

REGIONAL SAFETY ADVISORY COMMITTEE
North Central Texas Council of Governments
Transportation Council Room
Friday, January 24, 2020
10:00 am – 12:00 pm

AGENDA

1. Approval of October 25, 2019 Meeting Summary – Alonzo Liñán, RSAC Chair
2. Regional 911 Safety Grant – Tom Bamonte, NCTCOG
3. Congestion Management Process (CMP) Update – Clifton Hall, NCTCOG
4. UAS Safety and Integration Task Force – Ernest Huffman, NCTCOG
5. Solutions for Traffic/Vehicle Pedestrian, Traffic Assessment, etc. – Harold Gibbs, Chariot Solutions
6. NCTCOG Regional Safety Program Inventory and Upcoming Safety Plan – Kevin Kroll, NCTCOG
7. Update Items
 - a) CVE Equipment and Training Program RFP – Kevin Kroll, NCTCOG
 - b) Safety Performance Measures – Kevin Kroll, NCTCOG
 - c) TIM Call for Projects – Camille Fountain, NCTCOG
 - d) Photogrammetry Contract Completion – Camille Fountain, NCTCOG
 - e) Abandoned Vehicle Working Group – Natalie Bettger, NCTCOG
 - f) Wrong Way Driving Request for Information (RFI) – Natalie Bettger, NCTCOG
 - g) MUTCD Compliance Deadlines Discussion – Alonzo Liñán
8. Upcoming Safety-Related Events and Training Announcements
 - a) Traffic Incident Management First Responder and Manager Course:
 - o February 27 – 28, 2020 NCTCOG
 - o May 28 – 29, 2020 NTTA
 - o August 6 – 7, 2020 NCTCOG
 - o September 24 – 25, 2020 NCTCOG
 - o October 22 – 23, 2020 NCTCOG
 - b) Texas Statewide Impaired Driving Forum: February 12, 2020, San Marcos, TX
 - c) Lifesavers National Conference on Highway Safety Priorities: March 15-17, 2020, Tampa, FL
9. Other Business (Old or New): This item provides an opportunity for members to bring items of interest before the group
10. Next Special RSAC Meeting: March 27, 2020 at 10 am

Regional 911 Safety Grant: USDOT Safety Data Initiative

Clint Hail, Transportation Planner

Automated Vehicles Program
North Central Texas Council of Governments

USDOT Safety Data Initiative (SDI)

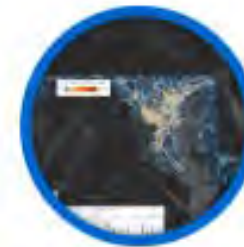
- SDI:
 - Driving turn to predictive analytics
 - Focus on scalable tools
 - Safety Data Initiative Beta Tools
 - Solving for Safety: Visualization Challenge
 - Awards announced in April-May
- NCTCOG:
 - Joint proposal: Transportation and NCT9-1-1
 - Improving handoffs of dynamic incidents across jurisdiction
 - Bridging the gap between transportation and emergency management

Projects

Safety Data Initiative Beta Tools



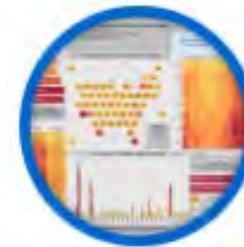
Solving for
Safety



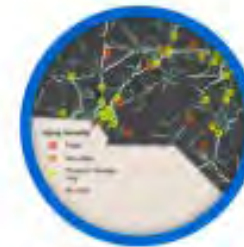
Waze



Pedestrian
Fatalities



FARS
Visualization



Rural Speed



2-STEP Tool

Congestion and Asset Management

Congestion Management Process Update

Clifton Hall

Regional Safety Advisory Committee

January 24, 2020

What is the CMP?

One of 5 federally-mandated planning documents
(MTP, TIP, UPWP, Public Participation Plan, CMP)

**Required for urbanized areas with populations exceeding 200,000
(also known as Transportation Management Areas “TMA”)**

“A **regionally-accepted** approach for **managing** congestion that provides **up-to-date** information on **multimodal** transportation performance and **assesses** alternative strategies that meet state and local needs.”

FHWA CMP Guidebook

What is Required in the CMP?

Regulations are not prescriptive towards the methods, approaches, and strategies in the CMP.

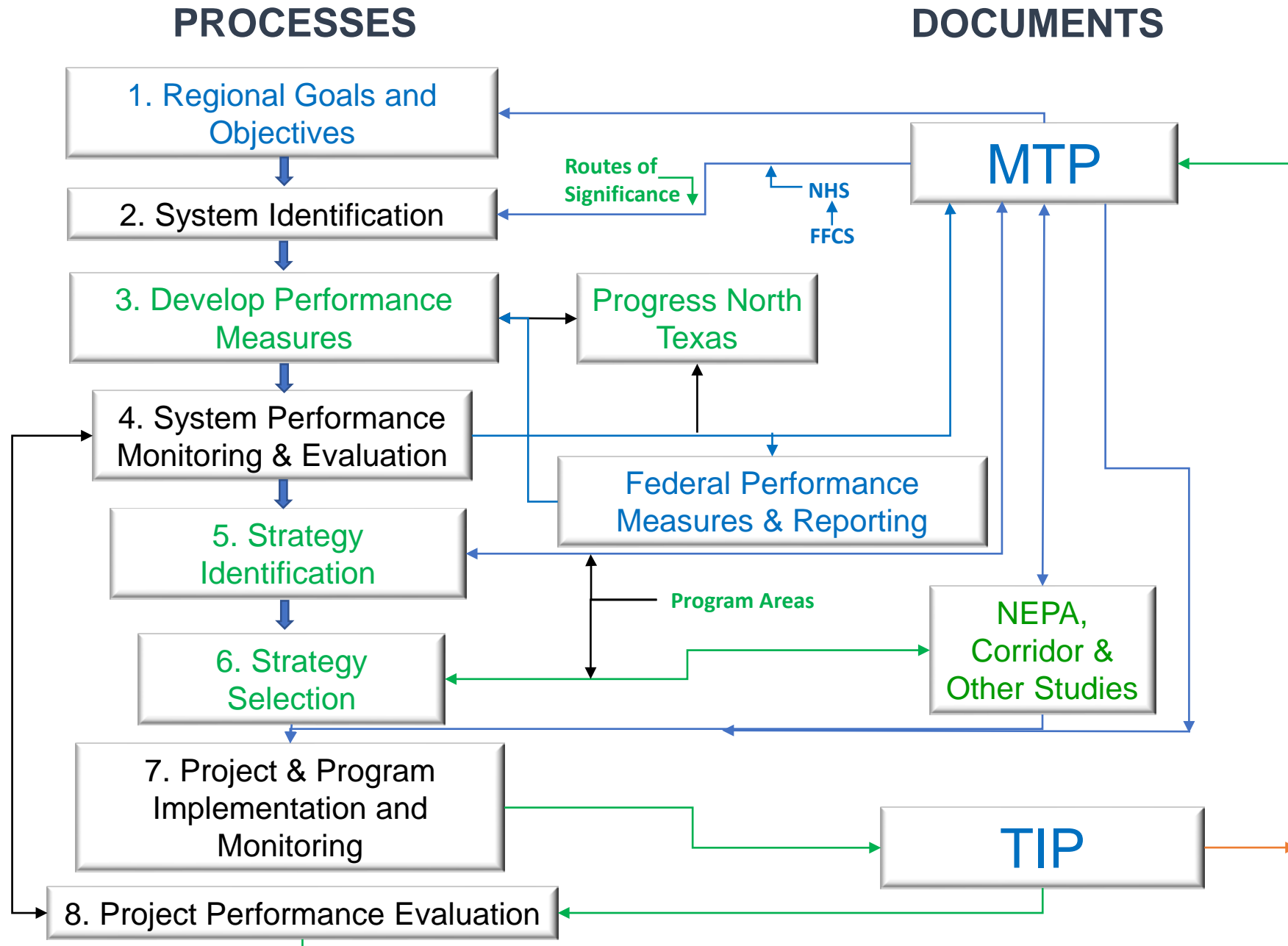
Congestion Management Strategies *should* include:

- Demand management strategies
- Traffic operational improvements
- Public transportation improvements;
- ITS technologies; and
- "Where necessary, additional system capacity"

For nonattainment areas, projects adding Single Occupant Vehicle (SOV) capacity *must* be evaluated and comply with the CMP by integrating congestion management strategies.

The CMP *shall* be developed, established, and implemented as part of the Metropolitan Transportation Planning Process.

CMP Processes and Related Documents



Regional Goals and Objectives

Mobility

Increase available options, reduce congestion, increase efficiency, provide access

Quality of Life

Preserve environment, improve air quality, promote active lifestyles, livable communities

System Sustainability

Encourage and enhance maintenance, increase **safety** and reliability, invest long-term in existing system

Implementation

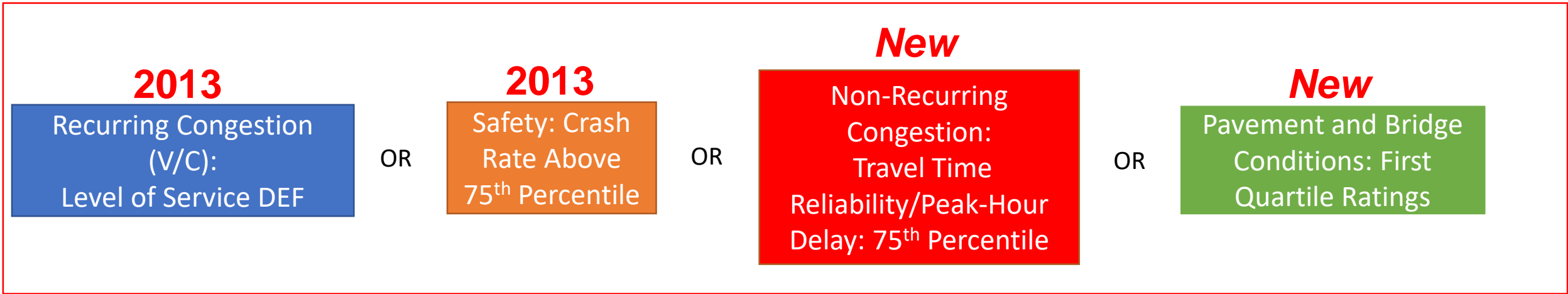
Timely project planning; cost-effective solutions for construction, operations, and maintenance; leverage existing assets

Corridor Performance Criteria

Construction
Programmed in TIP?



If so, hold for
evaluation after
completion.



