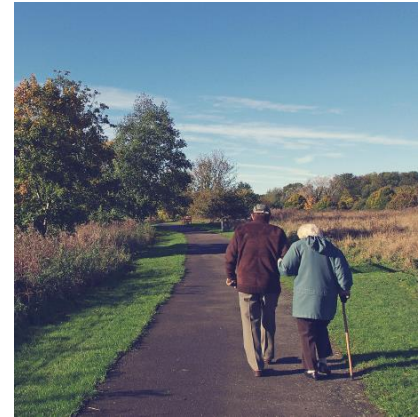
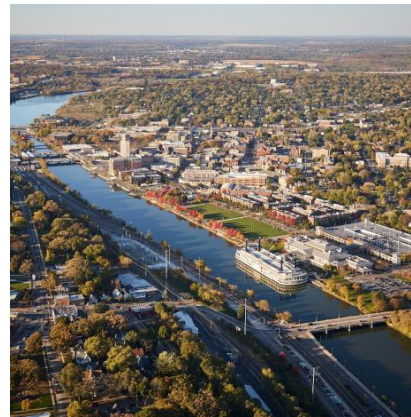
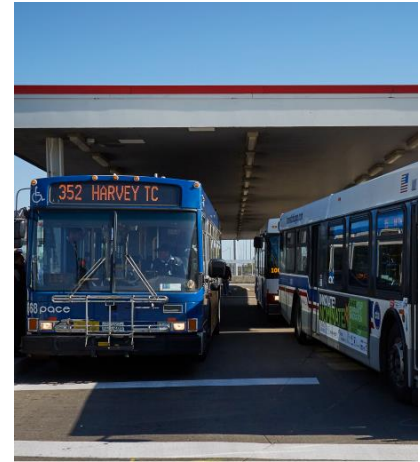


Transportation Technology and Operations Coalition

May 7, 2026

9:30 – 11:00 a.m.

When you are not speaking, please mute your microphone to reduce background noise.



1.0 Welcome

Stephen Zulkowski, DuDOT (Chair)

2.0 Agency updates

Open discussion among TTOC members regarding current work projects, topics of interest for upcoming meetings, etc.

3.0 CMAP announcements

Aaron Brown and Noah Harris, CMAP

4.0 Regional ITS Architecture update

Matthew Letourneau, AECOM

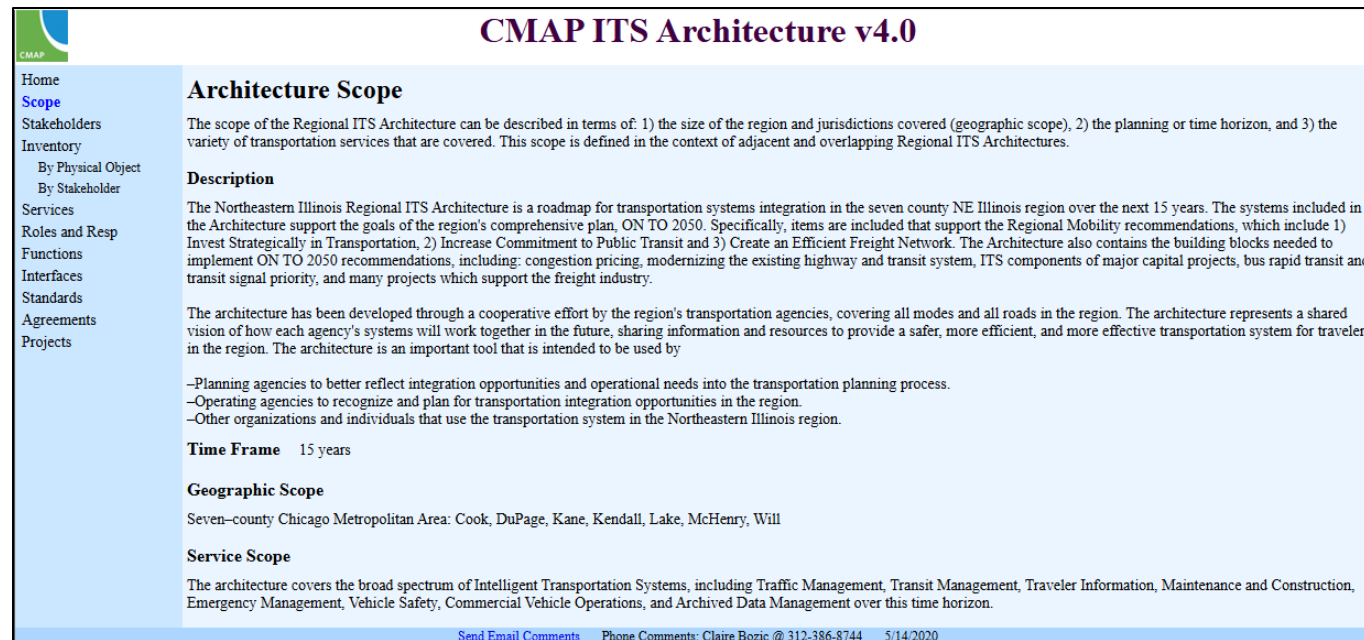
Northeastern Illinois ITS Architecture Update

Transportation Technology and Operations Coalition (TTOC)
Quarterly Meeting, May 2026

Matt Letourneau, PE, PTOE
Dan Nelson, AICP

Scope of this Update Cycle

- ✓ Add outstanding projects to the architecture
- ✓ Review and update architecture items
- ✓ Update the architecture website
- ✓ Revise the architecture executive summary
- ✓ Provide guidelines for element interfaces



CMAP ITS Architecture v4.0

Home
Scope
Stakeholders
Inventory
 By Physical Object
 By Stakeholder
Services
Roles and Resp
Functions
Interfaces
Standards
Agreements
Projects

Architecture Scope

The scope of the Regional ITS Architecture can be described in terms of: 1) the size of the region and jurisdictions covered (geographic scope), 2) the planning or time horizon, and 3) the variety of transportation services that are covered. This scope is defined in the context of adjacent and overlapping Regional ITS Architectures.

Description

The Northeastern Illinois Regional ITS Architecture is a roadmap for transportation systems integration in the seven county NE Illinois region over the next 15 years. The systems included in the Architecture support the goals of the region's comprehensive plan, ON TO 2050. Specifically, items are included that support the Regional Mobility recommendations, which include 1) Invest Strategically in Transportation, 2) Increase Commitment to Public Transit and 3) Create an Efficient Freight Network. The Architecture also contains the building blocks needed to implement ON TO 2050 recommendations, including: congestion pricing, modernizing the existing highway and transit system, ITS components of major capital projects, bus rapid transit and transit signal priority, and many projects which support the freight industry.

The architecture has been developed through a cooperative effort by the region's transportation agencies, covering all modes and all roads in the region. The architecture represents a shared vision of how each agency's systems will work together in the future, sharing information and resources to provide a safer, more efficient, and more effective transportation system for travelers in the region. The architecture is an important tool that is intended to be used by

- Planning agencies to better reflect integration opportunities and operational needs into the transportation planning process.
- Operating agencies to recognize and plan for transportation integration opportunities in the region.
- Other organizations and individuals that use the transportation system in the Northeastern Illinois region.

