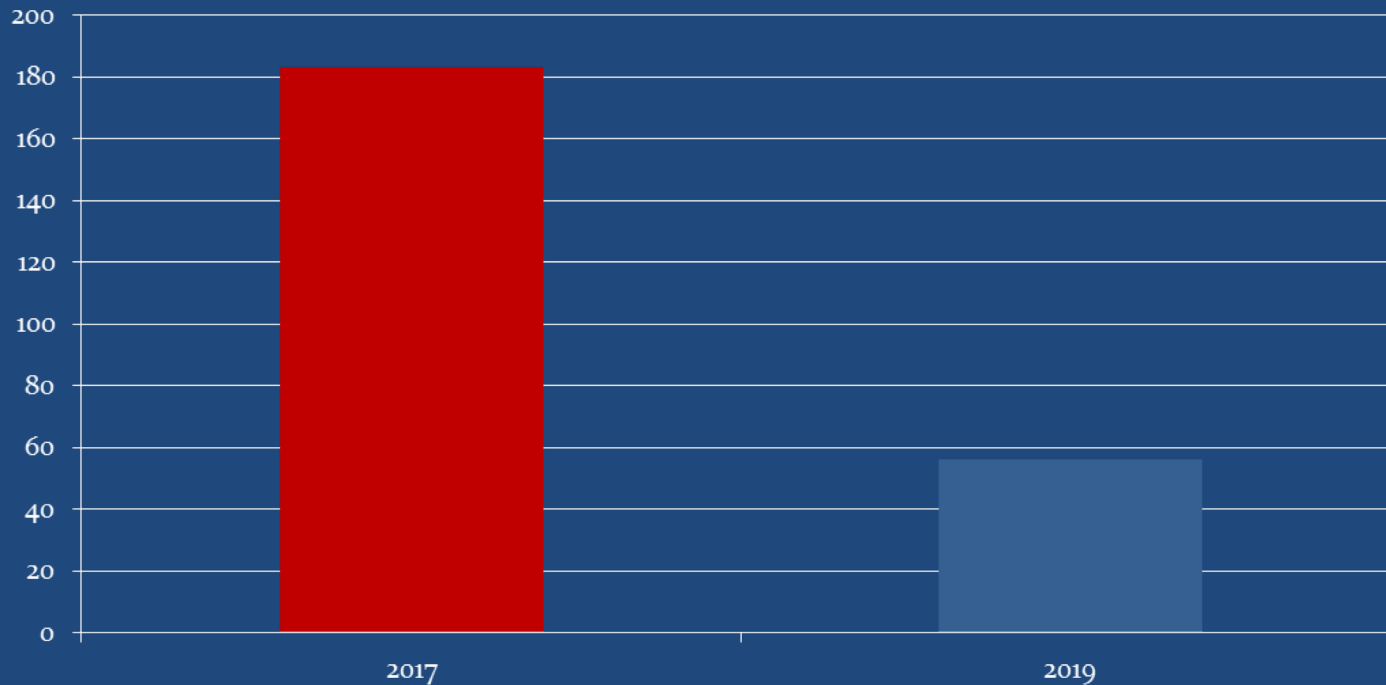
How the Public is Engaging – 22,115 people to date!