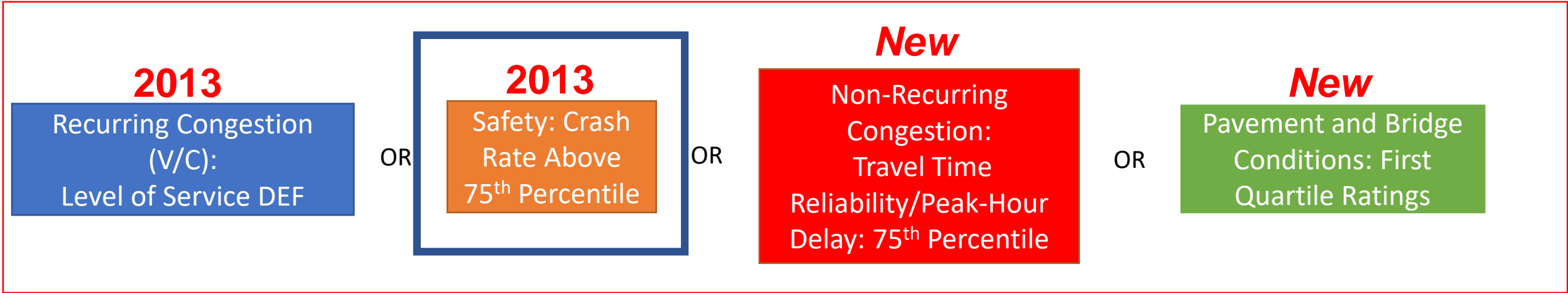
Further Evaluation

Corridor Performance Criteria

Construction
Programmed in TIP?

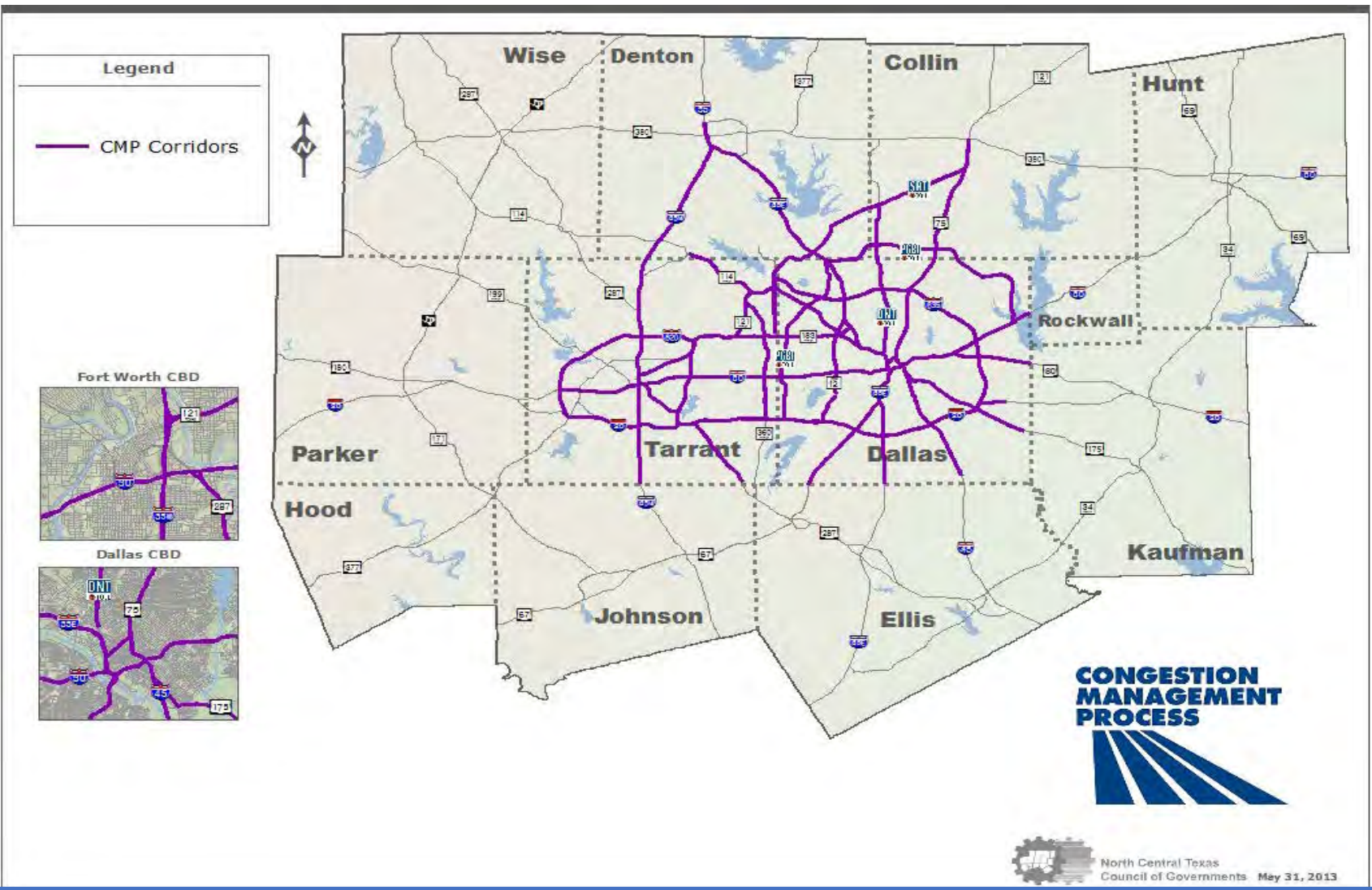


If so, hold for
evaluation after
completion.



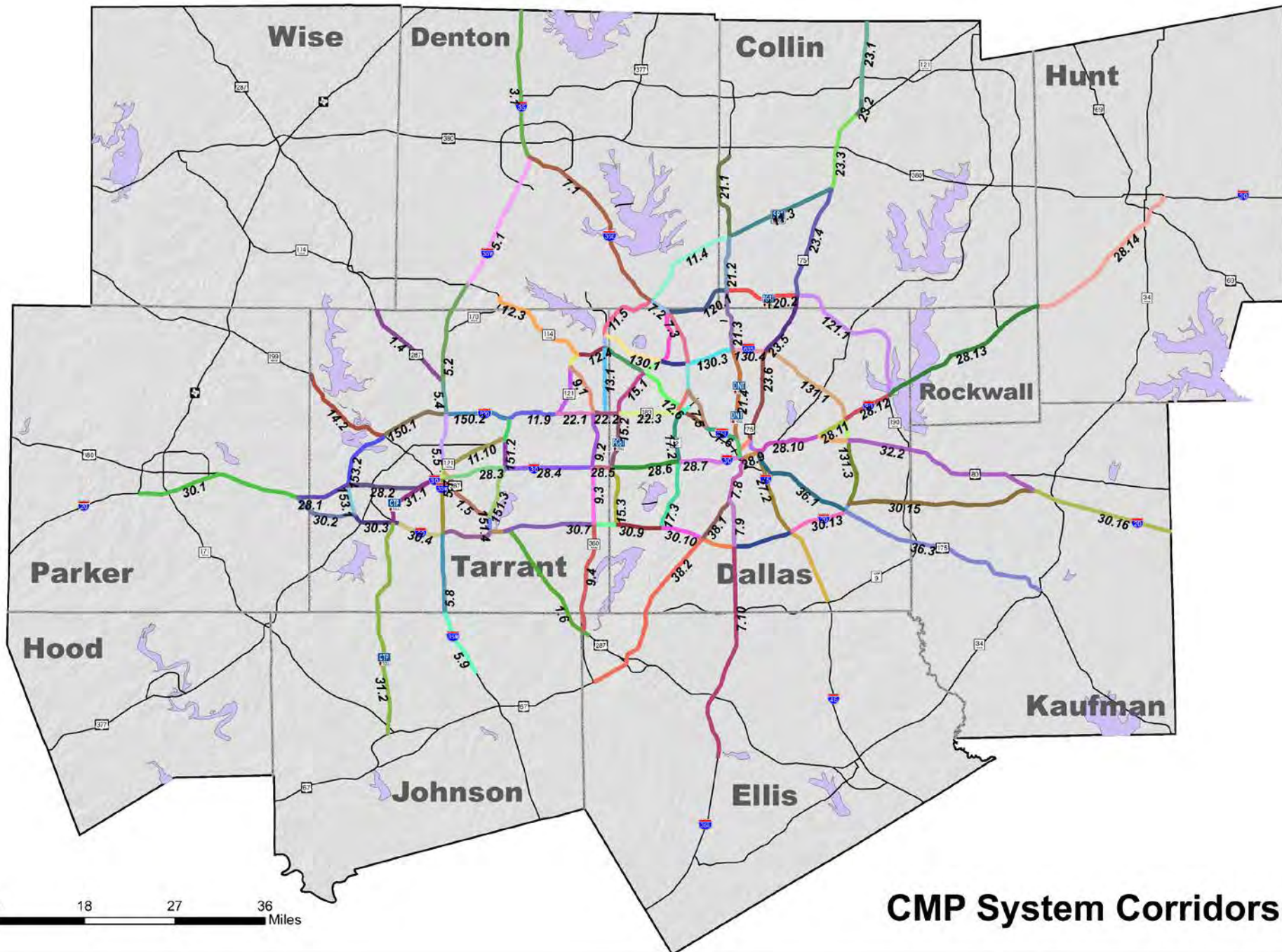
Further Evaluation

Roadway Corridors in 2013 CMP Update



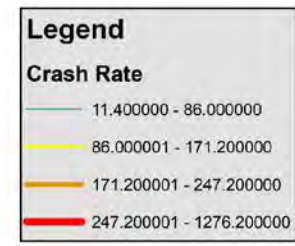
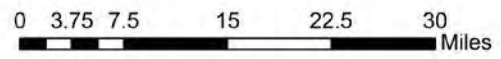
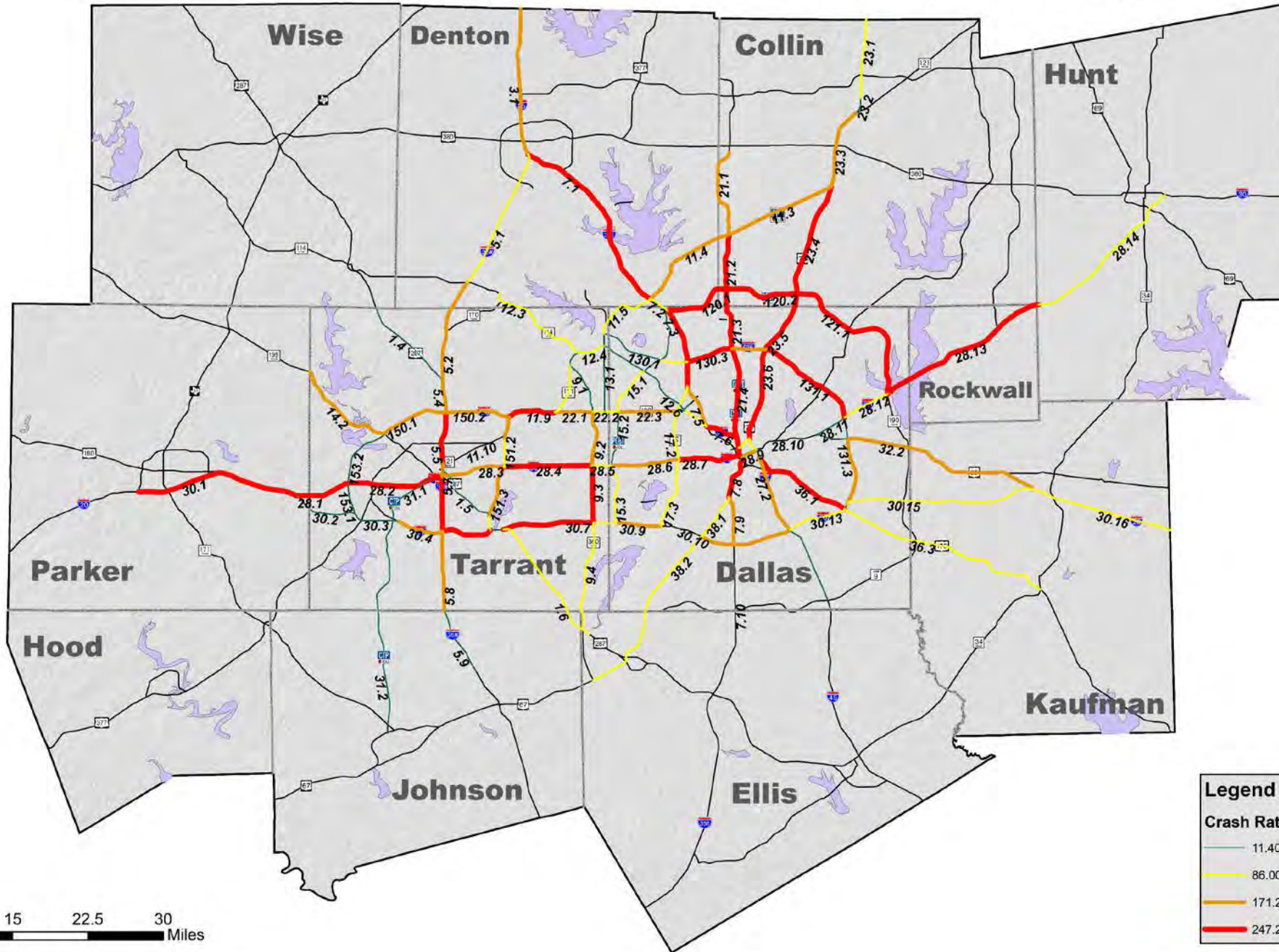
Highway Name
DNT
IH 20
IH 30
IH 35
IH 35E
IH 35W
IH 45
IH 635
IH 820
Loop 12
PGBT
SH 114
SH 121
SH 161
SH 183
SH 360
SP 97
SP 366
SP 408
SP 482
US 67
US 75
US 80
US 175
US 287