Time Frame 15 years

Geographic Scope

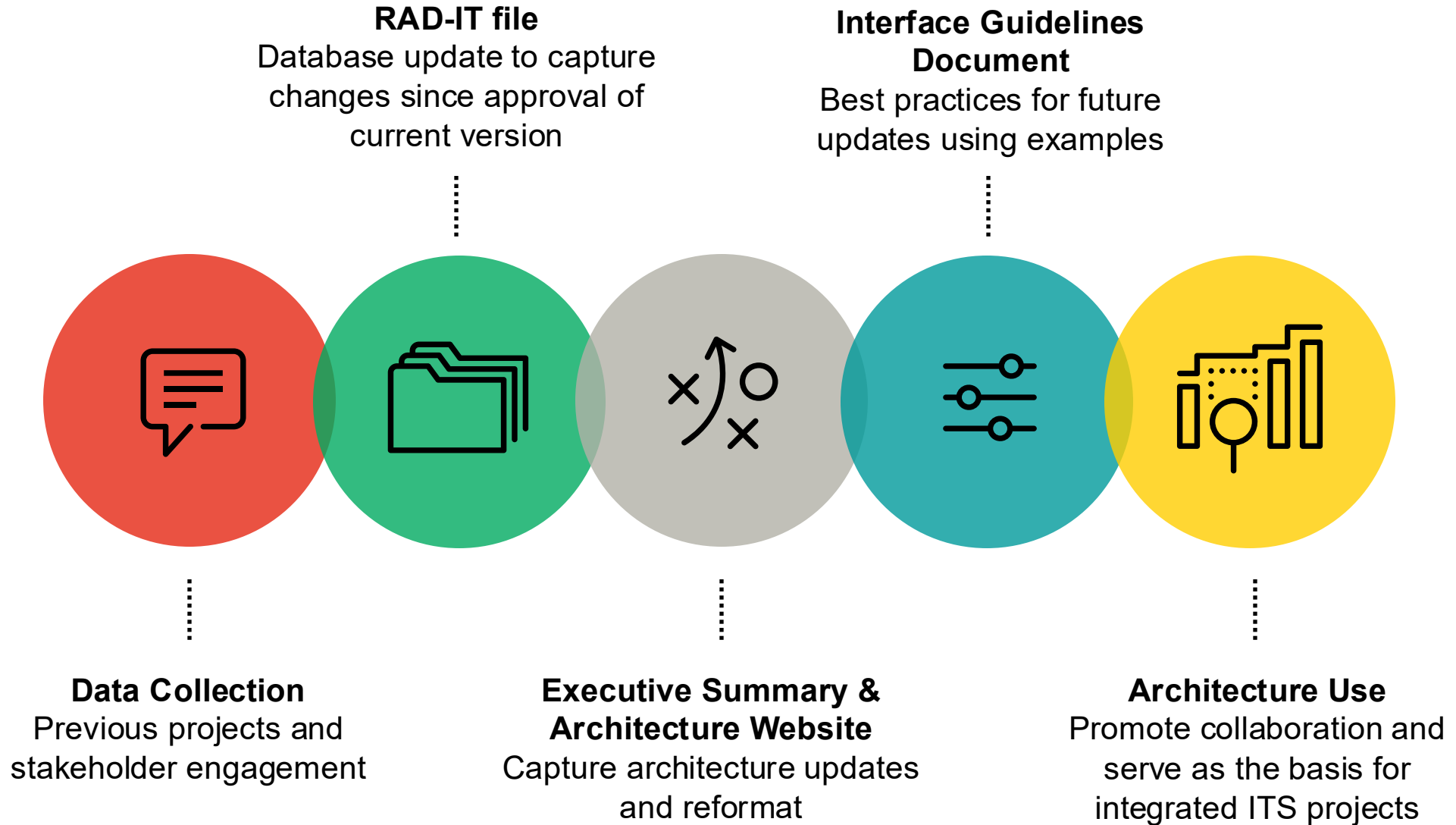
Seven-county Chicago Metropolitan Area: Cook, DuPage, Kane, Kendall, Lake, McHenry, Will

Service Scope

The architecture covers the broad spectrum of Intelligent Transportation Systems, including Traffic Management, Transit Management, Traveler Information, Maintenance and Construction, Emergency Management, Vehicle Safety, Commercial Vehicle Operations, and Archived Data Management over this time horizon.

[Send Email Comments](#) Phone Comments: Claire Bozic @ 312-386-8744 5/14/2020

CMAP Regional ITS Architecture Update Steps



Data Collection

Information assembled by CMAP was augmented with stakeholder engagement.

TTOC Discussion (11/6/25)

The project team presented a current listing of project-level ITS architectures, which were contained in an MS Excel spreadsheet to organize projects by stakeholder agency.

Comments were provided from Chicago DOT, Cook County DOT, DuPage County DOT, Kane County DOT, Lake County DOT, City of Naperville TED, and RTA.

Stakeholder interviews

Interviews were held to facilitate further discussion of project-level ITS architectures to update project descriptions and statuses:

- Jan. 20th, 2026 – IL Tollway
- Jan. 22nd, 2026 – Chicago DOT
- Feb. 4th, 2026 - Illinois DOT
- Feb. 4th, 2026 – Transit agencies (CTA, Pace, Metra, RTA)

Project log

An MS Excel spreadsheet was used to track the status and changes made to project-level ITS architectures.

