Chapter Two: Aviation System Criteria

This chapter establishes the overall framework for the development of Iowa's aviation system, which will meet the needs of aviation users in the state. The vision established for the Iowa aviation system remains the basis for developing goals and objectives.

The 2004 Iowa Aviation System Plan identified five system goals that provided the framework for developing the existing system over the last six years. Significant federal and state funds have been invested in the system toward meeting the prior goals. The Iowa Department of Transportation - Office of Aviation (Office of Aviation) and the Aviation System Plan advisory committee reviewed the 2004 goals and objectives to determine necessary updates or changes. This chapter reflects those changes and sets the new framework for developing the system over the next 20 years.

The establishment of specific goals provides the aviation system's structure, identifies specific objectives needed to realize the goals, and establishes performance measurement criteria that will evaluate how well the system meets the goals. Established goals are expected to facilitate meeting existing and future user needs, as well as provide guidance for decision making, planning, and infrastructure investment. The combination of these elements provides the platform for the development and evaluation of the entire system.

This chapter defines the goals, objectives, and performance measures that will provide the framework for development and evaluation of the system. The relationship between goals, objectives, and performance measures can be seen graphically in **Figure 2-1**.

Figure 2-1: Relationship between Goals, Objectives, and Performance Measures

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┌─────────────────────────────────────────────────────────┐
│                          Goals                           │
│                                                          │
│   Key focus areas to guide the aviation system toward    │
│                    meeting the vision                    │
│             (What the system should look like)           │
└─────────────────────────────────────────────────────────┘
                             ▼
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│                       Objectives                         │
│                                                          │
│    Criterion defining what is needed to achieve the      │
│                          goals                           │
│                (Means to achieve the goal)               │
└─────────────────────────────────────────────────────────┘
                             ▼
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│                   Performance Measures                   │
│                                                          │
│  Specific measurements to evaluate the system's progress │
│              in achieving the objectives                 │
│             (Methods to evaluate the objectives)         │
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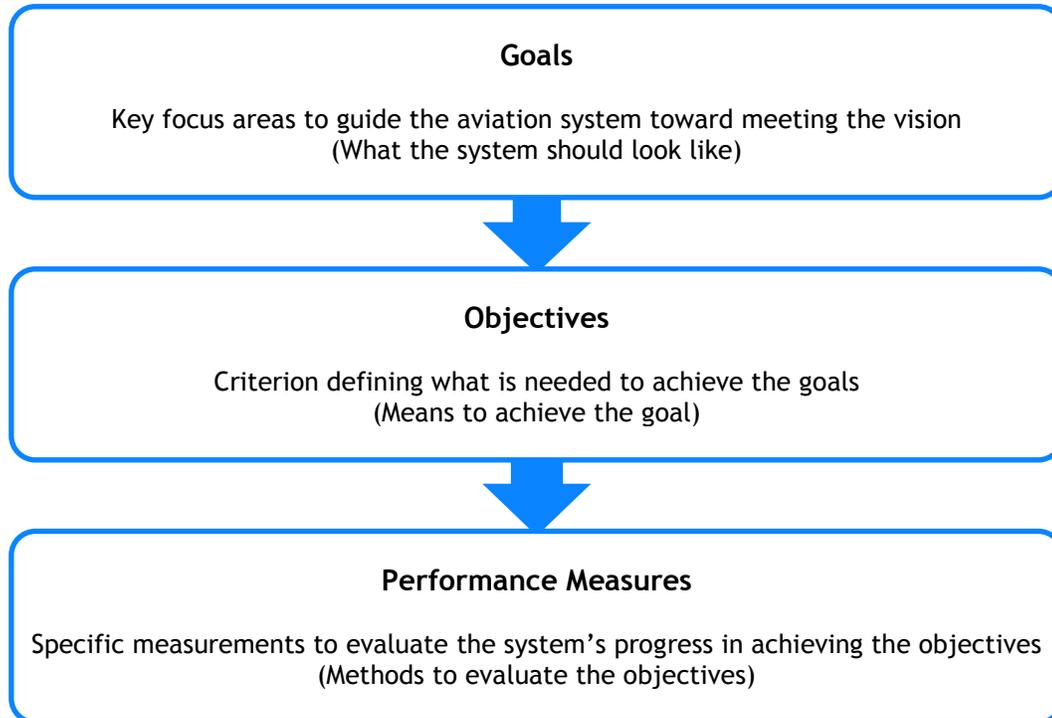
2.1 Aviation System Goals

The goals of the 2010 Iowa Aviation System Plan identify key areas and establish the framework necessary to guide the system toward meeting the established vision, based on existing and anticipated user needs. The six goals established to meet the needs of aviation users and achieve the aviation system vision are as follows:

- **Safety and Security** – Provide a safe and secure system of airports.