CMP System Corridors (2019)

CMP System Corridors Crash Rates (2014-2018)



Corridor Asset Inventory

Critical Corridors

Meets Initial Criteria



Fact Sheet/
Database Entry



Determine
CMP Strategies



Asset Availability Data		
Infrastructure	Alternative Modes	Operational Assets
Parallel Arterials	Sidewalks	NHS
Managed Lane ROW	Veloweb/ Multi-Use Paths	Managed/HOV/ Express Lanes
Frontage Roads	Light Rail	ITS
Parallel Freeways	Dedicated Bus Lanes	Routes of Significance
Shoulders	Commuter Rail	Hazmat Routes
At-Grade Intersections	Bus Routes	Truck Lane Restrictions
At-Grade R/R Crossings	Safe Routes to School	Signalized Intersections
Grade Separations (Arterials)	Demand Response Coverage (GP)	Regional Freight Routes
Park-and-Ride Facilities		TIM Attendance & Coverage



Performing Corridors

*Does Not Meet Criteria/
Construction programmed*



Fact Sheet/
Database Entry



*Continue to Monitor
Performance*

Strategy Identification

- Developed with Program Areas
- Consistent with MTP for Addition to the TIP
- Consistent with Safety Programs and Policies in MTP
- Projects will be Referred to Program Areas for CMP Strategy Possibilities on a Case-by-Case Basis
- TxDOT and Local Partners will be Given a “Menu” of Standard CMP Strategies
- Strategies will Eventually be Evaluated for Effectiveness, Giving Prioritization to More Impactful or Cost-Effective Strategies, including projects that leverage safety improvements

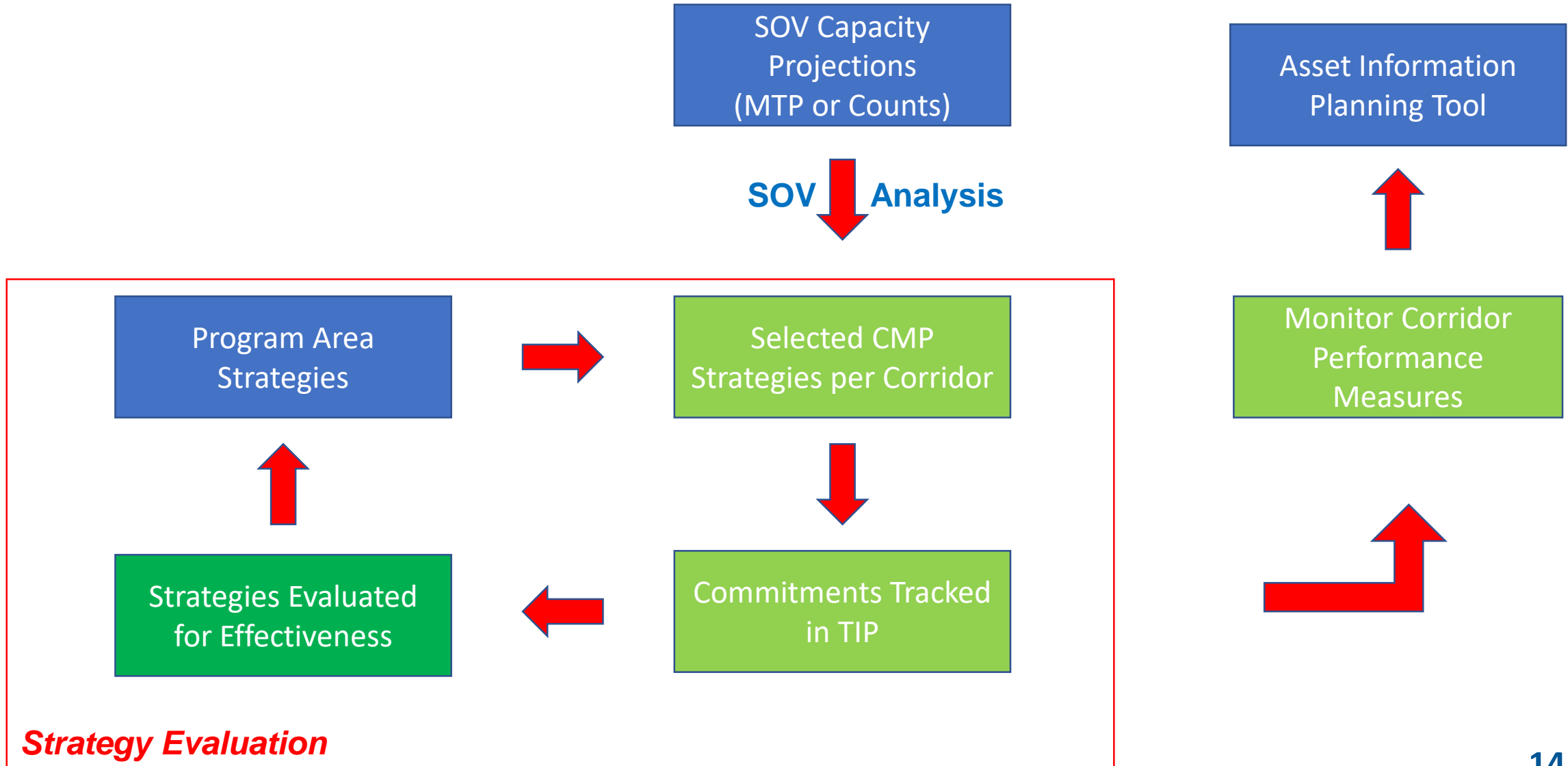
Strategy Identification

<i>Critical Factors</i>	Recurring Congestion	Non-Recurring Congestion/Reliability	Safety	Asset Condition (Pavement and Bridge)
One Factor	Alternative Modes; Demand Management	Operational Improvements	Safety-Related Projects	Rehabilitation/ Asset Management Planning
Two Factors	Asset Optimization (maximize available capacity + no added Right-of-Way) or M&O			
		+ Operational Strategies	+ Safety Strategies	+ Pavement Rehabilitation
Three Factors	Possible Reconstruction (4R)			
	<i>*Added Capacity and ROW as Necessary w/ Complimentary Alternative Modes</i>	+ Major Operations Studies and Commitments	+ Major Safety Studies and Commitments	<i>*Complete Pavement/Bridge Replacement</i>
Four Factors	Possible Major Corridor Reinvestment (5R)			
	<i>Major Capital Investments in Transit, Active, and Highway Infrastructure in Corridor</i>	<i>Multimodal Operational Studies and Investments</i>	<i>Comprehensive Corridor Safety Action Plan</i>	<i>Long Life Pavement and Bridge Design w/ Complimentary Risk-Based</i>



Program Area Strategies

Project Implementation and Monitoring



Project Performance Evaluation

- Develop a set of Baseline Performance Measures to Evaluate Strategies for Effectiveness
- Look to Existing Before/After Studies for Relevant Measures
- Focus on “Initial Criteria” Performance Measures (LOS, Reliability, etc.)
- Use Process to Track Federal Performance Measures as Necessary

Example Project Performance Measures

- Before/After Speeds
- Before/After Volumes
- **Before/After Crash Rate**
- Transit Ridership/Mode Split
- Changes in Asset Inventory
- Changes in Asset Condition
- Changes in Criteria Performance Measures, Peak Hour LOS, Crash Rate, Travel Time Reliability

Schedule

October 2019	Internal Peer Reviews – Small Groups
<i>Mid-December 2019</i>	<i>Data from Internal Groups</i>
December 9, 2019	Internal Peer Review(s) – Large Group
January 24, 2020	RSAC (Info) – Draft Safety Criteria and Overview
February 2020	Peer Review(s) – TxDOT/Regional Partners
February 28, 2020	STTC/RTC Workshop – Draft Corridor Analysis and Implementation Strategies
March 27, 2020	STTC Info – Critical Corridors and Process Updates
April 9, 2020	RTC Info – Critical Corridors and Process Updates
April 2020	30-Day Public Comment Period and Public Meeting**
April 24, 2020	STTC (Action) – Final CMP
May 14, 2020	RTC (Action) – Final CMP

Questions?

