



IOWA ADVISORY COUNCIL ON  
**AUTOMATED  
TRANSPORTATION**

## MPO & RPA QUARTERLY MEETING

### Automated Transportation Planning Considerations

September 21,  
2022

## PRESENTATION OVERVIEW

- Iowa Advisory Council on Automated Transportation (ATC)
- Iowa Automated Transportation (AT) Vision
- CAT in Planning Working Group & Membership
- **AT Planning Considerations Guidance Document**
  - Overview & Definitions
  - Planning Considerations
  - Advancing CAT through Planning Tools
- Resources

# IOWA ADVISORY COUNCIL ON AUTOMATED TRANSPORTATION (ATC)

## Vision

To create an AT-ready driving environment in Iowa for the safe movement of people and freight for a thriving Iowa economy

## Mission

Lead, coordinate, and enable the advancement of automated transportation systems in Iowa

<https://iowadrivingav.org/>

## Membership

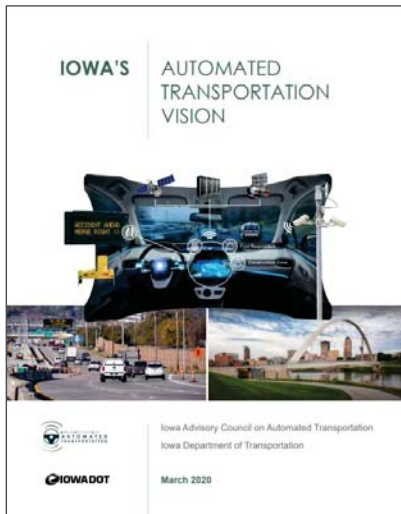
American Association of Motor Vehicle Administrators  
 Associated General Contractors of Iowa  
 Des Moines Area Community College  
 Des Moines Area MPO  
 Federal Highway Administration, Iowa Division  
 Federal Motor Carrier Safety Administration, Iowa Division  
 Freight Advisory Council  
 Iowa Association of Business and Industry  
 Iowa Bicycle Coalition  
 Iowa Communications Network  
 Iowa Department of Agriculture and Land Stewardship  
 Iowa Department of Natural Resources  
 Iowa Department of Public Safety  
 Iowa Department of Revenue  
 Iowa Department of Transportation  
 Iowa Economic Development Authority  
 Iowa House of Representatives  
 Iowa Insurance Division  
 Iowa League of Cities  
 Iowa Motor Truck Association  
 Iowa Public Transit Association  
 Iowa Senate  
 Iowa State Association of Counties  
 Iowa State University  
 National Highway Traffic Safety Administration, Region 7  
 Technology Association of Iowa  
 University of Iowa



# IOWA ADVISORY COUNCIL ON AUTOMATED TRANSPORTATION (ATC)



# IOWA AUTOMATED TRANSPORTATION VISION



- Completed March '20
- Iowa's AT Road-Map
- Identifies ~24 tactics
  - Assess & Advance Infrastructure Readiness
  - Ensure CAT in Planning
  - Modify Administrative Rules
  - Business/Community College Engagement (Labor & Workforce)
  - Capture AV Crash Data

<https://iowadrivingav.org/pdf/ATC-Vision.pdf>



## CAT IN PLANNING WORKING GROUP

### Purpose & Overview

- Working group to support this AT Vision Tactic
- Development of a white-paper resource to support CAT including:
  - Manageable and actionable planning considerations
  - Identify strategic considerations when prioritizing and allocating resources for investment
  - Identification of related planning tools (e.g., comprehensive plans, land use/zoning, screening tools)
  - Identification of related functional areas (e.g., policy, planning, engineering, public works, public safety)

### Membership

#### Consultant

- Brian Willham (HR Green)
- Maddie Adkins (MSA Professional Services)
- Marcus Coenen (FHU)
- John Peterson (Peterson Planning Strategies)
- Rose Schroder (Bolton & Menk)

#### MPO

- Dylan Mullenix (Des Moines Area MPO) (Co-lead)
- Kent Ralston (MPO of Johnson County)

#### Iowa DOT

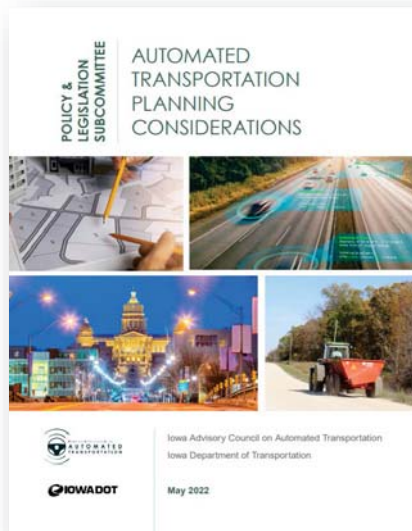
- Garrett Pedersen (Co-lead)
- Adam Shell

