2020 Annual Meeting

November 12, 2020

Welcome and Thank You for Joining Us!

- Logistics –
  - Please mute your phone line when not speaking
  - This meeting will be recorded and made available on the ITS Alaska webpage:
    - http://www.itsalaska.org
  - Submit questions and responses in chat box

Today's Meeting Agenda

Session	Presentation / Topic
11:00 – 11:10 Welcome and Introductions	1.1: **Welcome by Board of Directors and Introduction Webinar Participants** – *Jeremy Schroeder, Athey Creek* 1.2: **ITS Alaska Annual Business Update**
11:10 – 11:20 ITS America Updates	2.1: **Updates from ITS America – *Shailen Bhatt, ITS America***
11:20 – 11:50 Updates and Initiatives in Alaska	3.1: **Update on ITS Initiatives in Alaska** – *Alicia Stevens, AKDOT&PF* 3.2: **Update on the Alaska DOT&PF Self-Assessment and CAV Deployment Readiness –** Update on Alaska DOT&PF and FHWA self-assessment and readiness project for CAV deployment in Alaska, including survey results. *Vinod Vasudevan, Ph.D., P.E., University of Alaska Anchorage*
11:50 – 12:10 Impacts of New Technologies on Traffic Signal Operations	4.1: **AKDOT&PF Perspective** – *Val Rader, AKDOT&PF* 4.2: **Anchorage Perspective –** *John Crapps, Anchorage*
12:10 – 12:50 Presentations / Updates from Private Sector Members	5.1: **Building a Better Way** – *Muhammad Miah, SES America* 5.2: **Preparing for Cooperative Automated Transportation** – A description of experiences with the Iowa DOT. *Dean Deeter and Ginny Crowson, Athey Creek Consultants* 5.3: **Vendor Introductions and Brief Updates**
12:50 – 1:00 Other Public Sector Updates	6.1: **Public Sector Updates –** An opportunity for attendees to hear updates from the Alaska public sector agencies regarding other current and upcoming ITS projects. - AKDOT&PF - Municipality of Anchorage - CARTS - Others

ITS Alaska Members

ASESA

Athey Creek CONSULTANTS

VAISALA

TRANSPORTATION & PUBLIC FACILITIES · STATE OF ALASKA ·

ADVANCED TRAFFIC PRODUCTS

KINNEY ENGINEERING, LLC

Wostmann ASSOCIATES

ITS Alaska Board of Directors

- **President:** Jeremy Schroeder, Ph.D., P.E., Athey Creek Consultants
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- **Vice President:** Jim Amundsen, P.E., Alaska DOT&PF Central Region
- **Secretary:** Chuan Hu, Ph.D., University of Alaska Fairbanks
- **Treasurer:** Lance Ahern, Principal, Alaska Transit LLC
- **Director:** Alicia Stevens, Alaska DOT&PF ITS Coordinator, Statewide Design & Engineering Services

ITS Alaska Business Update

ITS America Updates

Shailen Bhatt, ITS America

Updates and Initiatives in Alaska

Update on ITS Initiatives in Alaska

– *Alicia Stevens, AKDOT&PF*

Update on the Alaska DOT&PF Self-Assessment and CAV Deployment Readiness

– *Vinod Vasudevan, Ph.D., P.E., University of Alaska Anchorage*

Alaska Department of Transportation & Public Facilities

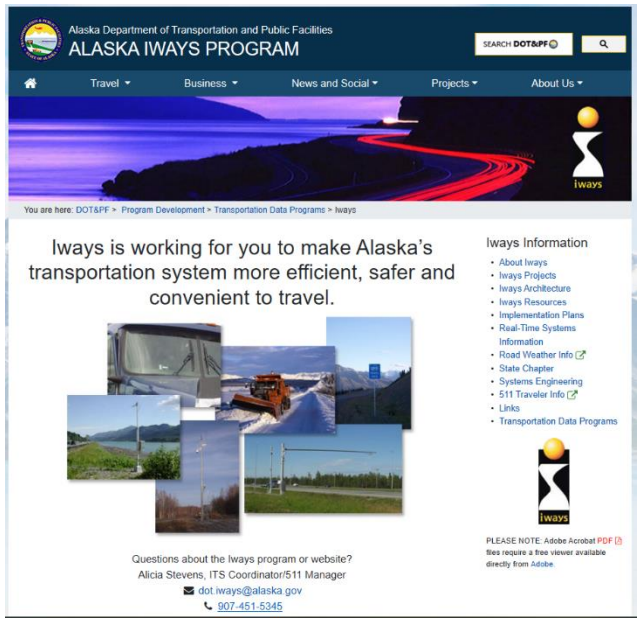
ITS Initiatives in Alaska

Alicia Stevens

November 12, 2020

ITS Programs

- 511: Alaska's traveler information, "Know B4 U Go"
  - Construction projects (Navigator)
  - Traffic Alerts (Nixle)
  - Weather Information (RWIS and NWS)
  - Road cameras (RWIS)
  - Closures & Maintenance