Contact:

Clifton Hall

Transportation Planner

(817) 608-2384

chall@nctcog.org

Natalie Bettger

Senior Program Manager

(817) 695-9280

nbettger@nctcog.org

Unmanned Aircraft Systems (UAS) Safety and Integration Initiative Update

*Regional Safety Advisory Committee
January 24, 2020*

Presenter: Ernest Huffman



Key Issues with UAS Integration in a Metro Area

Safety

Industry
Collaboration

Public
Engagement
and Perception

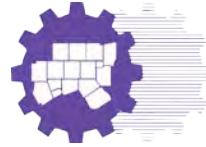
Education and
Training

Workforce
Development

Regulations

Technology

UAS Safety and Integration Initiative



North Central Texas UAS Task Force



Safety



Integration



Education

- Know Before You Fly Workshops
- Airport/Military Facility Risks



Legislation

- Regional Ordinance
- Statewide Legislation
- National Legislation
- Notice for Proposed Rule Making
- Permitting



Training

- Training Standards
- PSURT/Enforcement
- Promote UAS Training



Testing

- Metropolitan Testing Corridors
- Package Delivery
- Air Taxi
- Regional UAM Charter



Public Awareness

- UAS Applications
- UAS Careers
- Public Outreach Strategy
- Bring Your Drone to the Park Day

PRE-EXISTING COMMITTEES

Regional Coordination
Committee

Regional Transportation Committee
Surface Transportation Technical Committee
Air Transportation Advisory Committee

PSURT Committee and Team
Workforce Development

Lone Star UAS Center of Excellence
UAS Werx
Cumulus Technologies
Hillwood Group

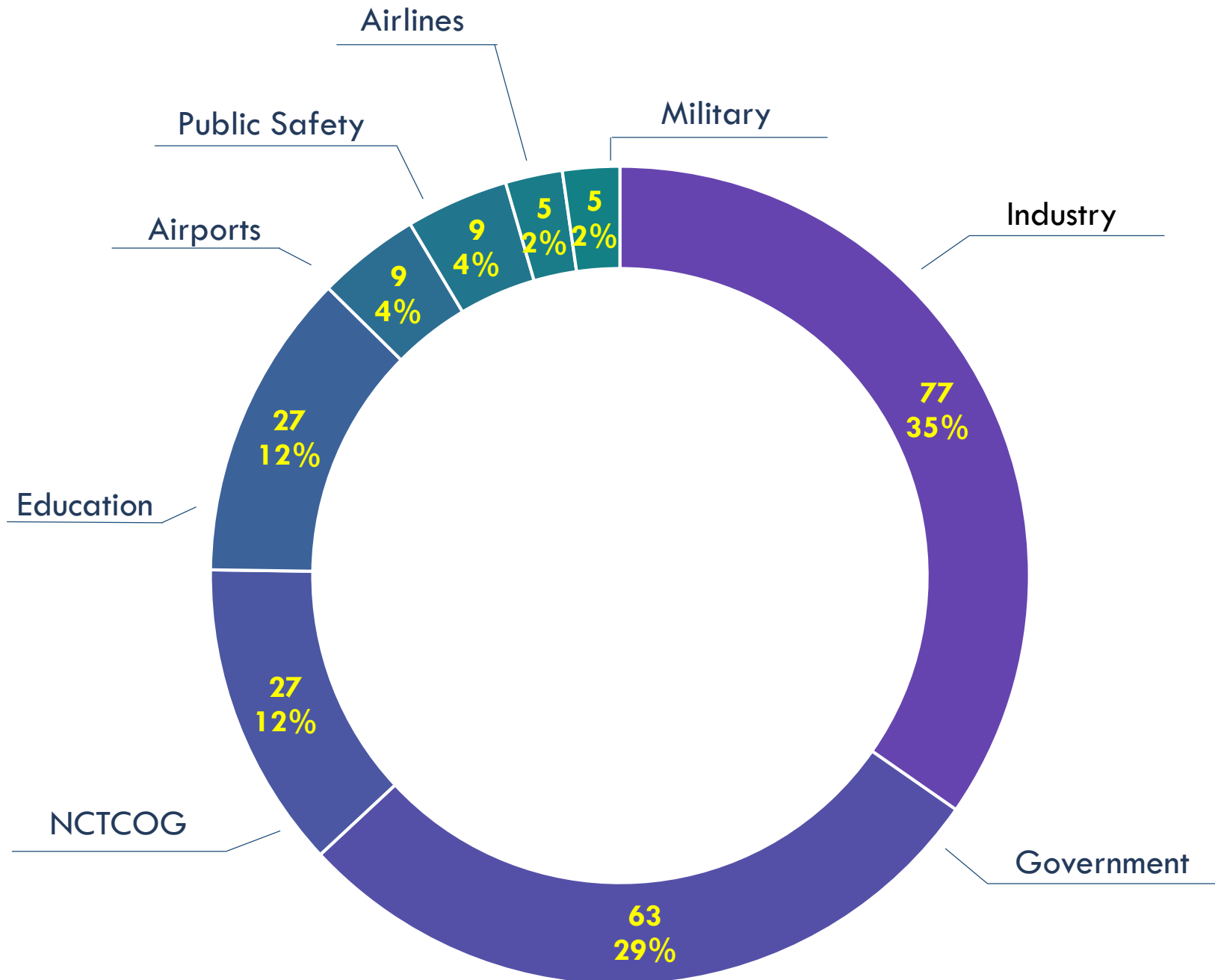
AUVSI Lone Star Chapter
Regional Freight Committee

Task Force Objectives

- Promote UAS safety and standardization
- Mitigate reckless UAS operations
- Promote the integration of UAS into the DFW regional airspace
- Collaborate with regional partners for a coordinated comprehensive approach

222 Members, 130+ Organizations

- Airports
- Cities, Counties, TxDOT and FAA
- Military
- Public Safety
- UAS Industry Representatives (training, manufacturers, etc.)
- Universities
- NCTCOG Staff (Transportation, 911, and Emergency Preparedness)



Notable Accomplishments

- 130+ organizations collaborating
- Know Before You Fly “Your Drone” Workshops
- Public Safety UAS Response Team (PSURT)
- Mineral Wells, TX establishment of the 8th UAS testing site
- First registered UAS Apprenticeship Program
- Partnering with Lonestar UAS Center of Excellence to attract NASA Grand Design Challenge



The Working Groups



Education and Public
Awareness



Legislative



Training



Integration

Education and Public Awareness



Prioritized Initiatives

Know Before You Fly Your Drone Workshops

Public Outreach Strategy

Outreach Events

Bring Your Drone to the Park Day



Prioritized initiatives

Provide Comments for Pending UAS
Legislation

Provide Comments on Notice for Rule
Changes from Government

Hold General Informational Sessions for
Legislature/Policy Makers

Strategic Legislative Plan

Regional UAS Charter



Prioritized Initiatives

Educate Superintendents and CTE Directors

Externships/Internships

Survey Regional Stakeholders for Employee Demand

University Research and Training

Federal Research Partnerships

UAS Workforce Pipeline Development



Prioritized Initiatives

Urban Air Mobility Integration

UAS Weather Detection and CASA Avoidance

Regional UAS Charter

Designate Viable Test Sites

Work with Airports on UAM Infrastructure Needs

Why should you be involved?

- Technology Pilot Opportunities
- Be a Part of the Solution
 - Safer skies
 - Participate in workshops
- Economic Development
 - Let the world know that the DFW region is supportive of the UAS industry
- Grant Opportunities
 - NCTCOG Incident Management 2020 Equipment Purchase
 - Letters of Support



Next Meeting

January 28, 2020, 10am – 12pm

Hosted by Hillwood

Tarrant County College, Northwest

Erma C. Johnson Hadley Northwest Center of Excellence for
Aviation, Transportation and Logistics

