1. LOOKING AHEAD

Just over 100 years ago, in 1917-1918, Iowa's first interurban highway was constructed with the paving of 11 miles between Mason City and Clear Lake. During this same era, the Ford Model T became the first automobile truly affordable to the masses. By the mid-20th century, postwar demand led to rapidly escalating auto and truck sales, producing heavy traffic on a neglected highway system. In response to these trends, along with mobility and defense concerns, the Federal-Aid Highway Acts of 1944 and 1956 funneled billions of dollars to the nation's highways and new Interstate Highway System. The Iowa General Assembly also created a dedicated fund to direct road user taxes to the state's primary, secondary, and municipal roads.

Just a half-century later, the momentum began to shift. A century of highway-centric system development has slowed, and philosophies regarding land use and alternative transportation modes have been evolving. Many experts are predicting that within the next few decades there will be widespread adoption of new technologies that have the potential to revolutionize travel. The transportation system is also recovering from impacts of the COVID-19 pandemic and the disruptions it has wrought since March 2020. While some forms of travel have returned to pre-pandemic levels, many passenger modes have not. Some changes, such as increased teleworking and rapid escalation of online shopping, may be lasting impacts of the pandemic.

Transportation in Iowa has always been an evolution – from horses and buggies to trains and trollies to cars and trucks. Now more than ever, it is critical that we plan for the system of the future, and not simply rebuild the system of today. This will require informed and dynamic investment in the transportation system and an increasing emphasis on accessibility and mobility options for system users. The past century has seen incredible transportation advancements. This document seeks to position the state of Iowa for the coming decades of change.

1.1 What the State Long Range Transportation Plan (SLRTP) is

Iowa's State Long Range Transportation Plan (SLRTP) is a system-level plan that forecasts the demand for transportation infrastructure and services to 2050 based on consideration of social, economic, travel, and technological changes likely to occur during this time. The SLRTP provides the long-range vision, policies, and decision-making framework that will guide investments in Iowa's transportation system over the coming years to meet these needs. Iowa is required to have a long range transportation plan by both federal and state code. The plan covers all modes of transportation in the state, for both people and goods. The SLRTP is not project specific, but provides the foundational framework to help guide Iowa Department of Transportation (DOT) policies, objectives, and investments across modes.

The plan is updated every five years because Iowa's transportation system is ever-changing. Proactively planning for the future of the system is critical to ensure people and goods can get where they need to go in a safe manner. The needs for the system are continually evolving due to changes in demographics, land use, travel patterns, technology, legislation, and available funding. The SLRTP establishes the vision and objectives for the state's multimodal transportation system, identifies existing and emerging needs, risks, and challenges, and recommends strategies to achieve the vision for the transportation system. The SLRTP also supports a continued emphasis on stewardship. The Iowa DOT views stewardship as efficient investment and prudent, responsible management of the existing transportation system.

This SLRTP is the third in the current series of long-range plans. In 2012, a policy level plan was adopted. In 2017, the plan was expanded to identify primary investment areas, categorize future needs across modes, and provide strategies to achieve the system vision. The 2022 SLRTP planning effort and document builds on these past plans with enhancements that include the following.

- Additional focus on emerging planning considerations
- Establishment of system objectives
- Expanded analysis of highway system needs and risks
- Updated strategies to implement the plan
- Development of Iowa DOT's rightsizing policy

As Iowa changes and the transportation system evolves, one constant will be that the safe and efficient movement of people and goods is essential for growing Iowa's economy and supporting Iowans' quality of life.

1.2 What the SLRTP Includes

Key components of the document include the following.

Trends	An analysis of demographic and economic trends and what these trends mean for Iowa's future.
System condition	An overview of each mode within the transportation system as well as passenger and freight trends.
Vision and system objectives	The vision for Iowa's future transportation system and objectives to help achieve it.
Planning considerations	An overview of several issues and factors that influence transportation planning.
Needs and risks	Analysis of current and future needs and risks by mode.
Strategies	Actions and initiatives to help implement the SLRTP and support system objectives.
Financial analysis	Projected annual costs and revenues for each transportation mode and a discussion related to addressing funding shortfalls.
Implementation	Programming future investments and ongoing performance monitoring.