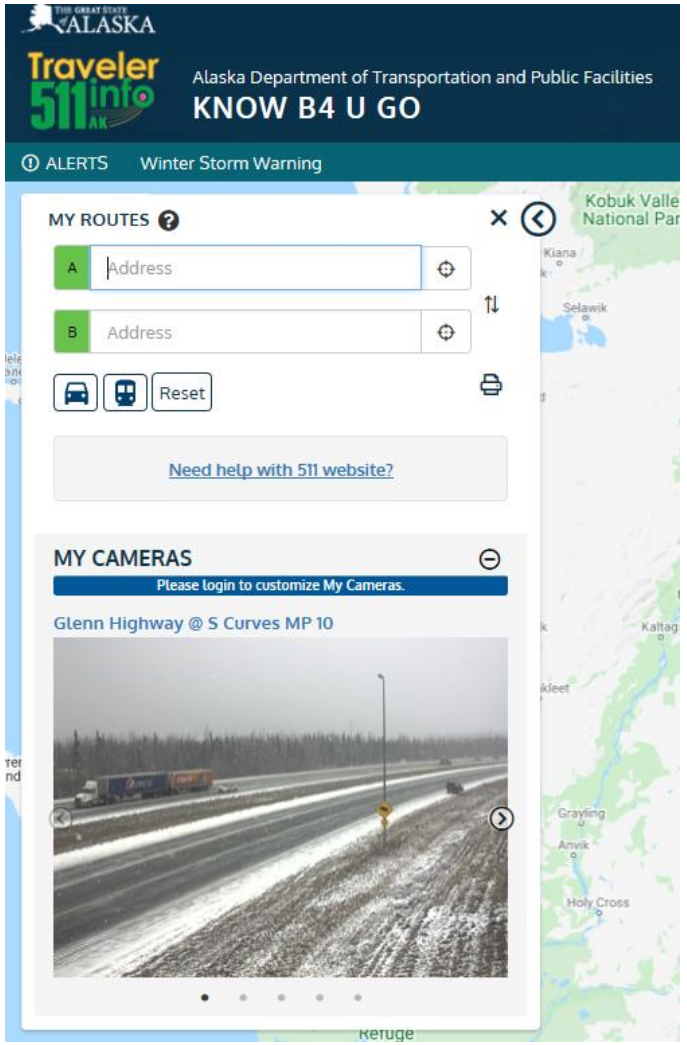


- RWIS: Road Weather Information System
  - 73 sites throughout the state
  - Provide weather data for M&O and public
    - Air temp, dew point, RH, wind speed & direction, precip & snow, pavement surface & subsurface temp