2301 Horizon Dr., Fort Worth, TX 76177



Contacts

Dan Kessler

Assistant Director of Transportation
North Central Texas Council of
Governments

DKessler@nctcog.org

(817)695-9248

Ernest Huffman

Principal Transportation Planner
North Central Texas Council of
Governments

ehuffman@nctcog.org

(817)704-5612

Task Force Website - <https://www.northtexasuas.com/>



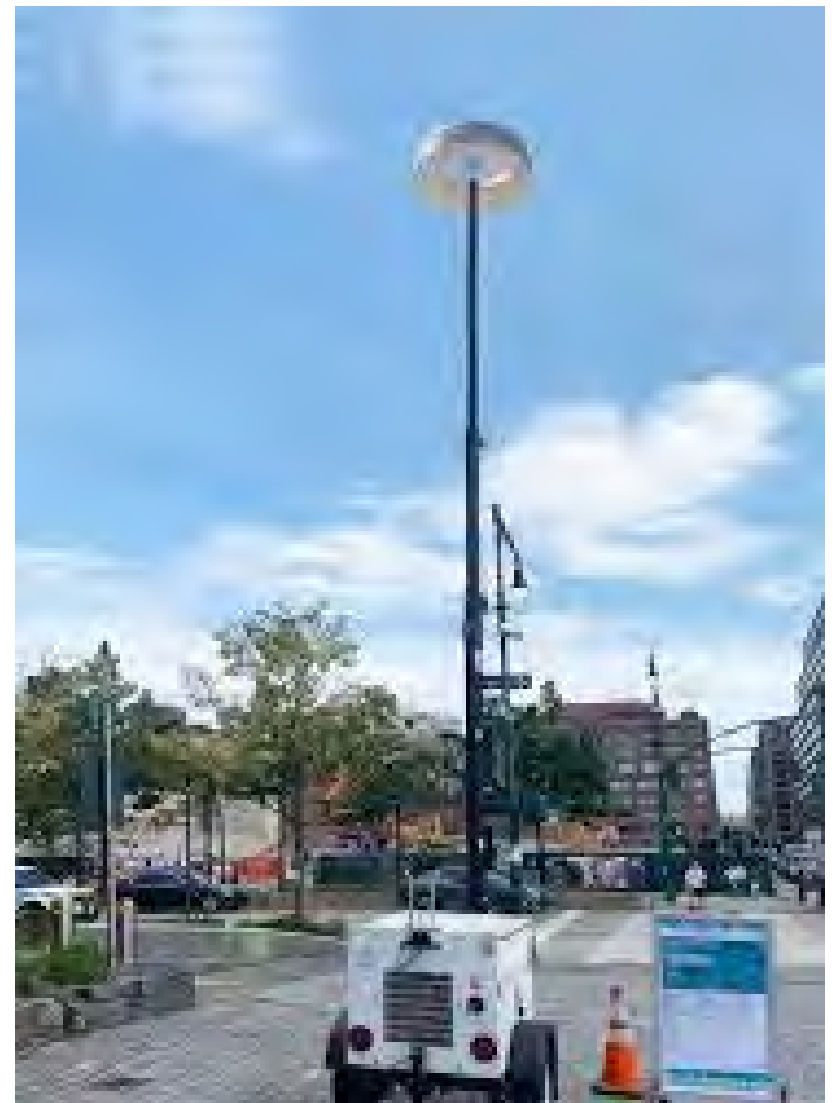
Harold Gibbs
469-332-8711

Harold.gibbs@chariot.com



Solutions for Traffic Incident Management

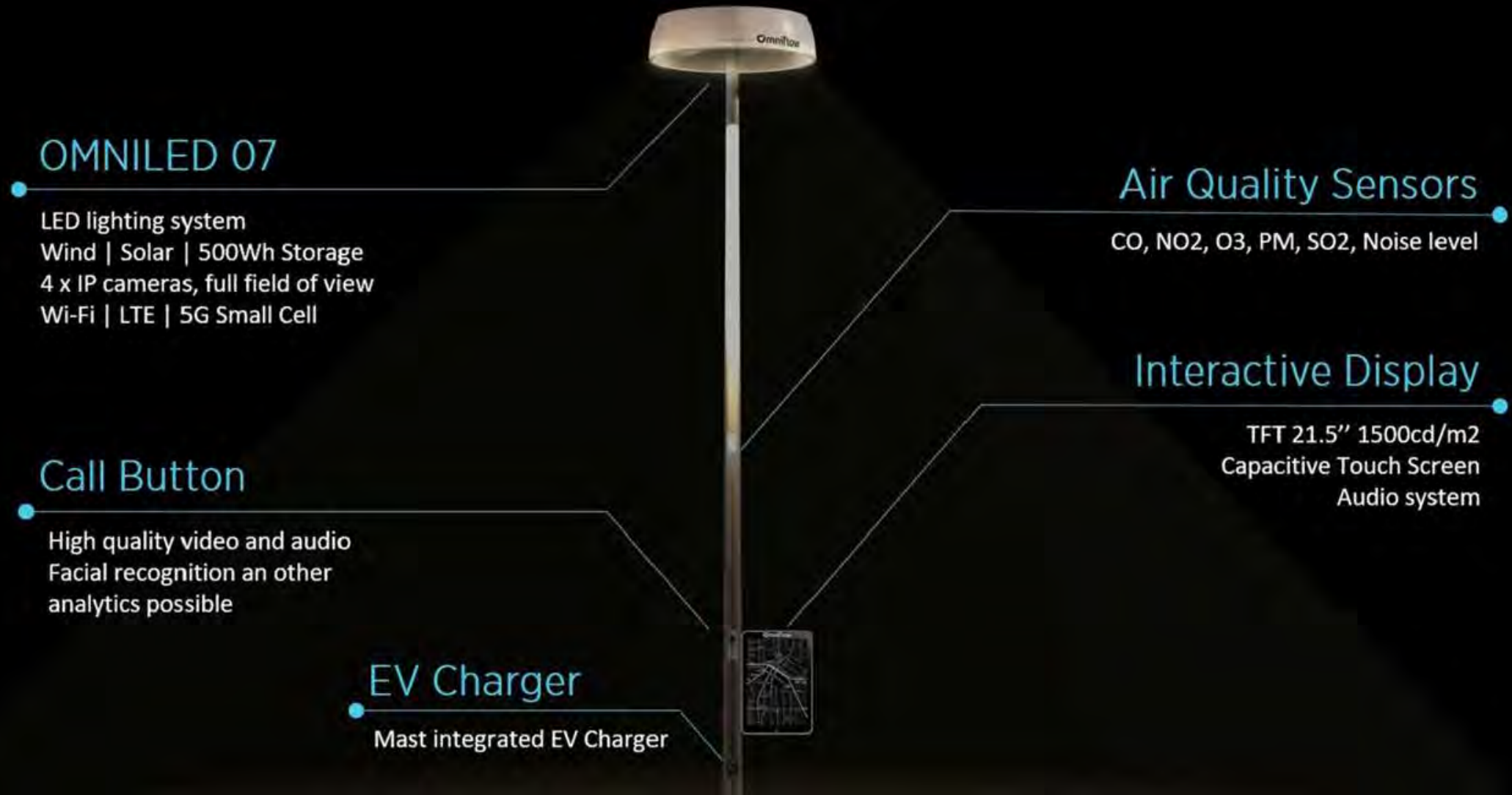
Harold Gibbs
Chariot Solutions



OmniFlow | USA

Simple IoT solutions for traffic incident management

Simple IoT solutions for traffic incident management





TheSmartCone™ is a modular IoT platform that can be configured for a variety of solutions surrounding safety, security, logistics and more. Our solutions improve efficiency, reduce costs and increase awareness.

WorkZone™ Safety

Pair with our multisensor wearable to individually monitor safety on site.

**Exelon, IBM*

Bike Lane/Cyclist Visibility

Detect cyclists approaching high traffic areas and alert vehicles via TheSmartTorch™.

**Detroit, Ottawa*

C/AV Intelligent Infrastructure

Create intelligent lanes with TheSmartTorch™ to alert VRUs to traffic.

**Whitby, Montreal*

Asset Tracking

High accuracy indoor positioning and tracking within 10 centimeters.

**DHL*

Fleet Management

Cameras, LiDAR and license plate recognition to track and secure your fleet.

**Enterprise*

Data Collection

Deploy anywhere to collect and push data to any custom software.

**IBM, Nokia*



• Work Zone Safety

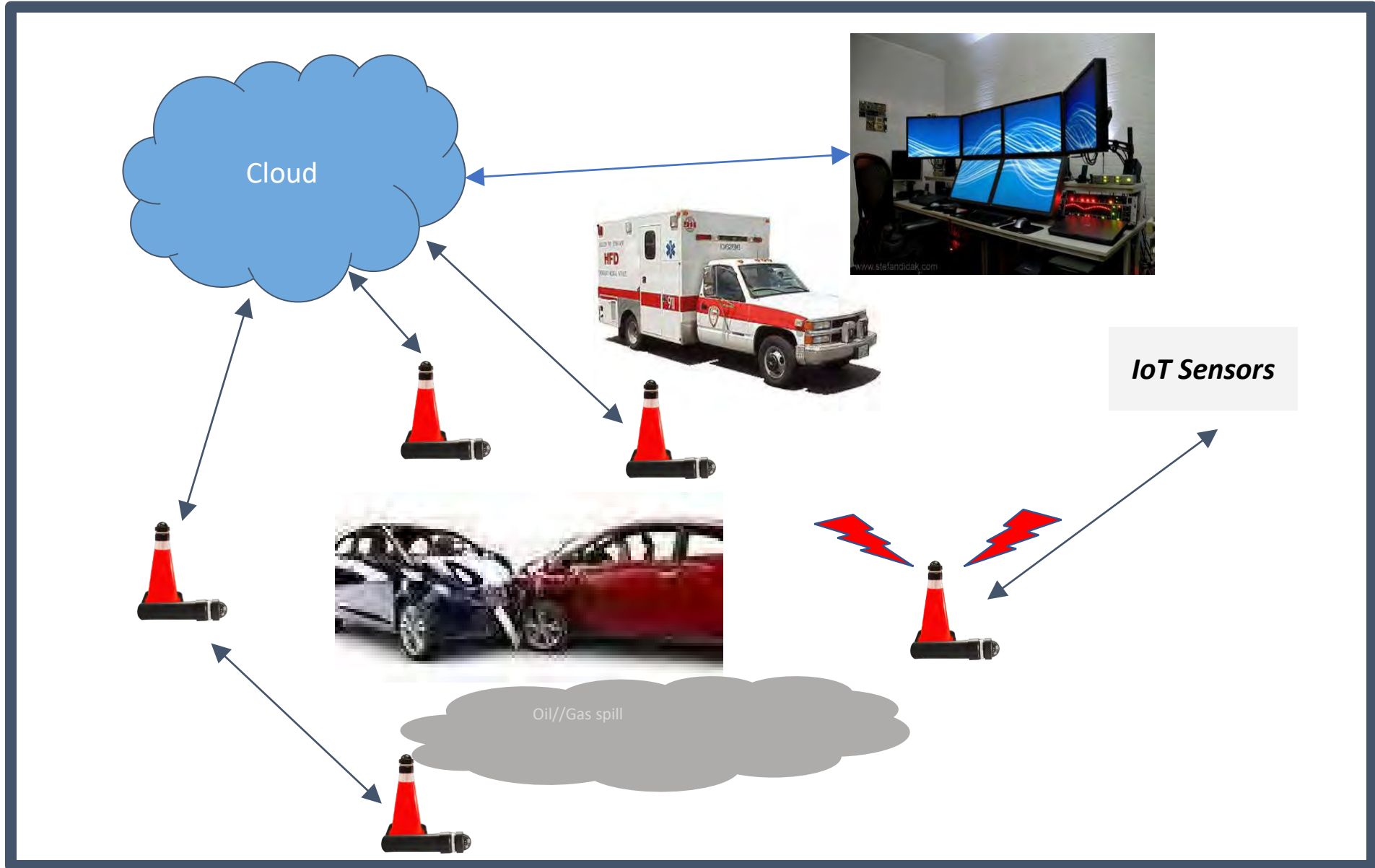
- Heat and Cold Stress
- Slip and Falls
- Fatigue
- Man-down
- Overexertion
- Fit to Drive
- Weather Conditions
- Expedite Response/Alerts
- Location Tracking
- Proximity Alerts
- Danger / Drop Zones
- Equipment On/Off
- Vibration Exposure
- Dust Exposure
- Chemical Exposure
- Gas Exposure

*Intended to increase awareness and provide advanced warning.

Not intended to save lives. * Multiple modules needed to achieve all work zone tracking initiatives.



• First Responders - DOT



• The SmartCone™ with Click-IoT™

The SmartCone™ is designed with the future in mind...

Click-IoT™ design allows for module to be added in as needed to build up the solution.

- Cameras – 360 degree or directional (can be placed on the top or bottom of the unit)
- LED light strip with customizable colors
- Speaker with customizable audio alerts
- Eight port halo for PIR, LiDAR (internal for trip wire scenarios), connection jacks, etc.
- LiDAR (externally mounted on the tower for traffic scenarios)
- RADAR
- License plate recognition
- Tower Module – Computing and Communications
- Environmental – temperature, humidity, air quality, etc.



• The SmartCone™ Base Station



Video Technology System

- 360/Directional Camera Feed
- Web Enabled Software
- Object Cataloging



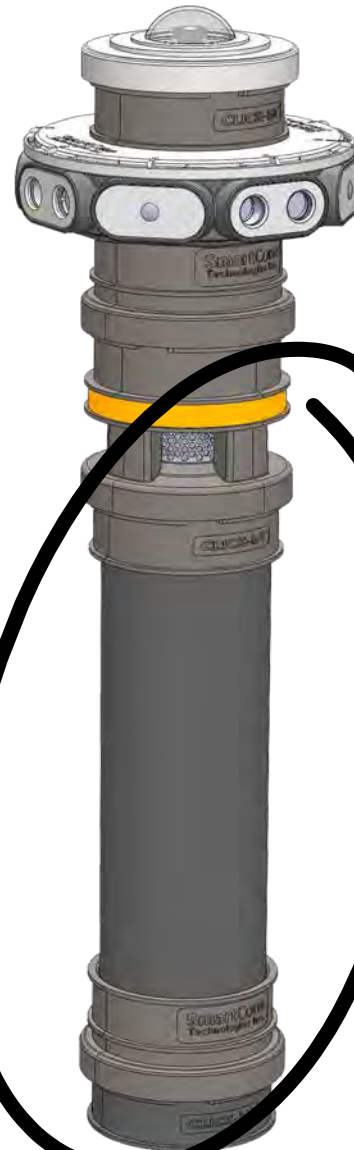
Database Architecture

- Integrated SQL Database Server
- Custom Query Functions
- Intuitive User Interfaces



IT Requirements

- User Level Access Permissions
- Administrator Level Functions



Software

- Records Videos
- Captures Still Images
- Analyzes For Objects



Network Architecture

- Stand Alone or Multi-Device
- 10/100Mbps / Wi-Fi / 4G/5G / LTE
- Systems Redundancy



Security

- AES-256 TLS Encryption
- 2048-bit RSA Keys
- Cone/sensors protected by a Firewall