1.3 How the SLRTP was Developed

Development of the SLRTP involved input from a variety of stakeholders and resources. While it is impossible to summarize all the discussions, analysis, research, resources, outreach, and meetings that took place during plan development, the efforts identified below played a critical role in shaping this planning effort and document.

Public Input

The Iowa DOT's current public participation process[1] identifies several steps to be used in developing planning documents to ensure opportunities for public input, review, and comment. The planning process for this effort built off the work and input gathering conducted as part of the 2017 plan update. For the 2022 SLRTP, emphasis was placed on use of a wide-ranging internal steering committee, regular discussions with the Iowa Transportation Commission (Commission) and metropolitan and regional planning partners, a public input survey to gather feedback on a number of key areas, and broad distribution of the draft document to stakeholders, resource agencies, and the public for review and feedback.

Public Survey

In order to gather public input during the planning process, a public survey was conducted during SLRTP development in 2021. The survey is described briefly here, and its results have been integrated into the plan. A summary of survey results can be found in the Appendix.

The survey was made available in May 2021 and advertised through a press release, social media, and extensive stakeholder distribution. Responses were received from all regions of the state, but there was relatively limited feedback overall. The results still provided useful information for SLRTP development.

The survey asked questions about the way individuals traveled, worked, and shopped before and during the COVID-19 pandemic, which helped provide a snapshot of changes due to the pandemic. The survey also asked about people's interest in using various modes or types of infrastructure, as well as their feelings on the safety, condition, ease of access, and amount of delay experienced in doing so. Other questions asked about the impact of fuel prices on travel patterns, interest in electric vehicles, and thoughts on current driver assistance features in vehicles as well as future vehicle automation.

Public Comment Period

The draft SLRTP was released for a 45-day public comment period in February 2022 and advertised through a press release, social media, and extensive stakeholder distribution. During this time, comments were accepted through a comment box on the website, email, standard mail, phone, or fax. All comments were reviewed and applicable changes to the draft SLRTP were considered; follow-up with commenters also occurred to address specific questions. The following statistics summarize the level of public input achieved during the comment period.

- Webpage visitors: 567
- Written comments received: 17

[1] Iowa DOT's public participation adheres to the process outlined in 23 CFR 450.210(a). The process can be viewed at http://www.iowadot.gov/program_management/StatePublicParticipationProcess.pdf.

Stakeholder Input

Iowa Transportation Commission

The Commission sets policy for the department through its approval of the SLRTP and the Iowa Transportation Improvement Program (Five-Year Program). The governor appoints the seven commissioners, with political and gender balance required. Commissioners are confirmed by the Iowa Senate and serve four-year terms on a staggered basis. Meetings occur monthly, with eight of the 12 Commission meetings held in Ames. The other four meetings involve tours and stakeholder input opportunities around the state. The meetings are open to the public and streamed online.

Commission meetings typically include an informal workshop and formal business meeting. Commission workshops were used to inform the Commissioners on development of the SLRTP and ask for their feedback. Presentations were made at six Commission workshops between November 2020 and April 2022 prior to the SLRTP being considered for adoption in May 2022. These presentations were also made available online on the project website.

Internal Stakeholders

Individuals representing a diverse cross section of the Iowa DOT were involved in the development of the SLRTP through a combination of topical communication and meetings as well as a formal Internal Planning Steering Committee (IPSC). The IPSC met bimonthly to provide guidance for the planning process and serve as a sounding board for SLRTP development. The IPSC included broad representation from across the department to ensure the inclusion of a wide range of perspectives, and also included a Federal Highway Administration (FHWA) liaison. Staff members from the following Iowa DOT divisions and bureaus participated in the IPSC during SLRTP development.