- CAV – State Charter, after assessment, to create a Strategic Plan

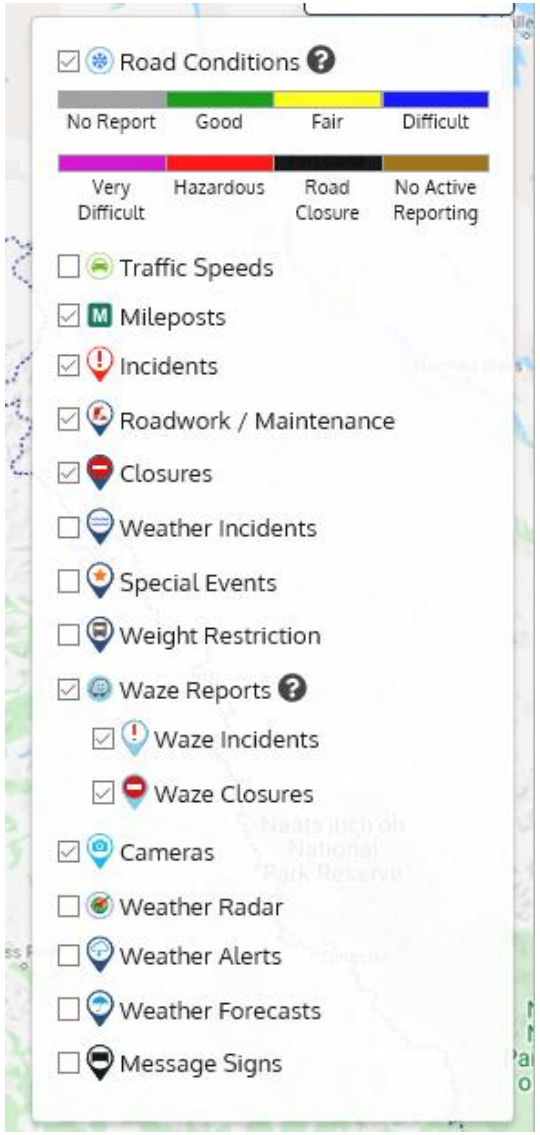
511 Upgrade

- New for users with an account
  - My Routes
  - My Cameras



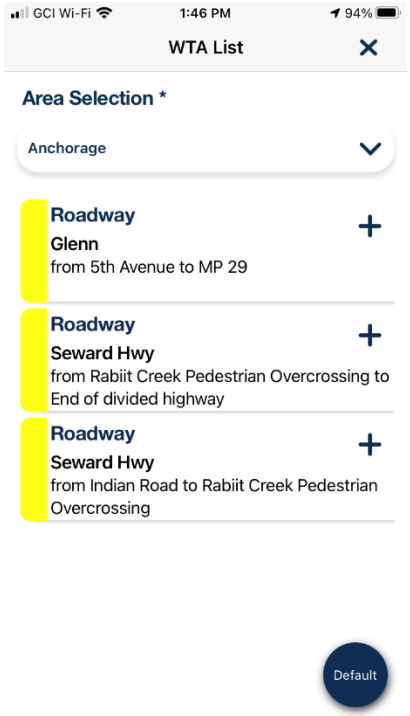
511 Upgrade

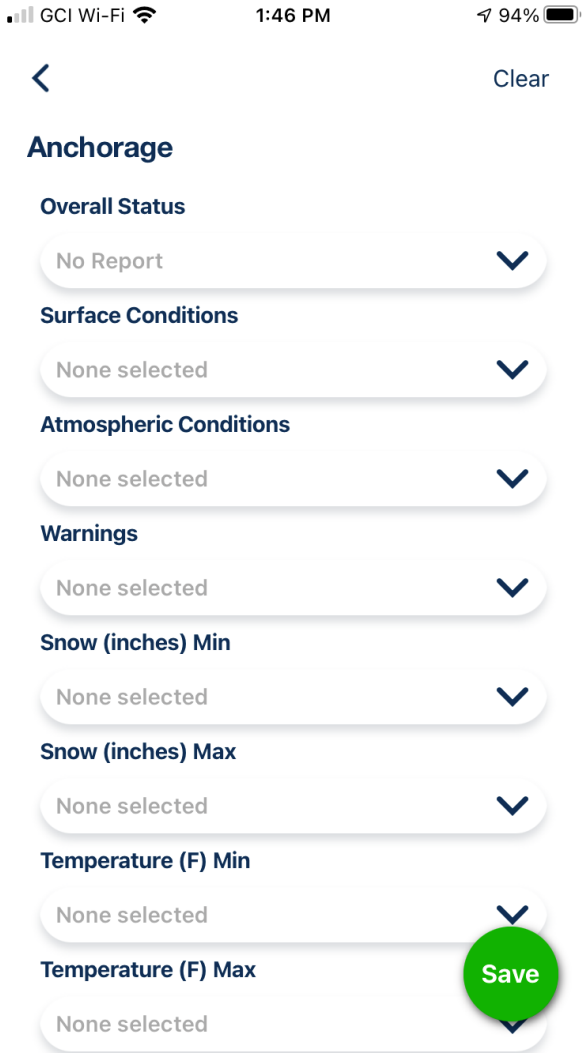
- New on the legend
  - Waze Reports
  - Weather radar and forecasting



511 Upgrade

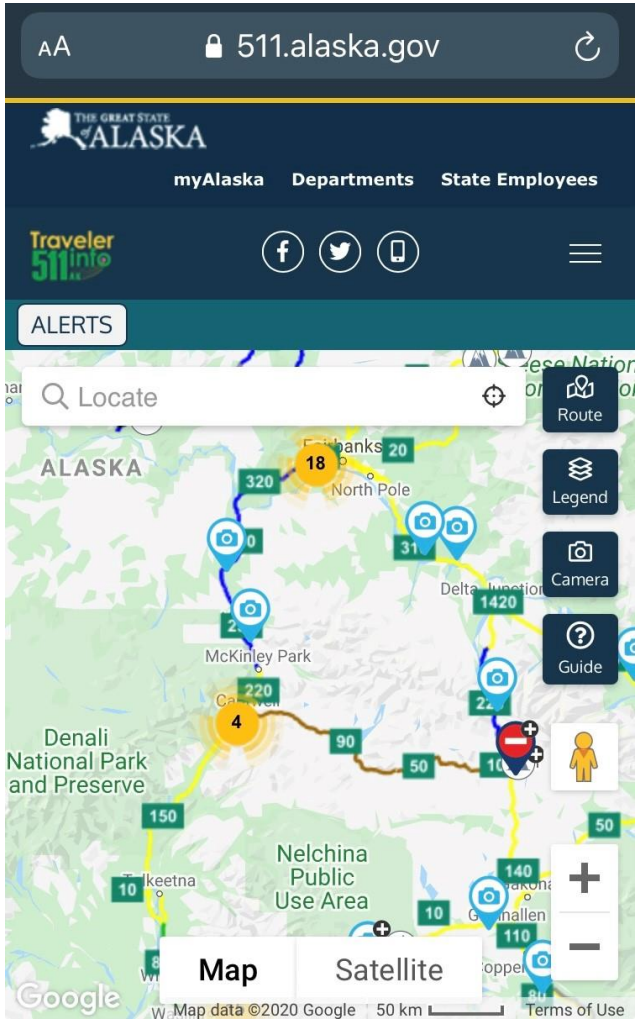
- New for Road Conditions
  - Mobile App for RCR
  - InReach app in the works





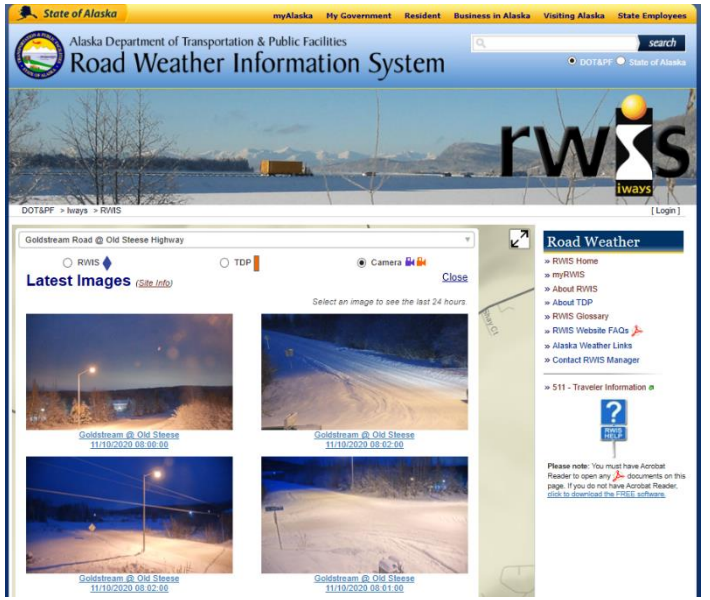
511 Upgrade

- Mobile friendly website
- Improved speech technology for phone system
- Marketing contract