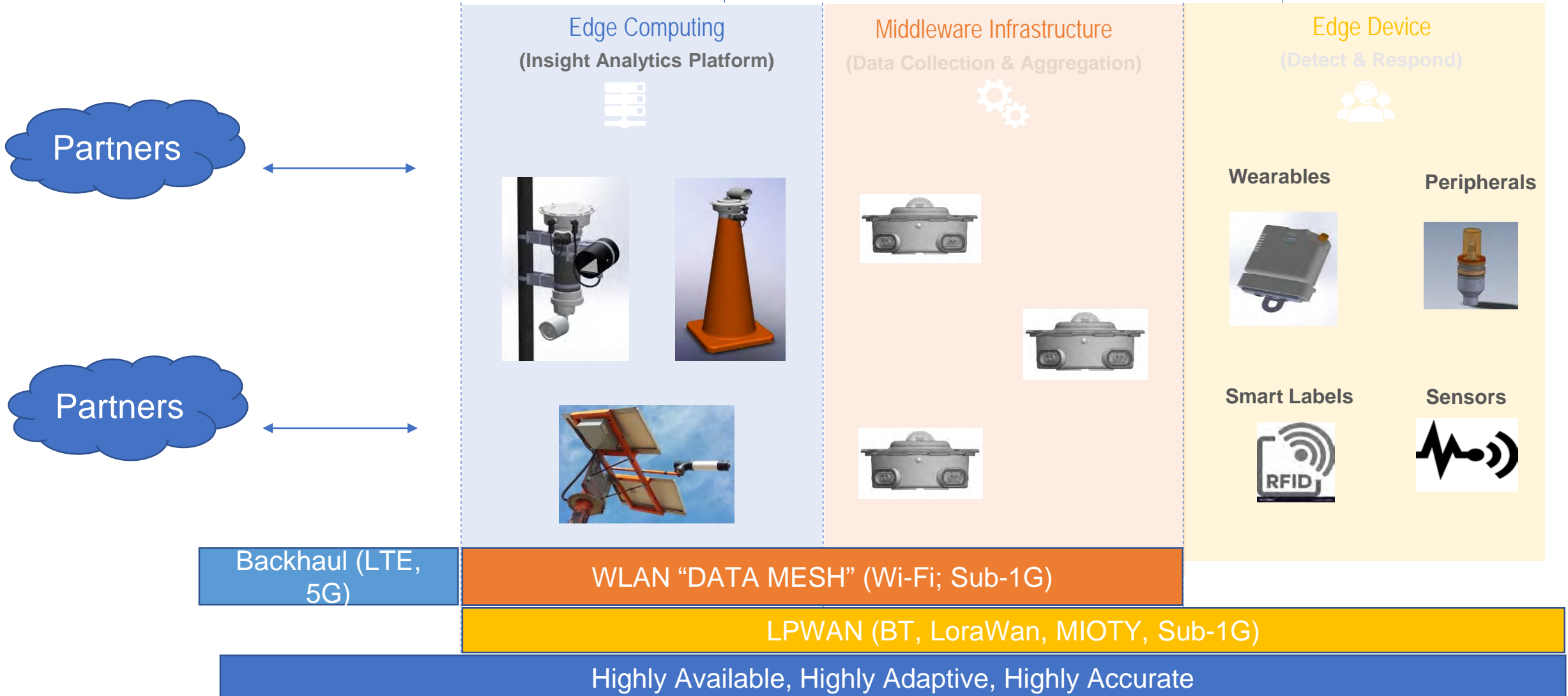




• Edge Computing/Wireless Sensor (WSN) Architecture

Cloud Computing

Cloudless Computing Platform



• Smart City Solutions

Protecting Vulnerable Road Users and making your city smarter through AutoGuardian by SmartCone, our subsidiary for safer roads.

Bike Lane Safety

- Cameras detect cyclists through machine learning and A.I, sending that information to computers stored in protected casings on nearby utility poles and activate LED lights which will begin flashing to alert approaching motorists.

Intelligent Crosswalks

Signage notifying vulnerable road users of oncoming vehicles, cyclists and more. Automatic detection of VRU at a crosswalk to set the crosswalk signal off.

AI Traffic Management

Video streams from cameras to see traffic intersections in real time and provide traffic counting – vehicles pedestrians, cyclists, etc.



Autonomous Vehicle Solutions

Enhance your autonomous shuttle solution by deploying TheSmartCone™ along the proposed routes interacting with the shuttle, pedestrians and cyclists with a primary focus on safety. AG monitors the route and offers advanced analytics.

Object Classification and Intent

We are developing the latest software with AI analytics to detect and classify objects such as pedestrians, cyclists and vehicle and detect the route in which they plan to take.

Street Level Air Quality Monitoring

TheSmartCone™ is able to provide detailed space-time information on CO² emissions, windspeed, temperature at the intersection and/ or street level as well as counting all vehicles, pedestrians, cyclists etc. in real time.

TheSmartCone™ is a modular IoT platform that easily integrates the latest sensors and software with edge computing and cloudless architecture for real-time alerts. It is portable and easily deployable to improve efficiency, reduce costs and increase awareness on any site.

RedZone Proximity Alerts

Set a dynamic safety perimeter around large moving assets.

Asset Tracking

Drive by/fly by automatic tracking of assets on site/truck/worker, etc.

Wearables

Worn on the body or a helmet to send proximity alerts, man down, & more.

Lane Closure Tracking

Video capture with GPS coordinates and time stamping.

License Plate Recognition

Track and secure who comes on site. Proximity breach capture and alerts.

Data Collection and Reports

Collect and push data to our dashboard or any custom software.



Implementation Use Case (Quebec, CA)

Intelligent Crosswalk

The city of Hampstead was looking for a solution to bring awareness to pedestrians crossing a busy intersection. One requirement was to do so without the pedestrian having to interact with technology to respect its religious residents. This included no push button or automatic pedestrian detection. SmartCone delivered an innovative solution to meet all requirements.



Our Role

Long range vehicle microwave sensors detect oncoming motorists up to 200 feet away and set off highly visible rapid flashing LED lights to notify pedestrians and cyclists looking to cross of approaching motorists. The flashing lights also bring awareness to the motorist that they are approaching a crosswalk and need to proceed with caution.

**According to US DOT, rectangular rapid flashing beacons have been found to provide vehicle yielding rates between 72 and 96 percent for crosswalk applications, including 4 lane roadways with average daily traffic (ADT) exceeding 12,000*.*



Implementation Use Case (North Dakota, USA)

Department of Transportation

In cooperation with North Dakota DoT and Salander Technology Services, SmartCone Technologies successfully alerted pedestrians to the presence of an autonomous bus. TheSmartCone™ detect an incoming autonomous bus and pedestrians at the same time using cameras, LiDAR and Infrared sensors.

Our Role

- TheSmartCone™ was deployed to alert Vulnerable Road Users (VRUs) of the presence of an oncoming autonomous bus.

The Solution

- Once the vehicle was detected, the lights on TheSmartCone™ flashed, an audio message was played, and a message was posted on a traffic sign letting the pedestrians know the bus was coming. This was a significant step forward in providing safety for pedestrians around autonomous vehicles.



Implementation Schematic

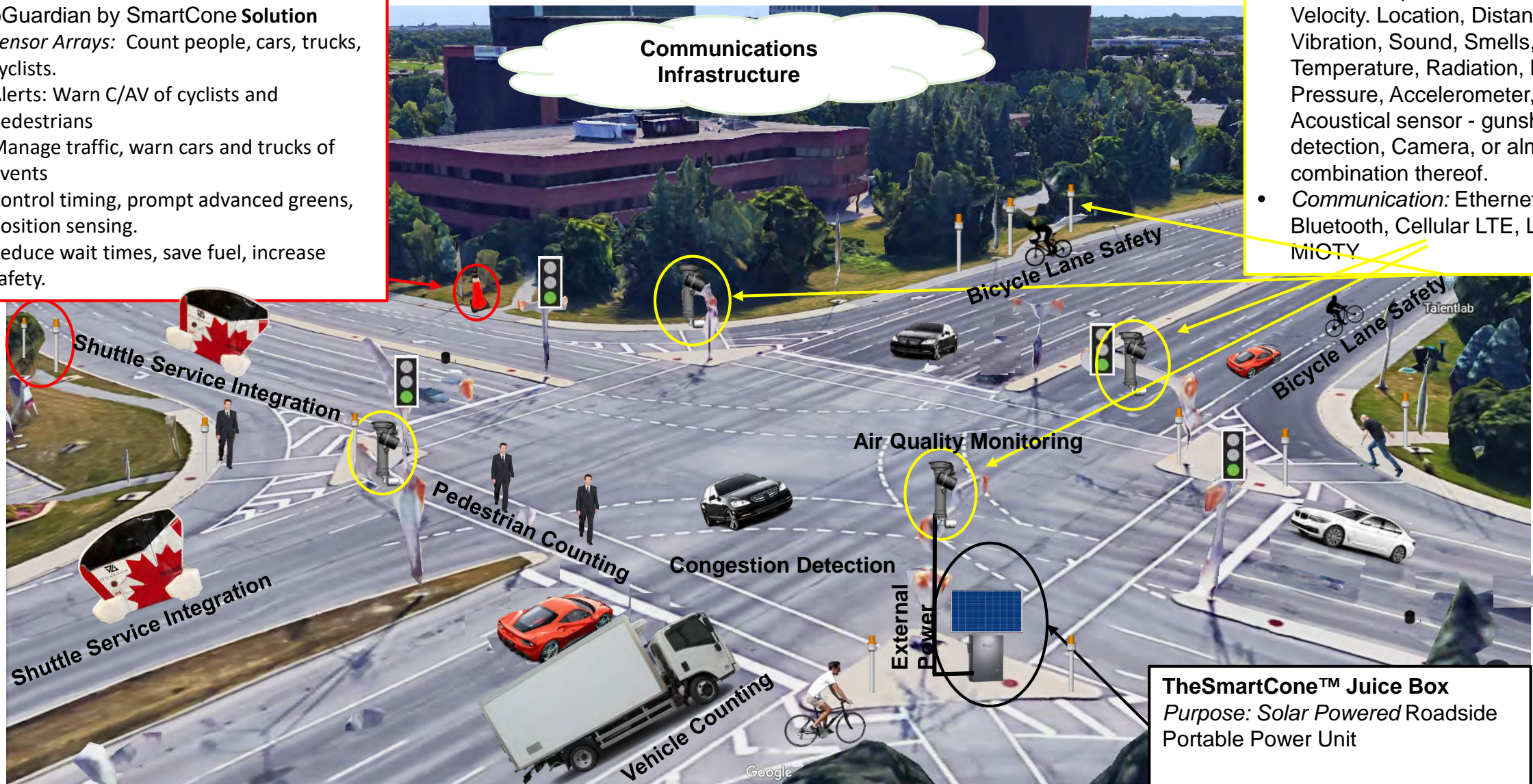
TheSmartCone™ Fixed Mount Sensor Devices

- *Sensor Outputs:* LIDAR, Motion, Velocity, Location, Distance, Vibration, Sound, Smells, Gases, Temperature, Radiation, Humidity, Pressure, Accelerometer, Acoustical sensor - gunshot detection, Camera, or almost any combination thereof.
- *Communication:* Ethernet, Wi-Fi, Bluetooth, Cellular LTE, LoRaWAN, MIOTY

Communications Infrastructure

AutoGuardian by SmartCone Solution

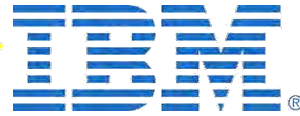
- *Sensor Arrays:* Count people, cars, trucks, cyclists.
- Alerts: Warn C/AV of cyclists and pedestrians
- Manage traffic, warn cars and trucks of events
- Control timing, prompt advanced greens, position sensing.
- Reduce wait times, save fuel, increase safety.