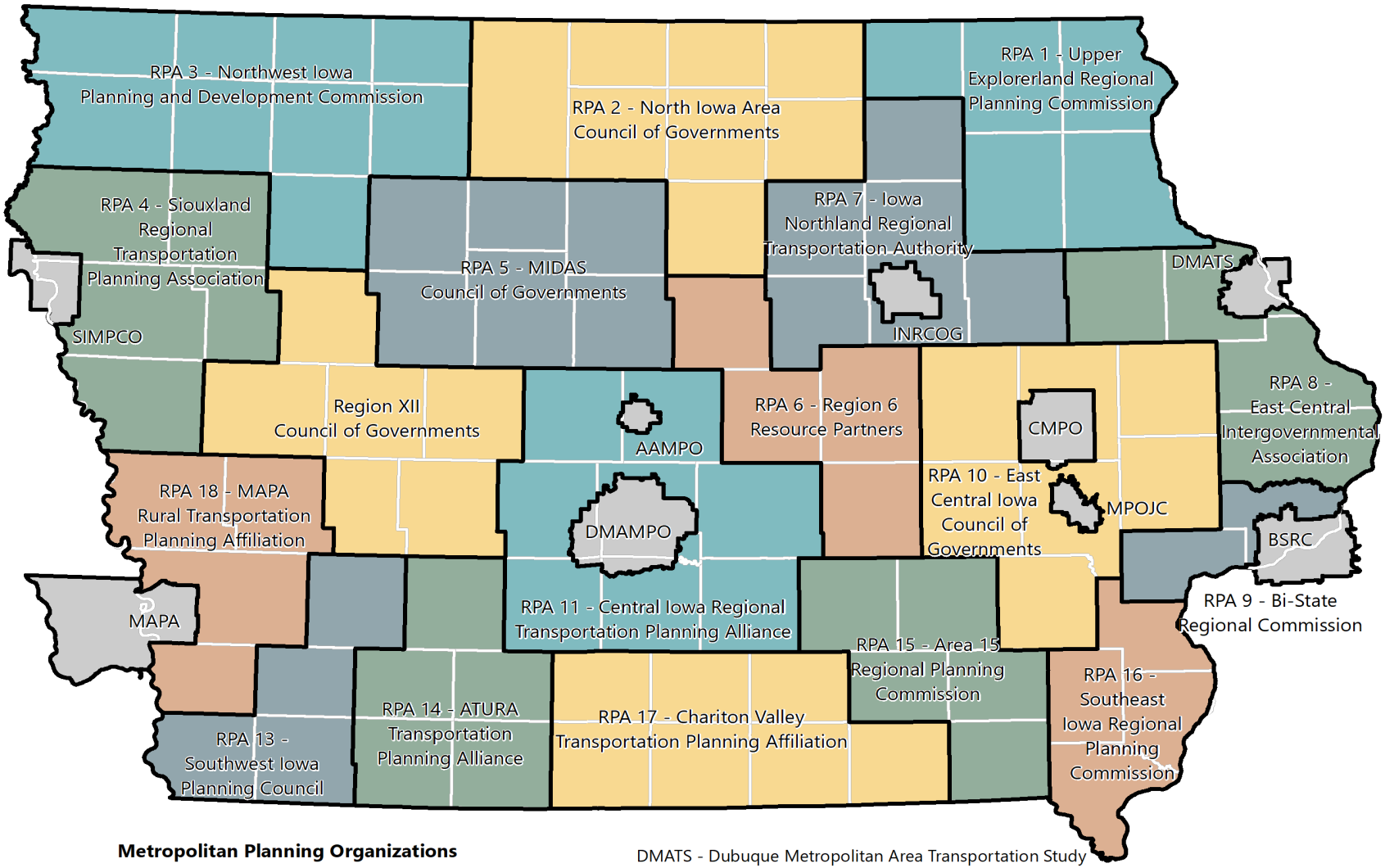
- Design
- Director's staff
- DOT Districts
- Field Operations
- Gov't and Community Relations
- Location and Environment
- Maintenance
- Modal Transportation
- Motor Vehicle
- Organizational Improvement
- Program Management
- Project Development
- Project Management
- Right of Way
- Strategic Communications
- Systems Operations
- Systems Planning
- Traffic & Safety
- Traffic Operations
- Transportation Development