Data Collection: MS Excel Spreadsheet Summary

	A	B	C	D	E	F	G	H	I	J	K
1	This document includes a listing of the 146 individual ITS projects contained in Version 4.0 of the Northeastern Illinois Regional ITS Architecture. As a regional ITS stakeholder, your input is needed to identify updates to these projects. This includes										
2	changes in status, timeframe, or other project details. Please filter to your agency's projects in column A (be sure to include "multiple" for multi-agency projects that involve your agency) and add your comments in the highlighted cells (column F) to										
3	more specific details about a project listed below, or to provide information about a new ITS project that is not shown in this list, please use the new online Architecture Change Request Form.										
5	When you have finished adding your comments, please save and send this file to Matt Letourneau at matt.letourneau@aecom.com . Thank you.										
6											
7	Stakeholder	Project	Status	Timeframe	Description	Stakeholder Update Comments	Matt's Update	Actions Taken	Potential Actions to Do		
8	CDOT	CDOT Automated Speed Enforcement	Existing	Short	This project includes the use of cameras and speed detection for automatic ticketing of speeding vehicles. The focus is on safety speed zones (schools and parks). The cameras are also capable of capturing traffic volume and speed data, which can be accessed by CDOT. There are plans to expand CDOT access to system cameras to view live video streams.	Added 15 cameras and upgraded cameras to provide live video. Overall, there are 221 cameras installed across the city providing 24/7/365 video data.		Project description updated			
9	CDOT	CDOT Bus Rapid Transit System	Existing	Short	This project refers to the implementation of bus rapid transit and related systems. This project covers the road side of BRT development which includes changes in lane configurations, allowed turns, and transit signal priority (TSP), and other traffic signal changes. The TSP aspect consists of street side equipment including communications, signal upgrades, and agreements. Two projects have been completed which only dealt with the road side of BRT and implemented TSP: Ashland Avenue and Western Avenue. The transit side project elements, listed under the CTA BRT project include stations, station fare collection equipment, station passenger information, and unique BRT vehicles. Two projects have been completed which implemented the road side and transit side of BRT: Loop Link (East-West Downtown BRT) and Jeffrey Jump. The Chicago DOT received UWP funding to develop a Chicago Bus Rapid Transit Master Plan in FY 13.	SMART grant obtained to support introduction of CTA bus queue jumps.	CDOT and CTA are implementing centralized TSP.	Project description updated.	Review camera to see potential flow for queue jump requests by CTA buses		
10	CDOT	CDOT Chicago Traffic Management Center TMC ATMS	Existing	Mid	The project supports the City of Chicago's Smart City Initiative and includes the planning, design, and deployment of an integrated system that ties numerous diverse systems and technologies together. Parsons worked with the Chicago Department of Transportation (CDOT) to meet the City's goal of collecting and processing data from multiple sources across departments to optimize transportation planning, design, management, and maintenance activities.	Adding more features and functionality, including the truck traffic tracker and traffic signal flush plans for major events.	Ongoing project.	Project description updated.			
11	CDOT	CDOT Cicero Ave / Midway Smart Corridor	Planned	Short	The advanced traffic management system is implemented and has deployed 19 signals, 7 CCTVs, 2 DMSs and multiple system detectors. Future enhancements relate to traffic adaptive control on the signals and possibly other roadside device enhancements. The other component of the smart corridor is the advanced traveler information system, which provides upgrades to several traveler information systems along the smart corridor. Specifically the project will include highway advisory radio upgrades to provide information on delays and closures at highway rail intersections, and installation of additional dynamic message signs.	Status change to Existing. Components are installed and operating.		Changed project status to Existing. Elements and flows updated to existing status.			
12	CDOT	CDOT Crash Data Integration	Existing	Short	Implementation of electronic collection of crash reports on-site by Chicago Police Department using mobile data terminals. This is 100% complete and transmits xml formatted data to the Chicago Department of Transportation.	Existing and ongoing project.		No change			

RAD-IT File Updates

The screenshot displays the RAD-IT software interface. At the top, the title bar reads: "RAD-IT - C:\Users\dan.nelson\OneDrive - AECOM\Desktop\CMAP RAD-IT Files\CMAP RAD-IT Version 9.3_012226.radit - CDOT Chicago Centralized Transit Signal Priority (CCTSP)".

The interface includes a ribbon menu with the following tabs: File, Home, and Output. The Home tab is active, showing various tool groups: Clipboard (Copy, Cut, Paste), Tools (Synchronize Elements, Update Status, Add Physical Objects, Add Flows, Flow Alarms, Check Flows), Review (Architecture, Spelling, Merge Spelling Dictionary), and a Review section with an ABC icon.

Below the ribbon is a navigation bar with tabs: Start, Planning, Stakeholders, Inventory, Services, User Needs, R & R, Functions, Interfaces, Communications, and Agreements. The "Current Project" is identified as "CDOT Chicago Centralized Transit Signal Priority (CCTSP)".

The main workspace is divided into several sections:

- Architectures:** Includes a "Regional" section with "NE Illinois Regional ITS Architecture v4.0" and a "Project" section with a list of projects. "CDOT Bus Rapid Transit System" is selected. Other projects include "CDOT Automated Speed Enforcement", "CDOT Chicago Traffic Management Center TMC ATMS", "CDOT Cicero Ave / Midway Smart Corridor", "CDOT Crash Data Integration", "CDOT Critical Bridge Infrastructure Surveillance", "CDOT Divvy Bike Share", "CDOT Dynamic Ridesharing and Shared Use Transportation", "CDOT Interoperable Demonstration Milwaukee Avenue TSP", "CDOT Irving Park Road Conversion to Adaptive Signal Control (ASC)", "CDOT Lake Shore Drive and Columbus Drive Adaptive Signal Control (ASC)", "CDOT Mobile Technologies to Measure Travel Times Using Probe Vehicles", "CDOT Red-light Camera Enforcement Program", "CDOT Smart Signal System", "CDOT Traffic Advisory System", "CDOT Transportation Data Archive", "Chicago Camera Images for Traffic Surveillance", "Chicago Data Sharing and Open Data Portal", "Chicago Parking Information Projects", and "Chicago Signal Controller Upgrade".
- Project Architecture Attributes:** Includes fields for "SET-IT Project" (Not set), "Name" (CDOT Chicago Centralized Transit Signal Priority (CCTSP)), and "Description" (This project will implement a centralized Transit Signal Priority (TSP) system that will serve CTA buses with signal priority requests that are sent through the CDOT Traffic Management Center (TMC) and transmitted to traffic signals in real time. This will include installation of new hardware and software for both the CTA and CDOT that will require integration to deliver timely responses at corresponding traffic signals for centralized TSP requests made by CTA buses along the following corridors: Roosevelt Road from DuSable Lake Shore Drive to Western Avenue; Stony Island Avenue from 57th Drive to 95th Street; and Broadway-Sheridan Road between Hollywood Avenue and Devon Avenue).
- Timeframe:** Set to "Short".
- Status:** Set to "Planned".
- Geographic Scope:** City of Chicago. Initial corridors to include Roosevelt Road from DuSable Lake Shore Drive to Western Avenue, Stony Island Avenue from 57th Drive to 95th Street, and Broadway-Sheridan Road between Hollywood Avenue and Devon Avenue.
- Service Scope:** (Empty field).
- Developer:** (Empty field).
- Maintainer:** (Empty field).
- Version:** (Empty field).
- Date/Time:** 1/23/2026 9:32:00 AM.

At the bottom right, there are "Apply" and "Cancel" buttons. A status bar at the very bottom indicates "RAD-IT up-to-date".

RAD-IT File Updates

- Project-Level ITS Architecture Updates
 - Project Description
 - Project Status
 - Elements within projects
 - Service package updates to reflect project changes
 - Interface updates with new elements
- Total of 67 Project Level ITS Architectures Updated in Version 5.0

Stakeholder Agency	Project Architectures Updated
City of Chicago Department of Transportation	12
Cook County Department of Transportation and Highways	4
Chicago Transit Authority	2
DuPage County Department of Transportation	7
Illinois Department of Transportation	12
Illinois Tollway	13
Kane County Department of Transportation	3
Lake County Department of Transportation	5
Metra	3
Pace Suburban Bus Service	4
RTA / NITA	2

RAD-IT File Updates: New Project-Level ITS Architectures



CTA Transit Signal Priority

An existing project was added to describe current TSP operations featuring bus-to-intersection communications of TSP requests. This includes along Ashland / Western / Jeffery corridors.