New RWIS sites

- Goldstream Rd @ Old Steese Hwy
- Ballaine Rd near Red Fox Drive
- EAFB Main Gate @ Richardson Hwy MP 341.3
- Richardson Hwy @ Tsina River MP 37.5



Mini RWIS Pilot Project

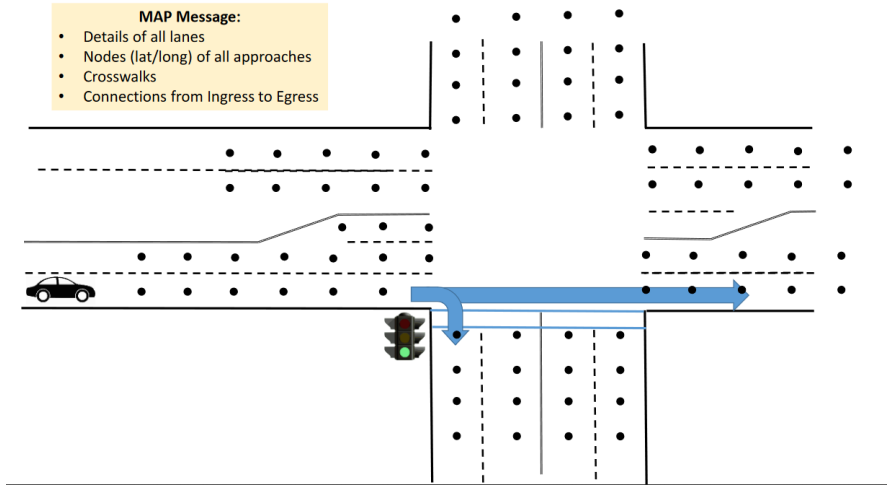
- Campbell Scientific, UAF, DOT&PF Research
- Solar powered
- At least 2 of 8 selected locations to be installed now
  - CHRS @ Nordale
  - Seward Hwy and Hope Y

Aurora Pooled Fund Study

- Invasive and Non-Invasive Sensing
  - Cables in pavement get dug up often
  - Surface Temperature data agreement
  - Two sites in AK :
    - North Douglas Highway MP 4.5
    - Hillside Road @ Upper Huffman Road

Other Ongoing Items

- CV Pooled Fund Study
  - Connected Vehicles
  - 4 active projects
  - 4 completed projects
- RWIS website update
- IWAYS Architecture Update
  - Framework for ITS (data flow)
  - Update will include:
    - Conversion to newest database
    - Add section on CAV
    - Update documents as needed



Thank You

Alicia Stevens

alicia.stevens@alaska.gov

451-5345

Impacts of New Technologies on Traffic Signal Operations

Val Rader, AKDOT&PF

John Crapps, Anchorage

Updates from Private Sector Members

Building a Better Way
– Muhammad Miah, SES America

Preparing for Cooperative Automated Transportation
– Dean Deeter and Ginny Crowson, Athey Creek Consultants

Vendor Introductions and Brief Updates

ITS Alaska 2020

Building A Better Way

SUNRISESESA

Our Story

BEST MANUFACTURING OVERALL EXCELLENCE 2015

BEST PLACE TO WORK IN RHODE ISLAND 2016

ITS PRODUCT OF THE YEAR 2014 FOR SOLAR POWERED SIGN

Sunrise SESA Technologies Inc.

Founded in 1976, SunriseSESA Technologies is the first LED sign company in the world and continues to be a trailblazer in high quality ITS messaging. Committed to delivering innovative products that promote mobility, reduce congestion and enhance roadway safety.

SUNRISESESA

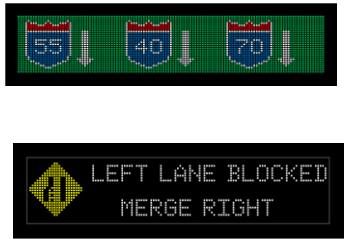
Our ITS Vision:

- Constantly Innovate New Technology
- Local, Regional, & National Distribution
- Provide Solutions and Full Customer Support

SUNRISESESA

Messenger Reliable, Efficient, Innovative		SolarSign Anytime, Anywhere	
Grid Powered DMS Full Color		Solar Powered DMS Amber or White	
Messenger 5000: Embedded DMS	Messenger 6000: Stand-alone DMS	SolarSign 5000: Embedded DMS	SolarSign 6000: Stand-alone DMS

SUNRISESESA

Retrofit Upgrade Advance, Transform, Conserve		Mobility Inform, Flow, Direct		
Renovation of legacy DMS Any type, any brand		- Full Matrix, Display unlimited MUTCD images. - States or Cities		
Amber	Full Color (new)	Blank Out Signs	Lane Control Signs	Variable Speed Limit Sign
				

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Maximize Budgeting & Funding:

- Long Term Savings
- Low Installation Costs
- Less Complex Systems
- Solar Capable for Energy Efficiency