State Planning Agencies

The state's transportation planning agencies, which include metropolitan planning organizations (MPOs) and regional planning affiliations (RPAs), are partners for transportation planning with the Iowa DOT and were coordinated with during the development of the SLRTP. MPOs conduct transportation planning and programming activities in the state's nine urban areas with populations greater than 50,000. Iowa's 18 RPAs conduct transportation planning and programming activities in the remaining nonmetropolitan areas of the state, covering all 99 counties. The locations of these agencies are shown in Figure 1.1.

The MPOs and RPAs were engaged regularly throughout plan development at quarterly meetings held between the agencies and the Iowa DOT. In addition, MPO and RPA long-range transportation plans were referenced during the development of the SLRTP. Ultimately, it is anticipated that the SLRTP will be useful to MPOs and RPAs in their transportation planning and programming activities, to help define Iowa DOT needs, risks, strategies, and objectives and integrate them into their processes as applicable.

Figure 1.1: Iowa metropolitan planning organizations (MPOs) and regional planning affiliations (RPAs)



Metropolitan Planning Organizations

AAMPO - Ames Area Metropolitan Planning Organization
BSRC - Bi-State Regional Commission
CMPO - Corridor Metropolitan Planning Organization
DMAMPO - Des Moines Area Metropolitan Planning Organization
DMATS - Dubuque Metropolitan Area Transportation Study
INRCOG - Iowa Northland Regional Council of Governments
MAPA - Metropolitan Area Planning Agency
MPOJC - Metropolitan Planning Organization of Johnson County
SIMPCO - Siouxland Interstate Metropolitan Planning Council

Source: Iowa DOT

Interagency and External Stakeholder Consultation

Another important part of developing the SLRTP is consulting with other various government agencies, including federal, state, tribal, and local governments. Consultation with these agencies was achieved in two main ways: by reviewing plans and maps from these entities, and by inviting them to review and comment on draft plan content. In addition to government agencies, a variety of modal interest groups were invited to comment on the draft plan. The list of agencies and groups contacted as part of the consultation process is included in the Appendix.

Other Plans and Studies

A large variety of plans, reports, and studies were considered throughout the SLRTP development process. Many of these documents will be referenced throughout the plan; a full list is included in the Appendix. In particular, other Iowa DOT specialized, system, and modal plans are extensively referenced in the plan; future updates to these plans will also involve incorporating material that is new in this SLRTP, such as the system objectives discussed in Chapter 4.

Stakeholder Feedback

Early feedback from stakeholders helped shape the information and strategies included in this plan, particularly the system objectives and planning considerations discussed in Chapter 4 and the strategies discussed in Chapter 5. Early in the planning process, input was sought from the IPSC and MPOs/RPAs on transportation issues and trends that would need to be considered in the SLRTP. The following items were the top general transportation priorities based on this feedback.

- **Funding:** There are concerns with the highway trust fund's long-term solvency; additional long-term funding sources are needed.
- **Resiliency:** We need to increase system resiliency and proactively plan for extreme weather events.
- **Workforce:** We need to plan for and react to teleworking changes at both an organizational level and a transportation system level.
- **Technology:** We need to plan for connected and automated transportation, including human-technology interactions, safety, and related infrastructure needs.
- **Asset management:** Aging infrastructure is a concern, and we need alternative and innovative methods of funding and addressing stewardship needs.
- **Bicycle/pedestrian:** Infrastructure accommodations need to be further incorporated into the planning and project development process.
- **Safety:** We need to address prevalent crash causes.
- **Multimodal:** Multimodal accessibility and connectivity are needed across the state for all road users, particularly for non-drivers.
- **Sustainability:** We need to plan for electric/alternative fuel vehicles of all types and their associated infrastructure needs and funding implications.
- **Rightsizing:** Capacity expansion is not sustainable; we should emphasize travel time reliability and the use of travel demand management and integrated corridor management strategies.
- **Analytical capabilities:** We need asset management data, tools, and strategies to help evaluate our system's needs and prioritize limited funding in an optimal way.