CDOT Centralized TSP

This ongoing CDOT project was added to describe centralized communication of TSP requests to traffic signals in the region.



Kane County DOT ITS Projects

Elements were added to capture KDOT's ITS Field Device Expansion and Asset Management System project. Updates were made to over future signal interconnect and signal timing optimization.

Executive Summary & Architecture Website

- Executive Summary document modified to capture architecture updates
 - Updated links to ARC-IT Version 9.3 as current version
 - Description of data collection process and interviews with agencies in 2026
 - Summary of project architectures that have been updated
 - Reformatting and organizational enhancements to Executive Summary
- Architecture Website Updates
 - CMAP Regional ITS Architecture v5.0

Executive Summary & Architecture Website



Chicago Metropolitan
Agency for Planning

CMAP Regional ITS Architecture v5.0

[Home](#)

[Scope](#)

[Stakeholders](#)

[Inventory](#)

[By Physical Object](#)

[By Stakeholder](#)

[Services](#)

[Roles and Resp](#)

[Functions](#)

[Interfaces](#)

[Communications](#)

[Agreements](#)

[Projects](#)

Welcome

This Regional ITS Architecture is a roadmap for transportation systems integration. The architecture was developed through a cooperative effort by the region's transportation agencies, covering all modes and all roads in the region. It represents a shared vision of how each agency's systems will work together in the future, sharing information and resources to provide a safer, more efficient, and more effective transportation system for travelers in the region.

The architecture provides an overarching framework that spans all of the region's transportation organizations and individual transportation projects. Using the architecture, each transportation project can be viewed as an element of the overall transportation system, providing visibility into the relationship between individual transportation projects and ways to cost-effectively build an integrated transportation system over time.

The purpose of this regional ITS architecture web site is to encourage use of the regional ITS architecture and gather feedback so that the architecture is used and continues to reflect the intelligent transportation system vision for the region. The menu bar at left provides access to the stakeholders, the transportation systems in the region (the Inventory), the transportation-related functions that are envisioned, and the existing and planned integration opportunities in the region.

Executive Summary & Architecture Website



Chicago Metropolitan
Agency for Planning

CMAP Regional ITS Architecture v5.0

- Home
- Scope
- Stakeholders
- Inventory
 - By Physical Object
 - By Stakeholder
- Services
- Roles and Resp
- Functions
- Interfaces
- Communications
- Agreements
- Projects**

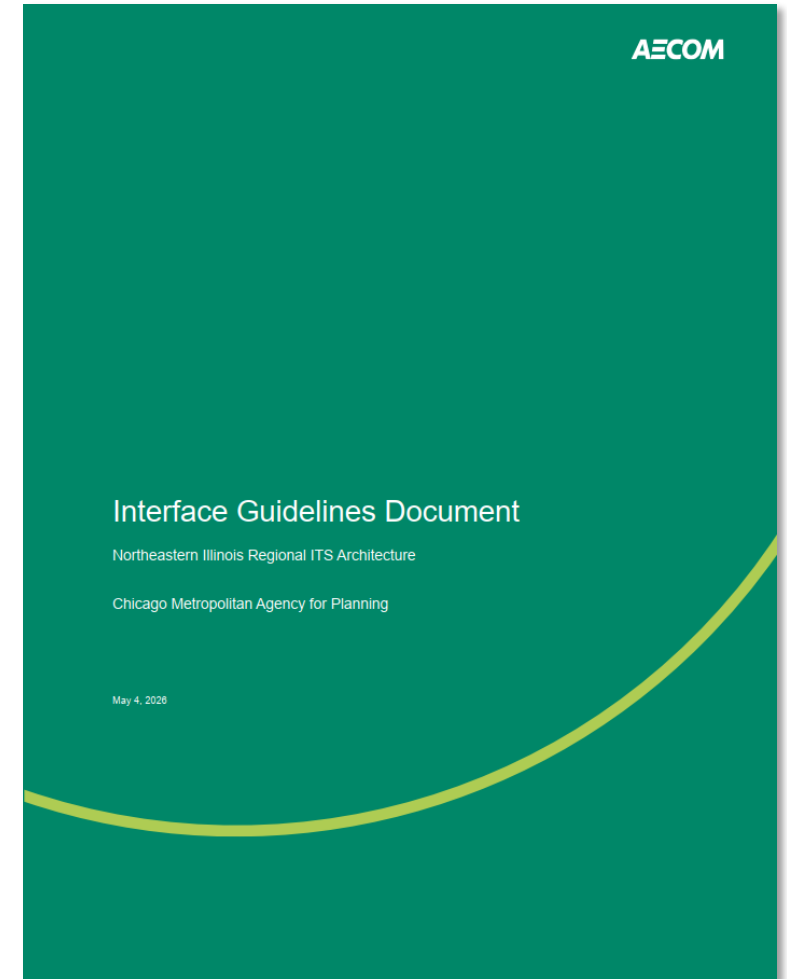
Projects

The Regional ITS Architecture provides a starting point for project definition. It provides an overall framework that shows how anticipated projects will integrate with each other and with existing systems. This page lists all the ITS projects that have been mapped to the regional ITS architecture.

Project	Status	Timeframe	Description
CDOT Automated Speed Enforcement	Existing	Short	This project includes the use of cameras and speed detection for automatic ticketing of speeding vehicles. The focus is on safety speed zones (schools and parks). The cameras are also capable of capturing traffic volume and speed data, which can be accessed by CDOT. As of 2025, the City has added 15 cameras and upgraded cameras to provide live video. Overall, there are 221 cameras installed across the city providing 24/7/365 video data.
CDOT Bus Rapid Transit System	Existing	Short	This project refers to the implementation of bus rapid transit and related systems. This project covers the road side of BRT development which includes changes in lane configurations, allowed turns, and transit signal priority (TSP), and other traffic signal changes. The TSP aspect consists of street side equipment including communications, signal upgrades, and agreements. Two projects have been completed which only dealt with the road side of BRT and implemented TSP: Ashland Avenue and Western Avenue. The transit side project elements, listed under the CTA BRT project include stations, station fare collection equipment, station passenger information, and unique BRT vehicles. Two projects have been completed which implemented the road side and transit side of BRT: Loop Link (East–West Downtown BRT) and Jeffrey Jump. The Chicago DOT received UWP funding to develop a Chicago Bus Rapid Transit Master Plan in FY 13. A federal SMART grant was obtained to support the introduction of CTA bus queue jumps through use of cameras at intersections.
CDOT Chicago Centralized Transit Signal Priority (CCTSP)	Planned	Short	This project will implement a centralized Transit Signal Priority (TSP) system that will serve CTA buses with signal priority requests that are sent through the CDOT Traffic Management Center (TMC) and transmitted to traffic signals in real time. This will include installation of new hardware and software for both the CTA and CDOT that will require integration to deliver timely responses at corresponding traffic signals for centralized TSP requests made by CTA buses along the following corridors: Roosevelt Road from DuSable Lake Shore Drive to Western Avenue; Stony Island Avenue from 57th Drive to 95th Street; and Broadway–Sheridan Road between Hollywood Avenue and Devon Avenue.
CDOT Chicago Traffic			The project supports the City of Chicago's Smart City Initiative and includes the planning, design, and deployment of an integrated system that ties numerous diverse systems and technologies together. Parsons worked with the Chicago Department of Transportation (CDOT) to meet the City's goal of collecting and processing data from multiple sources