#### Transit

- Tony Filippini (Des Moines Area Regional Transit)



# AT PLANNING CONSIDERATIONS



## Contents

- Introduction
- CAT Overview and Definitions
- Planning Considerations
- Advancing CAT Through Planning Tools
- Conclusion & Next Steps

Source: <https://iowadrivingav.org/pdf/Iowa-ATC-PLSubcommittee-AT-Planning-Considerations.pdf>



# AT PLANNING CONSIDERATIONS

## Guidance Document Contents

### Introduction

### CAT Overview & Definitions

- What is CAT?
- Automation Use Cases
- Levels of Automation
- Industry Outlook
- Other Key Terminology & Concepts (e.g., ADAS, ADS, ODD, TDM)
- Anticipated Deployment Timelines
- Anticipated Changes – Opportunities and Risks

### Cooperative Automated Transportation (CAT)

**All modes** of transportation **working together to improve safety, mobility, equity, and operations efficiency through interdependent vehicle and systems automation and information exchange**

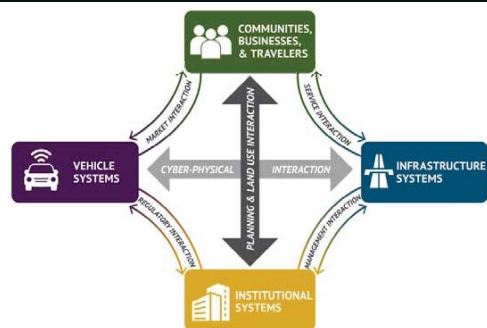


Figure 2 - CAT Systems & Users



# AT PLANNING CONSIDERATIONS

## Guidance Document Contents

### Planning Considerations

- American Planning Association (APA) Autonomous Mobility recommendations
  - Establish parking standards and requirements
  - Enhance transportation demand management efforts
  - Right-size the right-of-way to the human scale, reallocating space to alternative modes (builds upon the complete streets movement)
  - Utilize AV technology to improve transit services and extend service to underserved areas



# AT PLANNING CONSIDERATIONS

## Guidance Document Contents

### Planning Considerations continued...

- Add "pause points" to policies and procedures to allow for CAT considerations
- Minimize throwaway or sunk costs due to future obsolescence
- Seek policies and investments that are dual benefit, supporting today's users with tomorrow's technology needs
- Emphasize well-maintained infrastructure systems to support AV readiness
- Identify an individual to effectively champion CAT considerations within planning and other related functions
- Consider the latest research regarding future use cases



# AT PLANNING CONSIDERATIONS

## Guidance Document Contents

### Advancing CAT Through Planning Tools

- Long-Range Transportation Plan
- Comprehensive Plan
- Strategic Plan
- Code of Ordinance/Zoning Code/Subdivision Code

### Advancing CAT Through Planning Tools through three effort levels

- **Baseline** – building awareness
- **Medium** – Readiness activities
- **High** – Implementation

### Conclusion



## COOPERATIVE AUTOMATED TRANSPORTATION (CAT) KEY CONSIDERATIONS



Figure 5 - CAT Systems & Users



## RESOURCES

### ATC P&L Subcommittee - AT Planning Considerations guidance document

- <https://iowadrivingav.org/pdf/Iowa-ATC-PLSubcommittee-AT-Planning-Considerations.pdf>

### CAT Deployment & Innovation Timelines

- Noted in the AT Planning Considerations document – available upon request
- CAV & mobility business investment, forecast, and timeline analysis resources (e.g. Deloitte, McKinsey & Company, VTPI)

### AT Press Clippings

- Bi-weekly email bulletin
- Sign-up here: <https://iowadrivingav.org/clippings.aspx>

### FHWA – National Roadway Integration of Automated Driving Systems Concept of Operations (ConOps)

- Anticipated Q1 2023
- Contents (as of October 2021)
  - Introduction, Business Case for Roadway-ADS Integration, ADS Use Cases and Deployment Contexts, System Needs for Roadway-ADS Integration, Operational Concepts and Capabilities for ADS Integrations, Roadway-ADS Integration Scenarios, ConOps Implementation Considerations, ConOps Update Process



# THANK YOU