Connecticut Judicial Branch - Superior Court Operations



Online Adjudication Of Traffic Of Offenses

Changing Driver Behavior and the Impact on Highway Safety



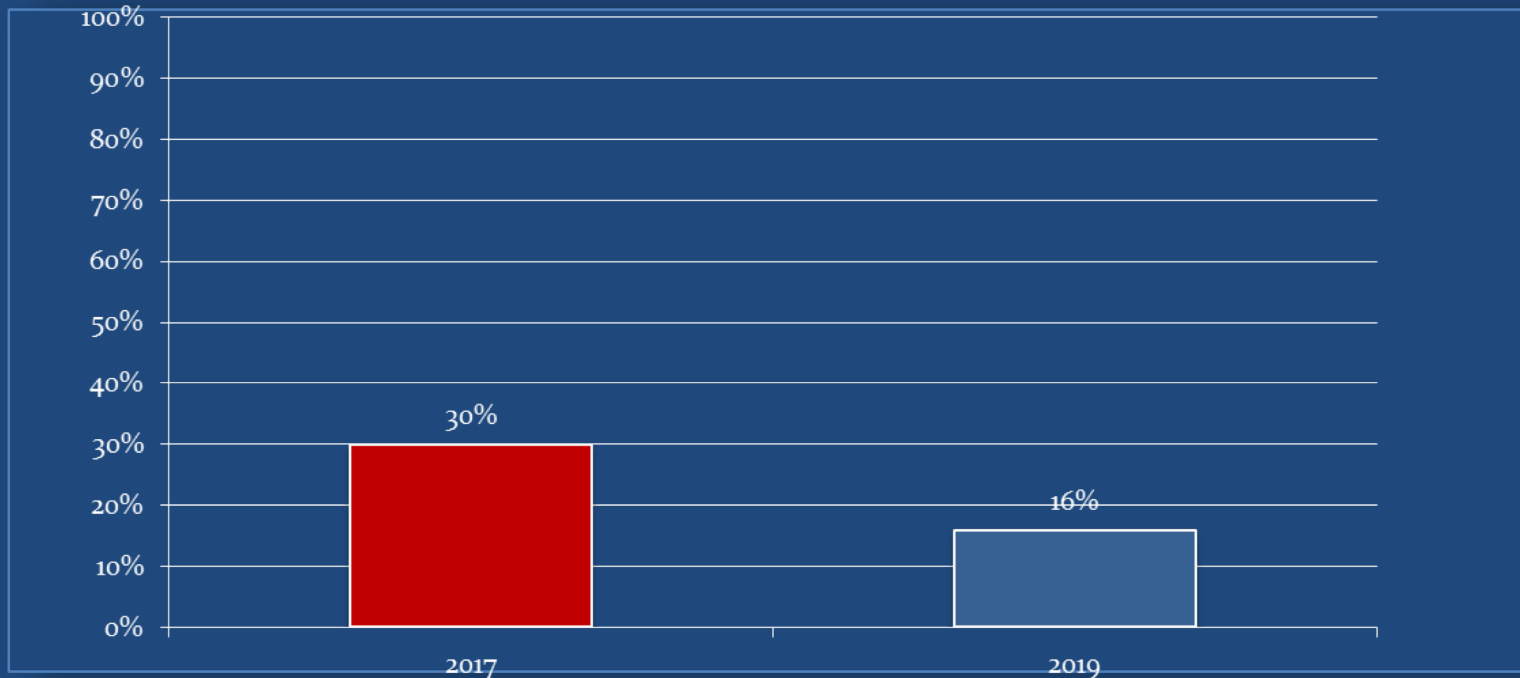
Issuance To Adjudication 183 to 56 days

Connecticut Judicial Branch - Superior Court Operations



Online Adjudication Of Traffic Of Offenses

Changing Driver Behavior and the Impact on Highway Safety



Not Prosecuted Cases Reduced from 30% to 16%



Online Adjudication Of Traffic Of Offenses

New Tasks 19/20 Grant Year

- **Improvements to the OnLine Adjudication System**
 - Enable clerks to message prosecutors concerning pertinent case information
 - Enable the public to update email addresses
 - Collaborate with the Highway Safety Office to develop and/or implement alternatives for safety interventions prior to disposition (e.g. Child Safety Seat Programs)
 - Analyze current disposition trends and statistics and document opportunity for improvement
 - Convene a work group to explore the possibilities of using Artificial Intelligence in the disposition process



Online Adjudication Of Traffic Of Offenses

New Tasks 19/20 Grant Year

- **Improvements to the Ecitation System**
 - **Implement action plans developed under previous awards to ensure 100% statewide participation in electronic citation**
 - **In conjunction with the Connecticut Department of Motor Vehicles, add the ability to take possession of a Connecticut Operator's License as a method of enforcement through the ecitation platform (N105 - Medical)**
 - **Make improvements to the ecitation schema and make code changes to eliminate inconsistencies (e.g. suffix of defendant's name)**

TRCC Website

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Traffic Records Coordinating Committee

Current Materials

- [TRCC Meeting / Current](#) ✓
- [TRCC Meeting / Past](#)
- [TRCC Stakeholders](#) ✓
- [TRCC Charter](#)
- [TRCC Traffic Records Strategic Plan](#)
- [TRCC Data Linkage Subcommittee](#)
- [TRCC Traffic Enforcement Data Update](#)
- [TRCC CSP Wrong Way Driver Study](#)
- [Project Submission Form](#) ✓

[Link to MMUCC PR-1 Crash Data Collection Main Page](#)

<http://www.ct.gov/dot/cwp/view.asp?a=2094&q=435916>

TRCC Website Contd..

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Reference Materials

[Traffic Records Program Assessment Advisory 2017](#)

[Traffic Records Assessment 2017](#) ✓

[MMUCC Guideline Fourth Edition 2012](#)

[D16.1 Manual on Classification of Motor Vehicle Crashes](#)

[One-Page MMUCC / D16.1 / D20.1 Standards Comparison](#)

[Traffic Records System Inventory](#) ✓

[Return to the Highway Safety Programs Page](#)

Open Forum

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General Discussion/Meeting
Adjourned



Walk At Your Own Risk

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From 2008-2017, **pedestrian fatalities** increased by 35%. When combined, **all other traffic deaths** decreased 6% over the same period.