Interface Guidelines Document

- Purpose - Provides guidelines on which interfaces (i.e., information flows) should and should not be included by CMAP when adding new ITS projects over time.
- Two sample projects used to provide illustration on steps to be taken
 - Chicago Centralized Transit Signal Priority
 - Will County Commercial Vehicle Alerts



Interface Guidelines – New ITS Project (CDOT Centralized TSP)

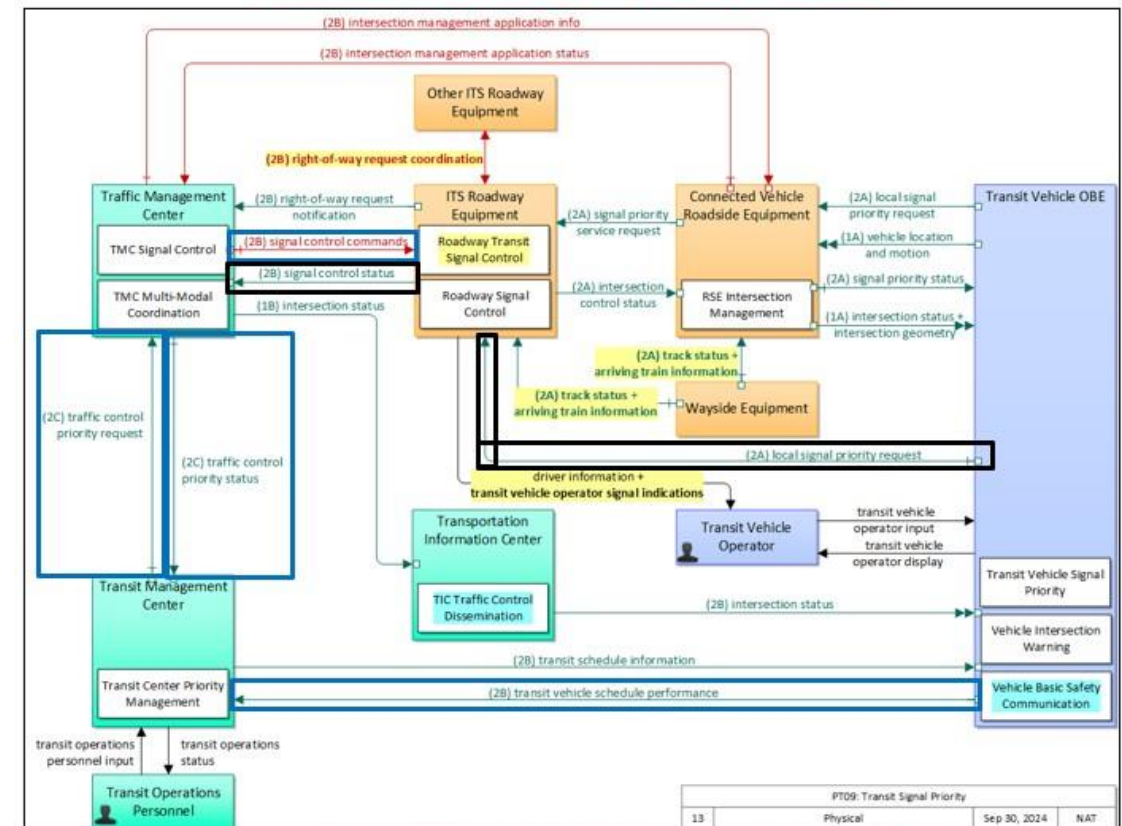
Identify Inventory Elements for project

Table 2 – ITS Elements for Project-Level ITS Architecture

Element	Description	Subsystem / Physical Object
CTA Bus Vehicles	Bus Transit vehicles are used to provide transit services on area roadways. They are instrumented to gather and generate fare, passenger loading, location and schedule adherence information, as well as provide passenger information via visual and audio displays. All buses are equipped to count boardings and alightings. Some buses are equipped with transit signal priority on-board equipment.	Transit Vehicle OBE
CTA Control Center	The CTA Control Center controls the movement of buses and rapid transit trains and provides power control for rapid transit operations. Both the BusWatch system and Rail Service Management System are resident at the Control Center, as are their dispatchers. This includes CTA Hub that will feed the Illinois Transit Hub.	Transit Management Center
City of Chicago Communications Infrastructure	Fiber and wireless communication network.	ITS Communications Equipment
City of Chicago OEMC Field Equipment	Traffic signals, traffic detectors, CCTV, VMS (portable and permanent) and highway advisory radio (HAR). Also includes speed feedback signs to present drivers with detected speed compared to posted speed limit.	ITS Roadway Equipment
City of Chicago TMC	The TMC will be the focal point to collect, transfer, process and disseminate real-time travel data, including information on road closures, construction activities, travel restrictions, accidents and incidents, and weather-related conditions. Other TMC functions may include integration with road weather systems on city bridges, snow/ice removal management, special event traffic management, assistance during emergency evacuations, and supporting CVO initiatives. Includes Bureau of Electricity Signal Operations and BOE Radio Main. This element includes the current traffic signal control systems operated by the City of Chicago.	Traffic Management Center

Review ARC-IT (PT09) for Interfaces

Figure 2 – PT09 Service Package Diagram from ARC-IT Website with Existing and New Interconnects / Flows for CMAP Regional ITS Architecture



Source: ARC-IT. Available at: <https://www.arc-it.net/html/servicepackages/sp79.html#tab-3>.

Interface Guidelines – New ITS Project (CDOT Centralized TSP)

Figure 5 – Interfaces View with Build Screen and Settings

The screenshot displays a software interface with a 'Build' dialog box open. The dialog box has the following sections:

- Build Settings:**
 - Include on the interfaces Tab:** A section with a 'Yes' radio button selected and a 'Settings...' button.
 - Only Selected Plans:** A slider set to 'All Possible Plans'.
 - Plan Selection:** A section with a 'Yes' radio button selected and a 'Settings...' button.
 - Conservative:** A slider set to 'Aggressive'.
 - Override:** A section with a 'Yes' radio button selected and a 'Settings...' button.

The background interface shows a table with the following columns: Start, Planning, Status, Inventory, Services, User Needs, R & R, Features, Work Item, Communications, and Agreements. The table contains multiple rows of data, with the first row highlighted in blue.

Interface Guidelines – New ITS Project (CDOT Centralized TSP)

Figure 8 – Interfaces View with Flows Between ITS Elements

The screenshot displays the 'CDOT Chicago Centralized Transit Signal Priority (CCTSP) - All Information Flows (MIT System)' interface. The main table lists various data flows between different ITS elements. A modal window titled 'Supplemental Flow Information' is open for the selected flow 'Traffic control priority request'.