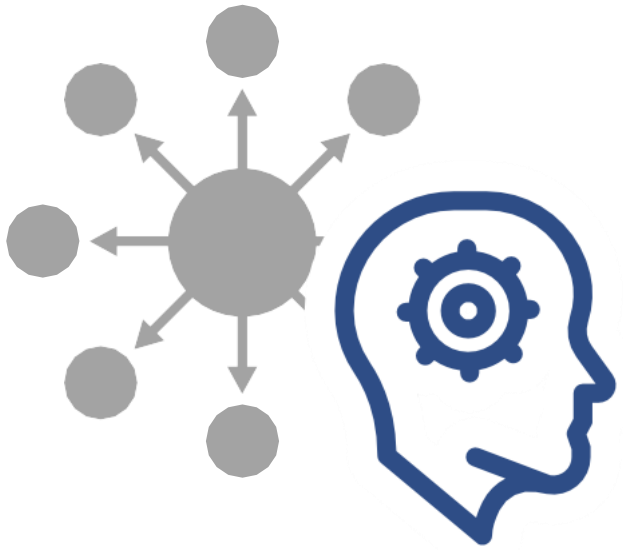
SUNRISESESA

Simple to Operate & Maintain

- Turn-Key Solution
- No Technical Training Necessary
- Two Year ITS Warranty
- Lifetime Technical Support
- Ready-to-Ship Parts Inventory

SUNRISESESA

Increase Road Safety:



- Warning Systems
- Traffic Calming
- Detection & Relay
- Alert Mechanisms
- Fault/Fail Detection

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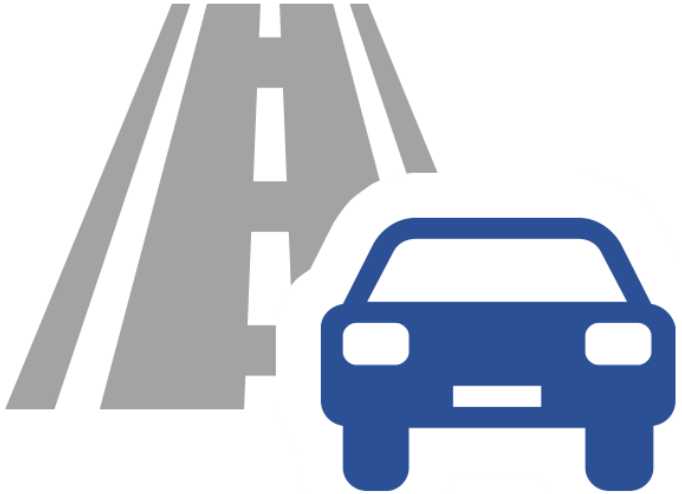

Reduce Traffic Congestion:

- Lane Management
- Travel Time Information
- Traffic Management & Monitoring

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Customer Service:

- Dedicated Technician & Account Manager
- Customizable & Off-The-Shelf Solutions
- Equipment Mentoring and Training

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- Data Sheets
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Thank You!

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Iowa's Cooperative Automated Transportation TSMO Service Layer Plan & AV Legislative Support

Dean Deeter

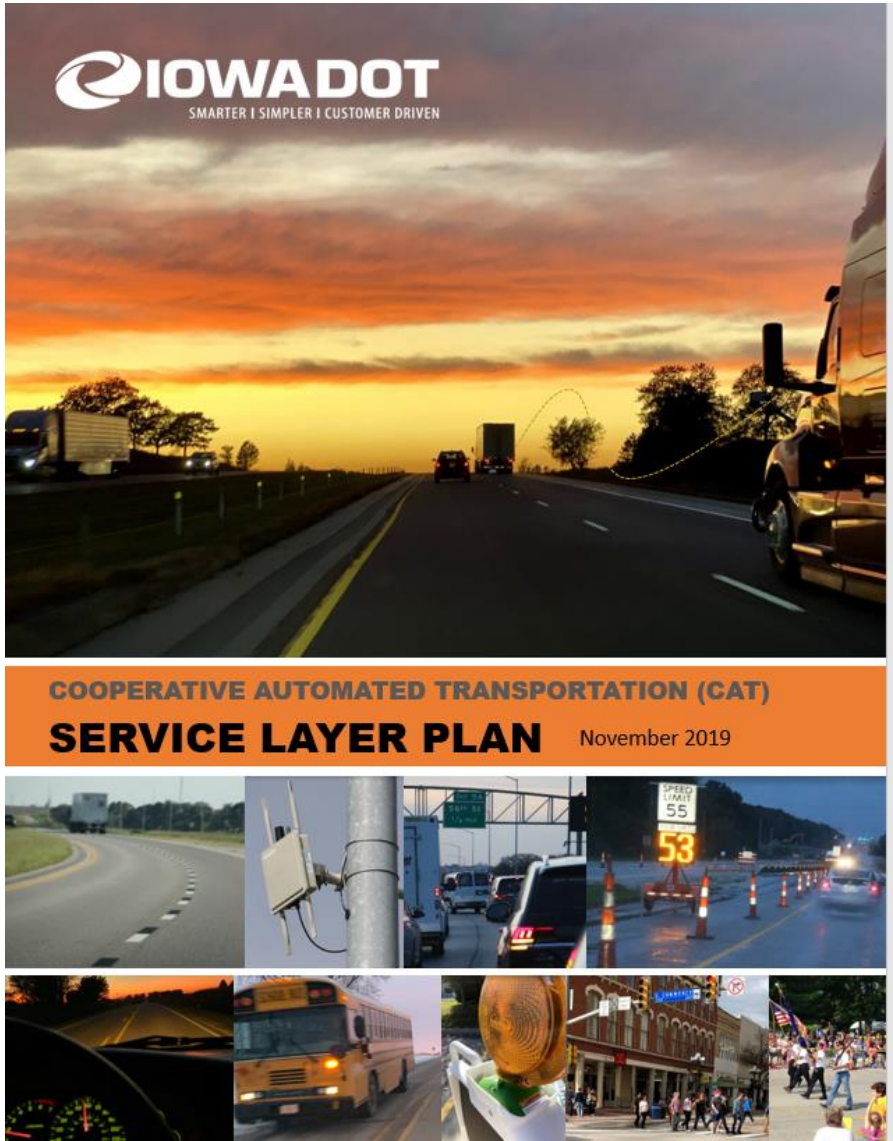
&

Ginny Crowson

Athey Creek Consultants

Topics

- Background on the Iowa CAT Service Layer Plan
- Key Elements of the Plan
- Automated Vehicle Legislation Support Activity