Director's roundtables were also held in 2021 to gather feedback from business, engineering, and technology stakeholders regarding important planning issues to be considered in the short- and long-term. Feedback included the following.

- There is shared appreciation for a truly multimodal system, as it is within a multimodal system that business logistics issues intersect with quality of life and mobility issues. The latter can be a way to begin addressing business concerns, such as attracting and retaining workers.
- There is a need for multijurisdictional planning as many transportation issues cross city, county, and state lines.
- There are short-term challenges with the misuse and misunderstanding of the current technology in vehicles; public education will be key.
- It is necessary to increase the workforce size and skills related to areas experiencing existing shortages, such as truck drivers, and emerging technology areas, such as automated vehicles.
- It is important to apply systemic safety solutions and use technology to reduce crashes.
- The department should continue to utilize flexible designs, integrate performance-based practical design into projects, and implement the Iowa DOT Complete Streets Policy.

1.4 How the SLRTP is Used

The SLRTP is a multimodal transportation planning effort intended to assist the Commission and department in making informed transportation investment decisions for the state. It helps provide policy direction for the types of investments the department should be making, and also identifies specific strategies and corridor-level needs and risks to be considered. Additionally, MPO and RPA policy boards and technical committees may use the plan to help capture the Iowa DOT's perspective for their local planning efforts and guiding their own investment decisions.

Projects programmed within the Iowa DOT Five-Year Program, which is approved by the Commission, support implementation of the SLRTP. In addition, more specialized plans will provide further detail concerning the implementation of elements of the plan. Figure 1.2 highlights the SLRTP's role in the generalized transportation planning cycle, the steps of which are further defined below.

Figure 1.2: Generalized transportation planning and programming cycle

Source: Iowa DOT

Public policy and input: Congress outlines specific requirements and factors to be addressed in planning and programming activities. Federal and state legislation provide parameters for the administration of transportation funds. The governor, state legislature, and citizens provide statewide direction; the Iowa Code lays out numerous program operational criteria.

Transportation plan: The SLRTP serves as a guide for the development of transportation policies, strategies, and improvements between now and 2050. The SLRTP evaluates transportation in Iowa from a system perspective, focusing on the movement of people and freight.

Five-Year Program: The Five-Year Program is a listing of specific Iowa DOT investments and is approved by the Commission annually. Major elements include individual modal projects scheduled over the next five years, sources of funds, annual accomplishments, and criteria/eligibility of different modal funding programs.

Performance monitoring: The Iowa DOT has been involved with performance monitoring and reporting for many years. The SLRTP documents the measures and targets that are federally required. It also provides a performance management framework for the Iowa DOT through its definition of system objectives and areas of measurement.