Source Element	Flow Name	Destination Element	In Begin	Status	Comments	CCC
Chicago Transit Authority Bus Vehicles	Transit vehicle schedule information	Chicago Transit Authority Control Center	+	Planned	- Not Identified	- Not Identified
Chicago Transit Authority Control Center	Transit schedule information	Chicago Transit Authority Bus Vehicles	+	Planned	- Not Identified	- Not Identified
Chicago Transit Authority Control Center	Traffic control priority request	City of Chicago TSC	-	Planned	- Not Identified	- Not Identified
City of Chicago DTSC Field Equipment	Light of way request notification	City of Chicago TSC	+	Planned	- City of Chicago Communications Infrastructure	- Not Identified
City of Chicago TSC	Traffic control priority status	Chicago Transit Authority Control Center	+	Planned	- Not Identified	- Not Identified
City of Chicago TSC	Signal control commands	City of Chicago DTSC Field Equipment	+	Planned	- Chicago Transit Authority Communications Infrastructure	- Not Identified
ADP/Spot Sign	Signal addresses	City of Chicago TSC	+	Not Applicable	- Not Identified	- Not Identified
ADP/Spot Sign	Signal schedules	City of Chicago TSC	+	Not Applicable	- Not Identified	- Not Identified
Automated Enforcement Cameras	Signal control coordination	City of Chicago DTSC Field Equipment	-	Not Applicable	- Not Identified	- Not Identified
Automated Enforcement Cameras	Camera system coordination	City of Chicago DTSC Field Equipment	-	Not Applicable	- Not Identified	- Not Identified
Automated Enforcement Cameras	Vehicle radio coordination	City of Chicago DTSC Field Equipment	-	Not Applicable	- Not Identified	- Not Identified
Automated Enforcement Cameras	Dynamic sign coordination	City of Chicago DTSC Field Equipment	-	Not Applicable	- Not Identified	- Not Identified
Automated Enforcement Cameras	Light of way request coordination	City of Chicago DTSC Field Equipment	-	Not Applicable	- Not Identified	- Not Identified
Automated Enforcement Cameras	Video surveillance coordination	City of Chicago DTSC Field Equipment	-	Not Applicable	- Not Identified	- Not Identified
Automated Enforcement Cameras	Vehicle vehicle tracking coordination	City of Chicago DTSC Field Equipment	-	Not Applicable	- Not Identified	- Not Identified
Automated Enforcement Cameras	Environmental sensor coordination	City of Chicago DTSC Field Equipment	-	Not Applicable	- Not Identified	- Not Identified
Automated Enforcement Cameras	Traffic sensor coordination	City of Chicago DTSC Field Equipment	-	Not Applicable	- Not Identified	- Not Identified
Chicago Airport Parking Systems	Garaging information	City of Chicago TSC	-	Not Applicable	- Not Identified	- Not Identified
Chicago Airports	Airports work service data	Chicago Transit Authority Control Center	-	Not Applicable	- Not Identified	- Not Identified
Chicago Park District Parking Management System	Garaging information	City of Chicago TSC	-	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority ATIS System	Transit traveler information	Chicago Transit Authority Bus Vehicles	-	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority ATIS System	Transit traveler information coordination	Chicago Transit Authority Control Center	-	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Info System	Transit traveler information	Chicago Transit Authority Bus Vehicles	-	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Info System	Transit vehicle operator information	Chicago Transit Authority Bus Vehicles	-	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Info System	Transit schedule information	Chicago Transit Authority Bus Vehicles	-	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Info System	Vehicle vehicle status	Chicago Transit Authority Bus Vehicles	-	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Info System	Transit vehicle operator authentication update	Chicago Transit Authority Bus Vehicles	+	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Info System	Driver instructions	Chicago Transit Authority Bus Vehicles	+	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Info System	Transit service coordination	Chicago Transit Authority Control Center	+	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Info System	Transit traveler information coordination	Chicago Transit Authority Control Center	+	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Transfer Stations	Stop coordination	Chicago Transit Authority Control Center	+	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Vehicles	Transit traveler request	Chicago Transit Authority ATIS System	+	Not Applicable	- Not Identified	- Not Identified
Chicago Transit Authority Bus Vehicles	Transit vehicle location data	Chicago Transit Authority Bus Info System	+	Not Applicable	- Not Identified	- Not Identified

The modal window 'Supplemental Flow Information' for 'Traffic control priority request' includes the following details:

- Description:** Request for signal priority at one or more intersections along a particular route.
- Associated Projects:** CCTSP Bus Rapid Transit System, CCTSP Chicago Centralized Transit Signal Priority (CCTSP), CCTSP Chicago Traffic Management Center TSC-ATIS.
- Associated Physical Objects:** East and Center Management Center (Source) → Traffic Management Center (Destination), Transit Management Center (Source) → Traffic Management Center (Destination).
- Associated Replacement Flows:** (None listed)
- Flow Type:** JAR-IT, User Defined, Discouraged.

Next Steps

Finalize and publish the website, executive summary, and Interface Guidelines document

Gather future architecture updates and apply interface guidelines



Thank you

Links:

- [ARC-IT website](#)
- [Northeastern Illinois Regional ITS Architecture](#)
- [ITS architecture change request form](#)

5.0 Emerging Technologies Policy Brief update

Erik Cempel, Cempel ITC



2026

Regional Transportation Plan



Transportation Technology and Operations Coalition

May 7, 2026



Chicago Metropolitan
Agency for Planning

Emerging technologies policy brief

Erik Cempel, Cempel ITC

Policy briefs: Purpose and format

Policy briefs provide a concise and clear summary of key transportation issues that should be considered in the RTP and serve to foster collaboration with stakeholders and inform decision-making.

Asset
management

Intercity rail
and bus

Innovative
finance and
project delivery

Emerging
technologies

Now published on CMAP's website!

Emerging Technologies Policy Brief: Introduction

Emerging technologies are transforming how we plan, design, construct, and maintain our transportation system. They:

1. Provide **opportunities** that help transform the Chicago region transportation system landscape
2. **Accelerate** construction timelines, improve transportation sustainability, increase safety & efficiency
3. Present **risks** that should be identified, averted, and mitigated

6 Key Technology Areas

Electric
Vehicles (EVs)

Unmanned
Aircraft
Systems (UAS)

Intelligent
Transportation
Systems (ITS)

Connected &
Autonomous
Vehicles (CAVs)