TheSmartCone™ Juice Box
 Purpose: Solar Powered Roadside Portable Power Unit

• Our Customers

End-to-end Solution Partners



IBM Maximo Worker Insights



AURRIGO



City of Grosse Pointe Park
The Place to Raise a Family





PRELIMINARY ROADWAY SAFETY PERFORMANCE MEASURES: 2018 TARGETS VS. PERFORMANCE

Regional Safety Advisory Committee | January 24, 2020

Kevin Kroll



North Central Texas
Council of Governments

Roadway Safety Performance Targets

- ❑ **Target: Number of Fatalities**
- ❑ **Target: Rate of Fatalities**
- ❑ **Target: Number of Serious Injuries**
- ❑ **Target: Rate of Serious Injuries**
- ❑ **Target: Number of Non-motorized Fatalities plus Serious Injuries**

(Targets based on a five-year rolling average)

TxDOT Safety Performance Targets and Projections

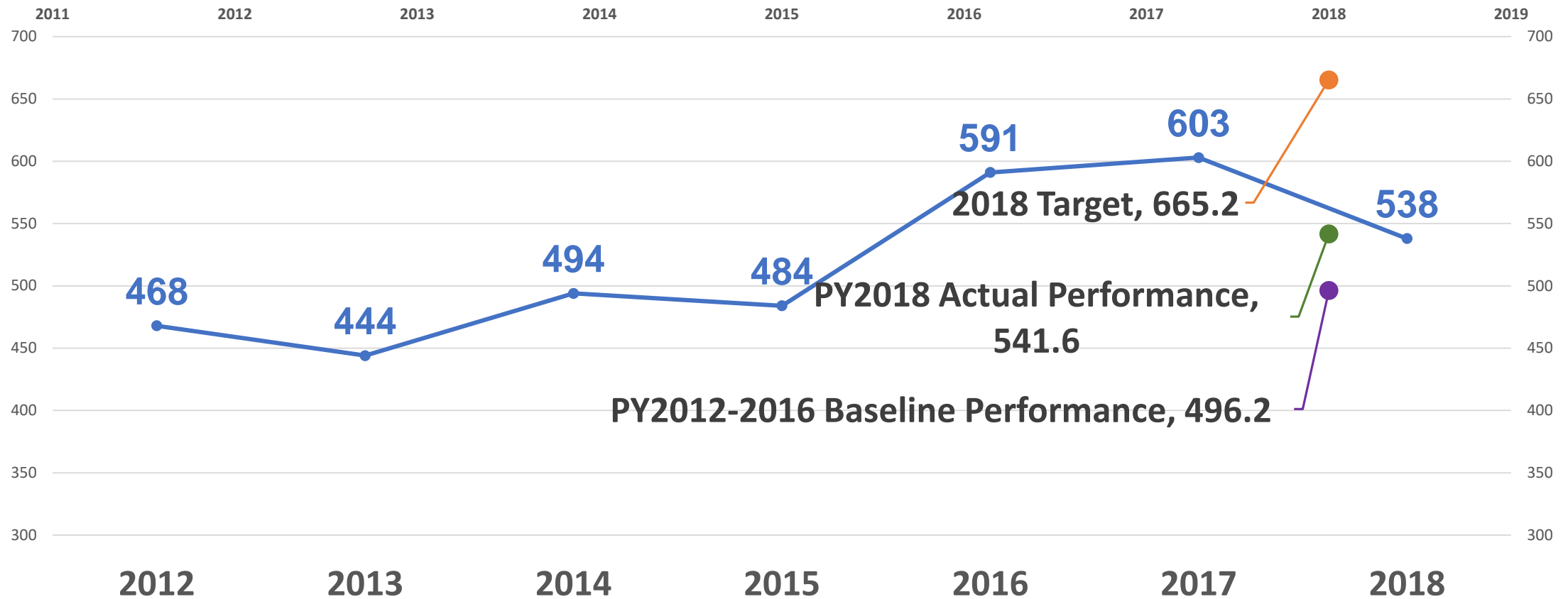
Safety Performance Targets	2018 TxDOT Targets	2018 NCTCOG Targets	2019 TxDOT Targets	2019 NCTCOG Targets	2020 TxDOT Targets	2020 NCTCOG Targets	2021 Targets	2022 Targets
	0.4% Reduction		0.8% Reduction		1.2% Reduction		1.6% Reduction	2.0% Reduction
No. of Fatalities	3,703.08	665.2	3,791.0	599.2	4,068	589.3*	-	-
Fatality Rate	1.432	0.960	1.414	0.838	1.48	0.803*	-	-
No. of Serious Injuries	17,565.4	3,647.8	17,751.0	3,999.6	18,602	3,499.7*	-	-
Serious Injury Rate	6.740	5.180	6.550	5.568	6.56	4.768*	-	-
No. of Non-motorized Fatalities and Serious Injuries	2,150.6	560.0	2,237.6	582.4	2,477	595.0*	-	-

* Indicates preliminary estimate.

Targets are based on a five-year rolling average (ex. 2016 – 2020) for 2020.

Proposed reduction from original trend line projections.

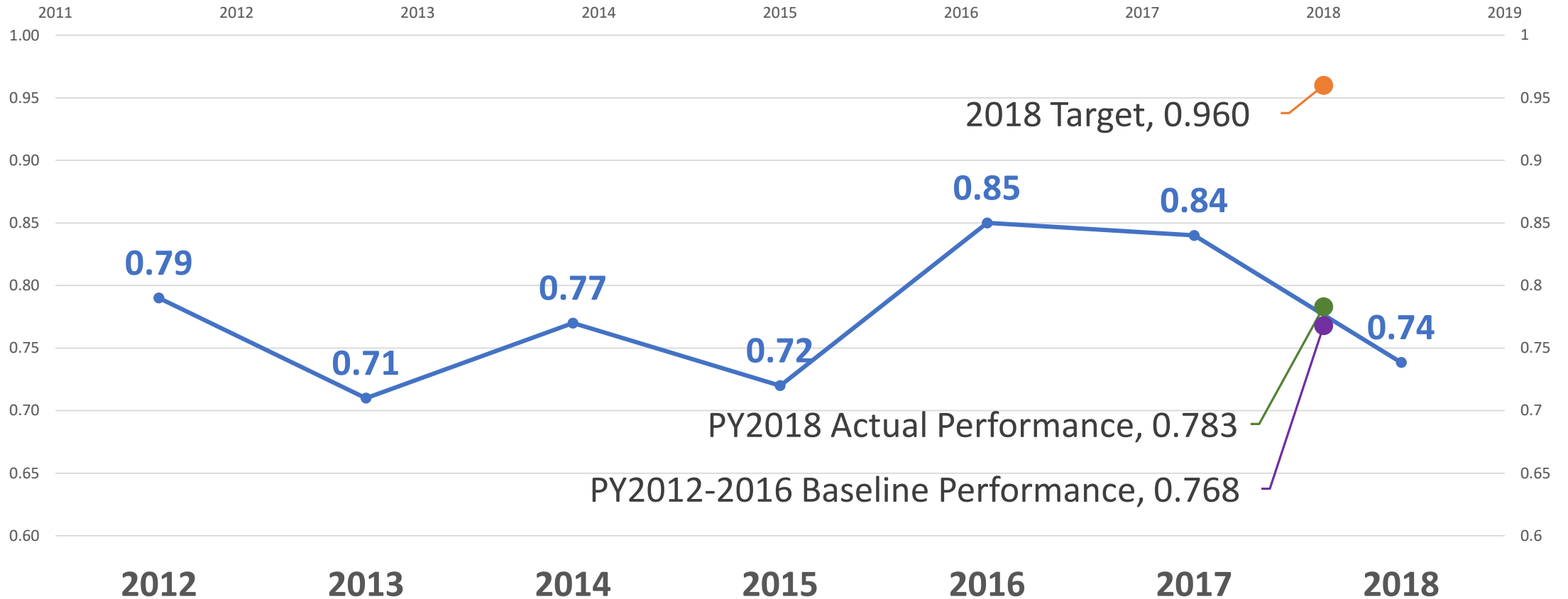
NCTCOG Performance Measures – Fatalities 2018



2018 Target approved by RTC in Dec. 2017

PY2018 Actual Performance calculated as 2014-2018 rolling five-year average

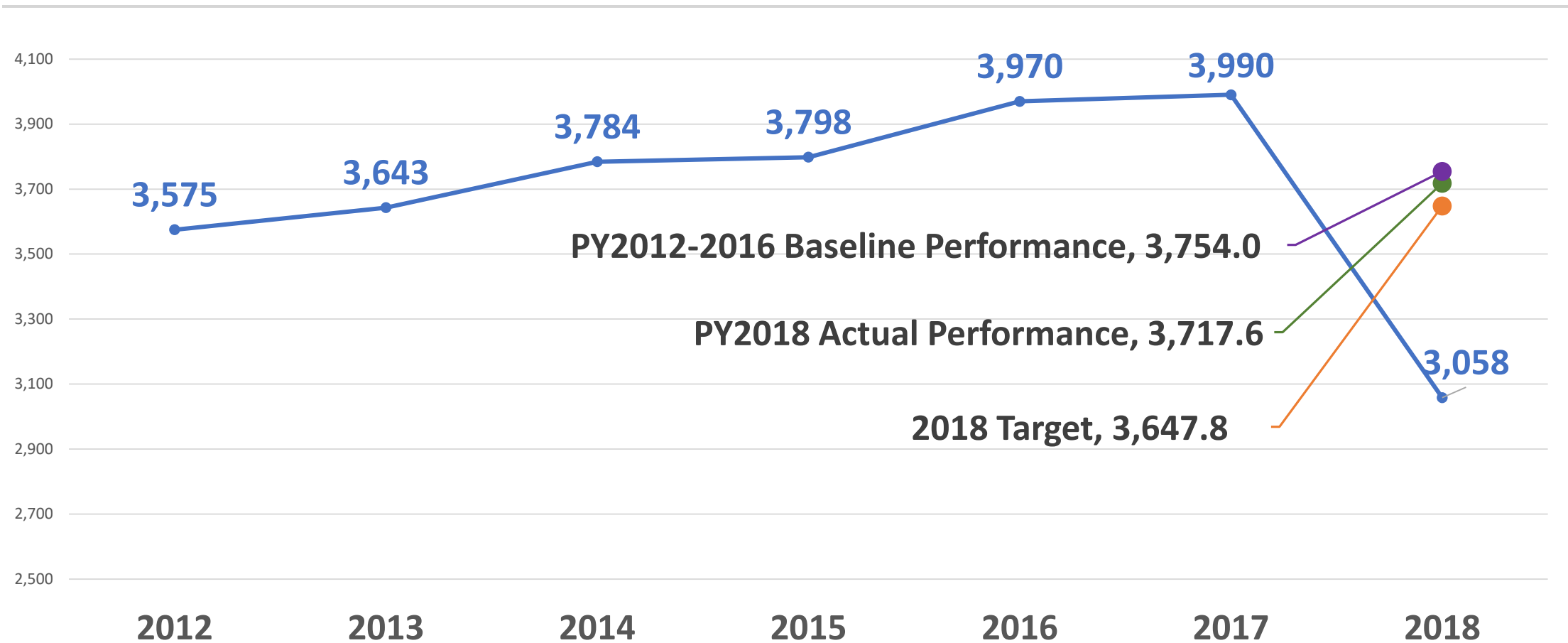
NCTCOG Performance Measures – Rate of Fatalities 2018