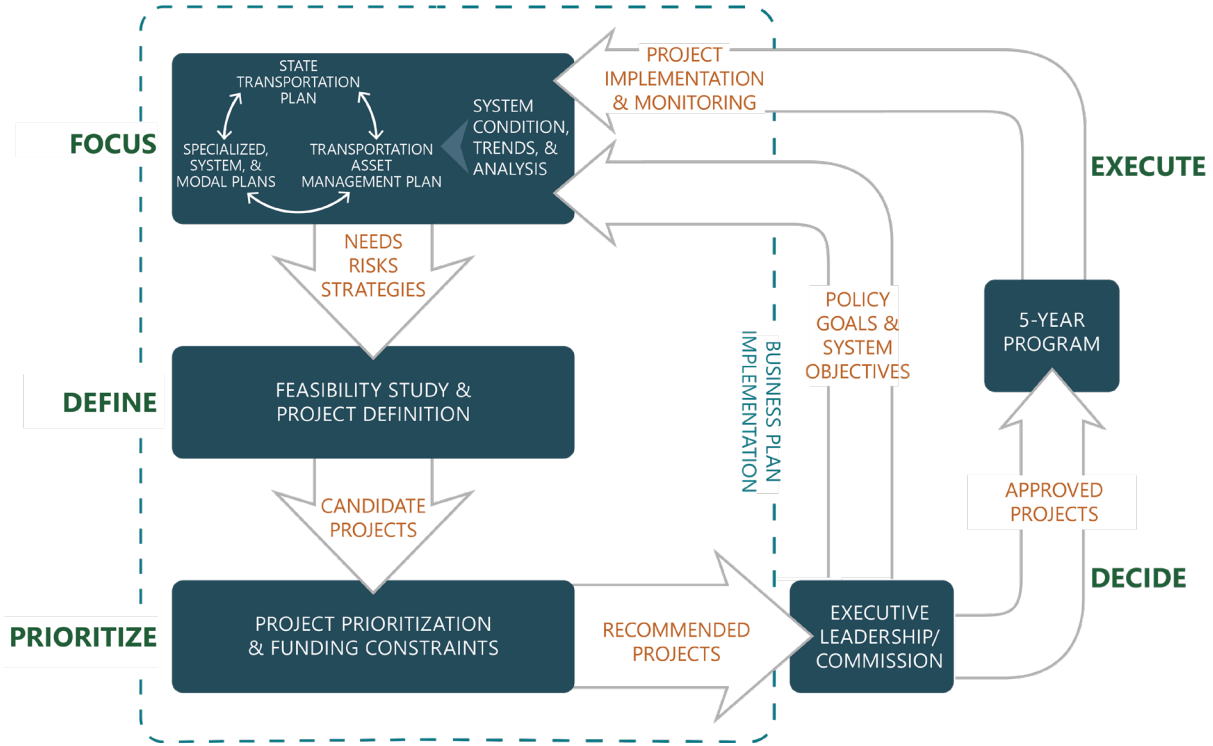
Beyond this generalized four-step cycle, Figure 1.3 helps document the overall planning and programming process. Iowa DOT policy goals and system objectives are established by the Iowa DOT Executive Leadership Team and Commission. These are combined with analysis of system condition and trends to help shape overarching planning documents, including the SLRTP. These planning efforts typically have a 10- to 30-year horizon and help **focus** attention on needs, risks, and strategies to be pursued for the benefit of the system. These broader topics are then further **defined** through efforts such as feasibility studies, which begin to review specific needs at a corridor or similar level, and through the definition of specific projects.

Once candidate projects are developed, they must be **prioritized** based on various factors and funding availability. Recommended projects then move forward to the Iowa DOT Executive Leadership Team and the Commission for consideration. Once it is **decided** what projects to target funds for, they become part of the Five-Year Program and move forward towards **execution**. Following the implementation of projects, monitoring of system performance helps complete the cycle and reinform the overarching planning processes.

The Iowa DOT Business Plan helps with the short-term implementation of the focusing, defining, and prioritizing stages. The 2021-2025 Business Plan identifies a sequence of strategic alignment steps to help lead to implementation of the SLRTP's vision, including documentation of the Iowa DOT's core values and core focus and the establishment of 1-year objectives, 5-year priority goals, and a 10-year target. The 5-year priority goals, listed below, most closely align with the SLRTP update cycle and all relate to themes throughout the plan.

- Goal 1 – Improve transportation system safety and performance
- Goal 2 – Improve customer service
- Goal 3 – Advance workforce for future challenges and opportunities
- Goal 4 – Secure stable and sustainable funding
- Goal 5 – Grow innovation

Figure 1.3: Relationship between elements of the planning and programming process



Source: Iowa DOT