Cybersecurity

AI & Predictive
Analytics

Emerging Trends: EVs

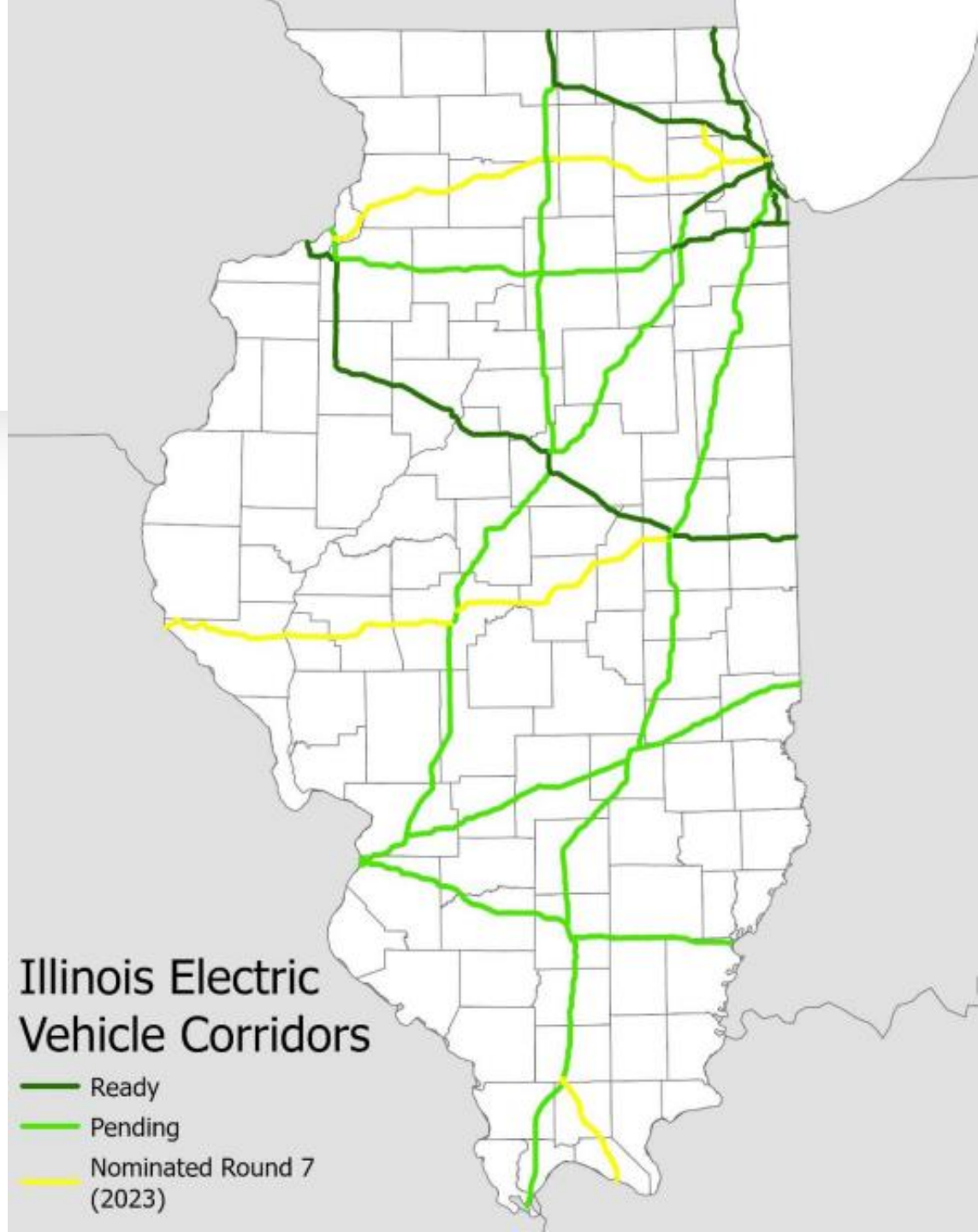
20% of global vehicle sales; CMAP region has 70% of Illinois EVs