Project Background

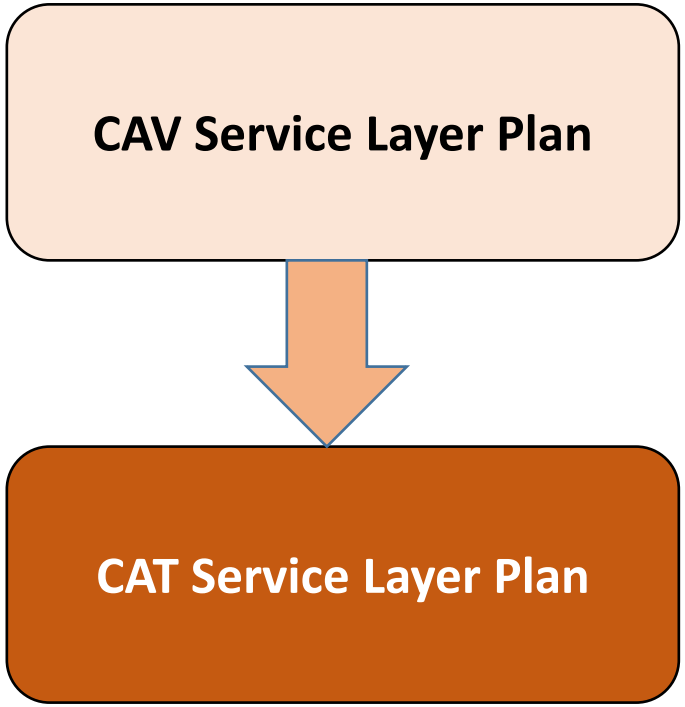
- Iowa DOT completed a TSMO Strategic Plan and Program Plan in 2016
- Iowa's TSMO Plans describe 8 Service Layer Plans:

Traffic Management Center	ITS and Communications	Traveler Information	Traffic Incident Management
Emergency Transportation Operations	Work Zone Management	Active Transportation and Demand Management	Cooperative Automated Transportation

Iowa's Situation & Need for Cooperative Automated Transportation

- Agricultural state with rural to urban migration occurring
- Increases in biking/walking and related conflicts with vehicles
- Increasing accessibility and mobility challenges for rural residents
- Safety and accessibility are higher concerns than travel time reliability
- ***Automated Transportation Advisory Council recently formed***

Connected Automated Vehicle (CAV)
Transition to
Cooperative Automated Transportation (CAT)