2018 Target approved by RTC in Dec. 2017

PY2018 Actual Performance calculated as 2014-2018 rolling five-year average

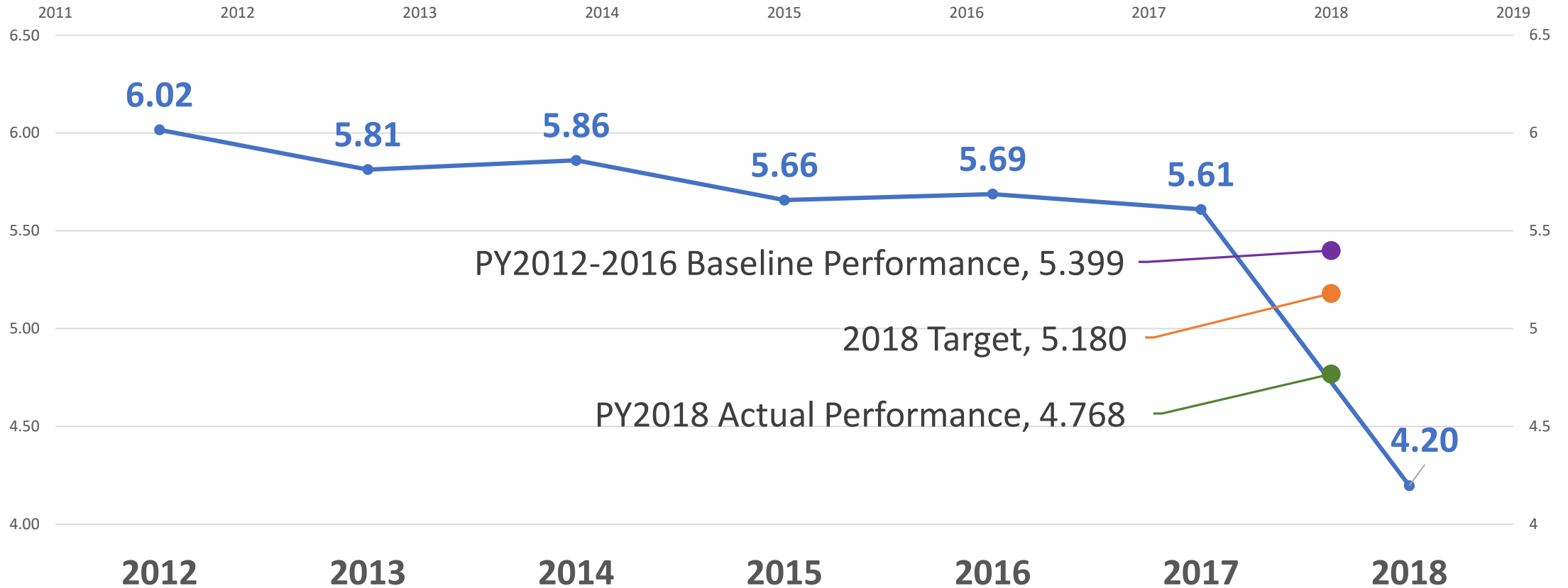
NCTCOG Performance Measures – Serious Injuries 2018



2018 Target approved by RTC in Dec. 2017

PY2018 Actual Performance calculated as 2014-2018 rolling five-year average

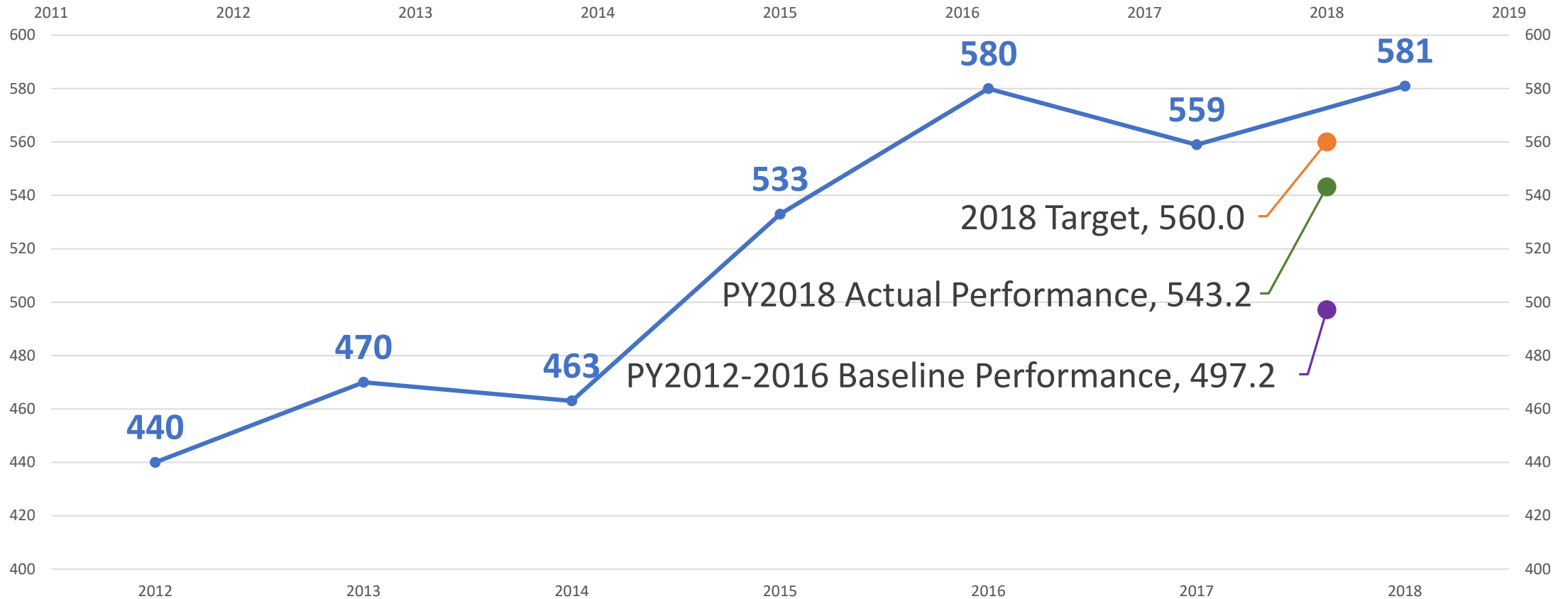
NCTCOG Performance Measures – Rate of Serious Injuries 2018



2018 Target approved by RTC in Dec. 2017

PY2018 Actual Performance calculated as 2014-2018 rolling five-year average

Number of Non-motorized Fatalities plus Serious Injuries 2018



2018 Target approved by RTC in Dec. 2017

PY2018 Actual Performance calculated as 2014-2018 rolling five-year average

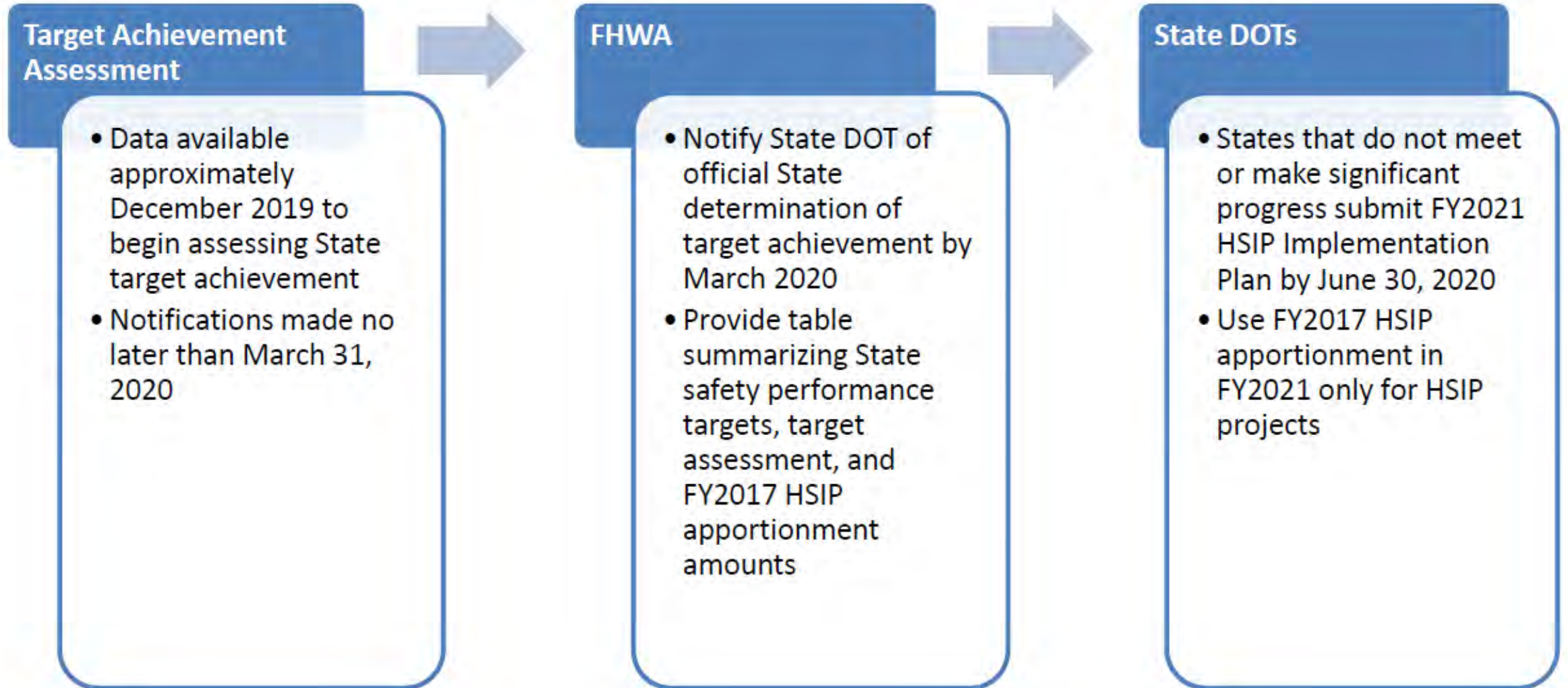
NCTCOG Actual Safety Performance 2018 - Preliminary

Safety Performance Targets	NCTCOG 2018 Targets	NCTCOG PY2018 Actual Performance *	NCTCOG PY2012-2016 Baseline Performance	Met Target ?	Better than the Baseline ?	Met or Made Significant Progress?
Number of Fatalities	665.2	541.6	496.2	Yes	No	Yes
Rate of Fatalities	0.960	0.783	0.768	Yes	No	
Number of Serious Injuries	3,647.8	3,717.6	3,754.0	No	Yes	
Rate of Serious Injuries	5.180	4.768	5.399	Yes	Yes	
Number of Non-motorized Fatalities and Serious Injuries	560.0	543.2	497.2	Yes	No	

*PY Actual Performance calculated as PY2014-2018 five-year rolling average.

Final 2018 Safety Performance for NCTCOG region will be presented in late spring 2020.

FHWA Notification Process and Responsibilities



Contacts

Kevin Kroll
Senior Transportation Planner
817-695-9258
kkroll@nctcog.org

Camille Fountain
Transportation Planner
817-704-2521
cfountain@nctcog.org

Sonya J. Landrum
Program Manager
817-695-9273
slandrum@nctcog.org