CTA, Pace, Metra committed to net zero-emission electric fleets

Net positive environmental impacts; asset management challenges

Continued charger expansion; unpredictable funding

Policies removing barriers



Emerging Trends: UAS

Commercial fleet drones expected to exceed 1 million in 2025

Infrastructure inspection and traffic crash investigation

Package delivery in limited use and development

Passenger transport R&D; cities beginning planning for accommodating their use

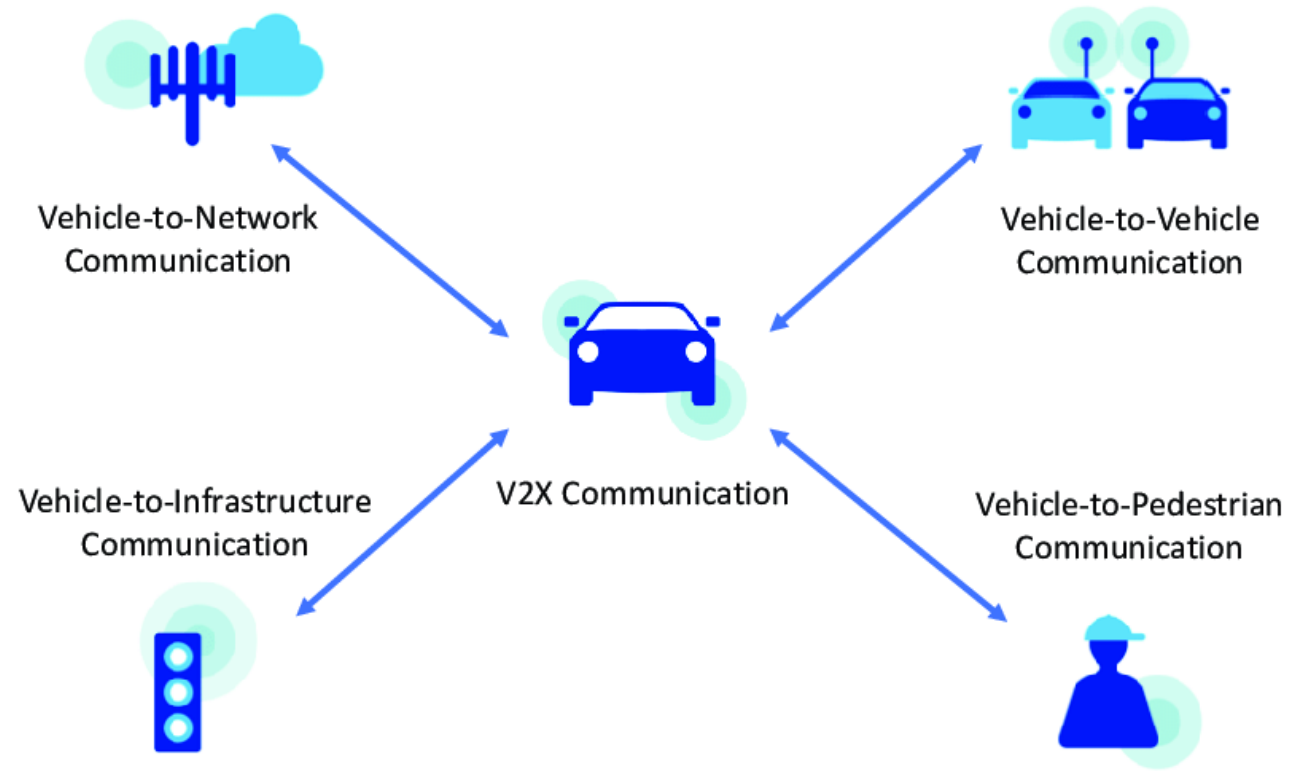


Emerging Trends: ITS

Long history across agencies

Digital twins to predict optimal evacuation routes and infrastructure

Development of V2I, V2V, V2P tech to integrate CAVs



Emerging Trends: CAVs

30% of new vehicles will have minimal CAV capabilities

Pilots in rollouts across the US

General expansion to breakthrough Level 4 autonomy through Waymo

Safety, traffic, freight, transit, land use, and parking impacts

Infrastructure continues to adapt to accommodate CAVs



Source: AuveTech

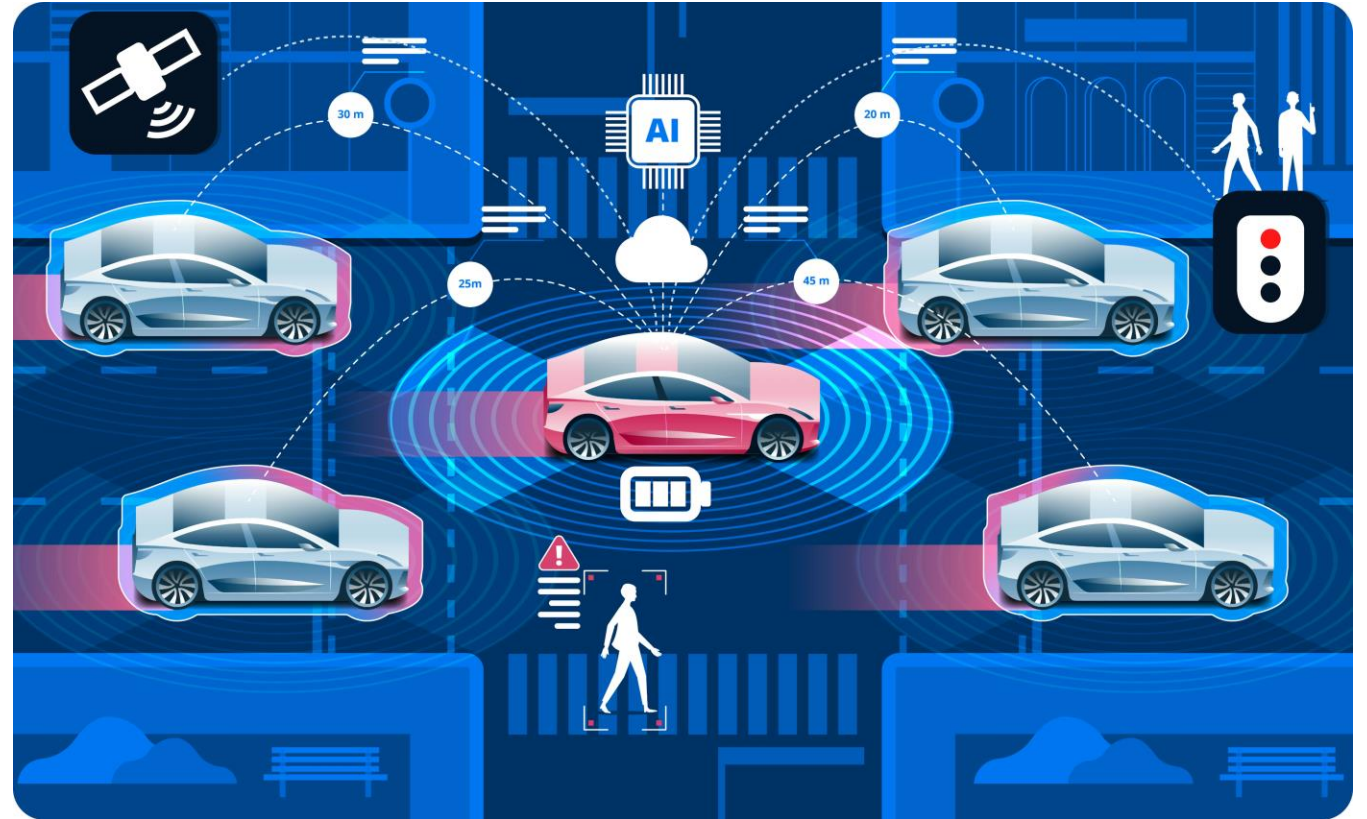
Emerging Trends: AI & Predictive Analytics

AI systems that assess large data sets

Predicting safety, asset condition, and traffic flow

Facilitating CAV integration

Necessitating large data centers



Emerging Trends: Cybersecurity

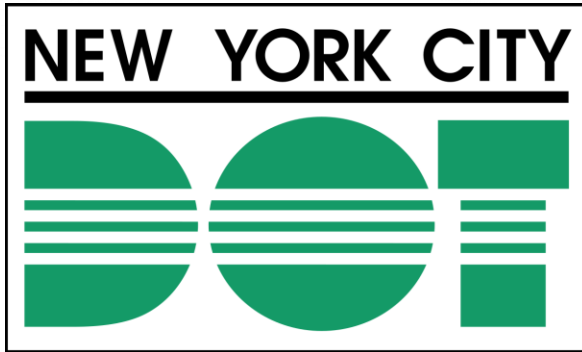
Increased system vulnerability, “edge devices”

Effective governance, education, and collaboration

AI supporting and undermining cybersecurity



Peer examples: New York City



Planning and programming

Facilitation of funding

Targeted infrastructure investments: Bus & UAS

- Fleet Electrification: MTA's Zero-Emission plan is a roadmap to convert 5,900+ buses
- NYC DOT is planning for UAS & eVTOLs at JFK/LaGuardia Airport
- Testing V2X on thousands of city vehicles to provide real-time collision warnings



Peer examples: California



Planning and programming

Facilitation of funding

Targeted infrastructure investments: EVs & CAVs

- Waymo operates fully autonomous services across SF and LA
- SF Bay Area's MTC created master blueprint (RITSA) ensuring communication for all local and state tech systems – IDOT model
- San Jose mandated EV-capable wiring in new homes, growing trend



Other peer examples

- **Seattle's MPO** launched a guide that provides technical assistance to help navigate the complex process of fleet electrification and public charging deployment.
- **Atlanta's MPO** developed guides for implementing a regional ITS structure and smart technology to ensure all systems can communicate.
- **Phoenix** is home to the largest autonomous ride-hail service area in the world (315 square miles), including the first fully autonomous service to a major airport.
- **Jacksonville's MPO** opened a regional transportation management center with the Florida DOT. Additionally, the creation of the Smart North Florida Coalition has led to local agencies pilot testing cutting-edge technology.

Opportunities

Lead in information sharing and education

- Leverage TTOC
- Create framework or coalition for piloting innovative tech
- Support local governments to stay current on EV charging, data centers, and other tech

Innovate at the local level

- Facilitate shared use of technology
- Incorporate technology training in grant applications
- Find opportunities for regional purchases

Leverage technology in regional planning

- Incorporate changes into regional planning and modeling
- Consider emerging tech as transportation solutions and
- Incorporate into funding programs
- Leverage AI and predictive analytics for decision-making

Discussion

6.0 Adjournment

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Location: TBD

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