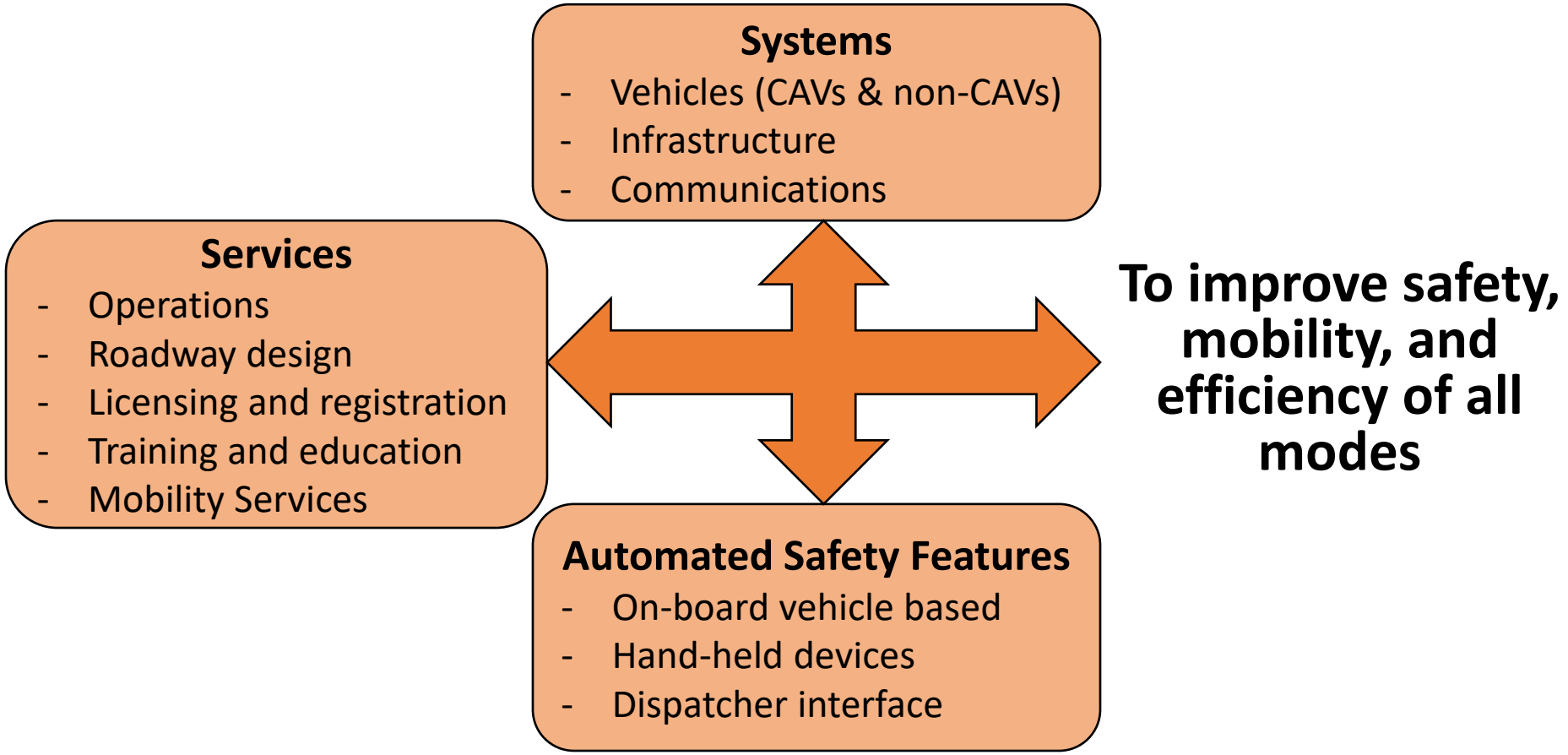


Cooperative Automated Transportation (CAT):

- Reflects the broader aspects of automation, and expands beyond just the vehicle to include all modes, business processes, and mobility services
- Aligns with the changing industry references and broader vision

Cooperative Automated Transportation (CAT)

(3 Basic Elements Working Together)



Iowa CAT Objectives

1

Objective 1: Manage the Iowa digital CAT infrastructure in order to increase Iowa's AV readiness.

2

Objective 2: Ease the entry and ongoing operations of connected and automated vehicles in Iowa through appropriate physical infrastructure additions.

3

Objective 3: Identify and define the business processes needed to allow and support CAT within Iowa.

4

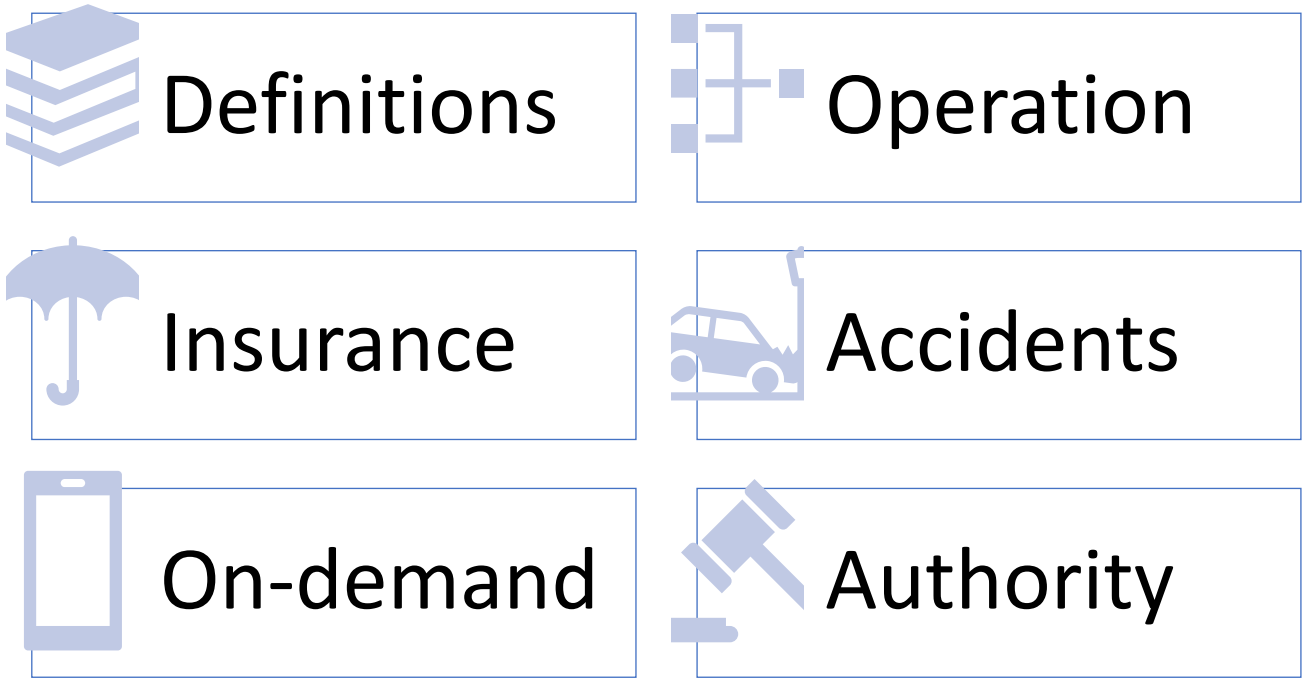
Objective 4: Secure Iowa travelers, transportation providers, residents, and the physical and digital infrastructure against intentional or unintentional threats.

Tactics to Accomplish the Objectives

Tactic 1: Continue pilot demonstrations as a mechanism to explore partnerships that will establish the ***digital infrastructure*** for CAT in Iowa
Tactic 2: Systematically increase the accuracy and granularity of DOT generated ***data*** to accomplish 'AV-ready' data to contribute to the digital infrastructure
Tactic 3: Conduct investigations and demonstrations that increase Iowa DOT's understanding and educate Iowa DOT project designers of changes needed to the ***physical infrastructure***
Tactic 4: Participate in national activities and support the outcomes from Iowa Advisory Council on Automated Transportation Plan to facilitate an ***aligned, consistent, coordinated process*** to establishing CAT business processes, policies, regulations, and infrastructure in Iowa.
Tactic 5: Define business process needs and systematically implement actions that will ensure Iowa ***residents and travelers*** are informed, educated, trained, and represented equitably as CAT expands throughout Iowa.
Tactic 6: Support efforts to update business processes, satisfy staffing and funding needs, and conduct ***internal*** outreach and education to promote CAT within Iowa DOT
Tactic 7: Ensure all CAT activities and deployments have undergone rigorous testing and have mechanisms in place to ensure ***security***.

Iowa Senate File 302: Motor Vehicles Operated by ADS

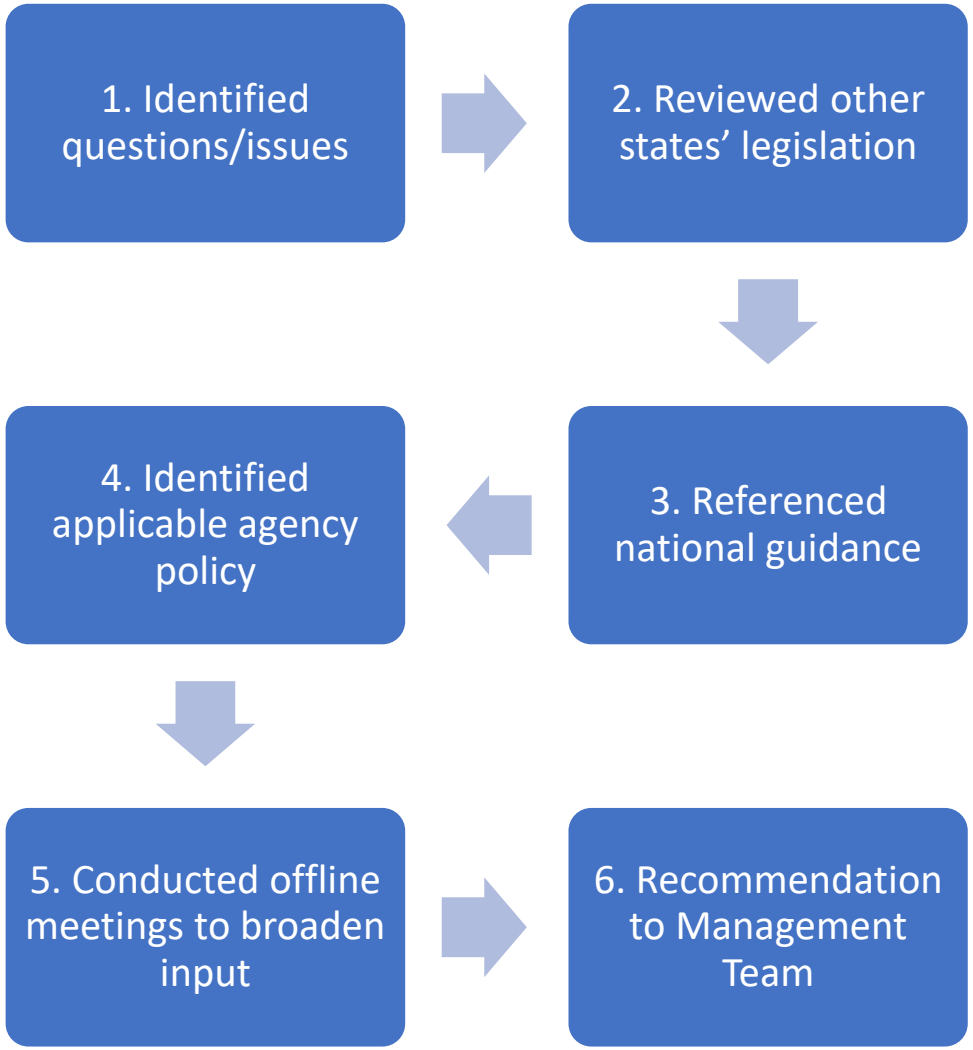
- Key parts of legislation



https://www.legis.iowa.gov/legislation/BillBook?ga=88&ba=sf302

Working Group Process

- Established a multidisciplinary working group to:
  - Identify needs and challenges
  - Provide recommendations regarding administrative rules



Rulemaking Recommendations

- Add new rule chapter on AV L3-5
- Identify AV operational restrictions in vehicle registration and titling
- Identify on-demand AV networks
- Identify AV operational restrictions in commercial motor vehicle registration and titling
- ***Establish parameters to manage AV testing***

Legislative Considerations

- Revise definitions for consistency
  - Level 3-5
  - Driverless-capable vehicle to ADS-equipped vehicle
- ***Address assignment of liability for traffic violations***
  - Similar to responsibility assignment for accidents

Agency Actions

- Build organizational capacity (internal)
- Maintain ATC (external)
- CMV legal assessment
- ***Traffic law review***
- Infrastructure guidance
- Identify in crashes

Questions?

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Ginny Crowson Crowson@acconsultants.org

Iowa CAT Service Layer Plan:
https://iowadot.gov/TSMO/IowaCAT.pdf

Iowa Senate File 302:
https://www.legis.iowa.gov/legislation/BillBook?ga=88&ba=sf302

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Other Public Sector Updates

AKDOT&PF

Municipality of Anchorage

CARTS

Others

Thank you for joining us today!

Please e-mail Jeremy (Schroeder@acconsultants.org) if you want an "attendance certificate" as documentation for PDH requirements.