- **Infrastructure and User Support** – Provide an airport system that meets existing and future user needs.

- **Accessibility** – Provide a system of airports that is adequately accessible from both the ground and the air.

- **Economic Support** – Support economic development through the air transportation system.

- **Planning** – Establish airport related local planning to guide the development and operation of airports in Iowa.

- **Education and Outreach** – Provide local aviation education opportunities that promote understanding, safety, utilization, and career development.

2.1.a Objectives to Achieve Goals

Specific objectives define the means and methods to achieve each goal and are typically based on an assessment of existing and future user needs. Identification of these specific system objectives provides defined criteria that can be implemented to meet the goals. Objectives may target existing facilities or services as well as quantify future system needs that should be corrected. Objectives for each goal may not be the same for every airport, but may be adapted to the role that an airport serves within the system.

2.1.b Performance Measures to Achieve Objectives

Performance measures establish criteria to evaluate whether the system is meeting the stated objectives and identify the system's progress towards achieving the goals. Performance measures are typically expressed as a percentage and can be used to identify strengths and weaknesses in the system. As the evaluation identifies targets that are not met, the measurement criteria can help contribute to the development of plan recommendations to guide future system performance towards achieving the objectives. The desired percentages for meeting an objective varies based on what role a particular airport serves. Generally, the airports filling a more advanced role are expected to meet each objective with a higher percentage.

2.2 Safety and Security Goal

Safety is an important priority for any system that provides transportation infrastructure. Providing a safe and secure system for airport users should be a priority. Airports can help provide a safe operating environment by having clear approaches and by developing and implementing safety and security plans.

> **Goal - Safety and Security:**
>
> Provide a safe and secure system of airports

2.2.a Objectives to Achieve the Safety and Security Goal

Specific objectives identified to achieve Safety and Security goals include:

- **Airports having clear approaches to primary runways** – By keeping the areas that extend from each runway end of the primary runway clear of obstructions, aircraft have a safer environment to operate during landing and takeoff. This provides a safe environment for both aircraft operators and neighbors on the ground in the vicinity of an airport.

- **Airports having clear approaches to all runways** – Safe airfield environments are enhanced when each runway end is clear of obstructions.

- **Airports developing and implementing emergency response plans** – Emergency response plans identify procedures and guidelines for airport response to emergencies. Such plans better equip airports to react appropriately and timely in the event of an emergency.

- **Airports developing and implementing security plans** – Security plans outline procedures, regulations, and compliance measures to address site-specific security needs. Plans help airports become proactive in enhancing security measures at the airports.

2.2.b Performance Measures to Evaluate the Safety and Security Goal

To assess the system's progress in meeting the safety and security objectives, the following performance measures are evaluated:

- Percentage of airports with clear approaches to the primary runway.
- Percentage of airports with clear approaches to all runways.
- Percentage of airports with emergency response plans.
- Percentage of airports with airport security plans.

2.3 Infrastructure and User Support Goal

By providing an adequate infrastructure and an appropriate level of service, the system is able to support user needs. Maintenance and enhancement of the infrastructure and the ability to adapt to changing user needs strengthens the

> **Goal - Infrastructure and User Support:**
>
> Provide an airport system that meets current and future user needs

performance of the aviation system. Consequently, this goal looks to both maintain and enhance, where appropriate, the infrastructure and services of the system.

2.3.a Objectives to Achieve the Infrastructure and User Support Goal

Specific objectives identified to achieve the Infrastructure and User Support goal include:

- Airports meeting, or working toward meeting, the facility targets identified for their specific role.

- Airports meeting, or working toward meeting, the service targets identified for their specific role.

- Primary runways maintained to have a pavement condition index (PCI) of 70 or higher. The PCI is a numerical index based on a score of 0 to 100 that rates the condition of a hard surface. A rating of 100 is assigned to pavements in optimal condition.

- Airports maintaining an overall pavement condition index of 70 or higher.

- Based aircraft stored in covered hangars.

2.3.b Performance Measures to Evaluate the Infrastructure and User Support Goal

To assess the system's progress in meeting the infrastructure and user support objectives, the following performance measures are evaluated:

- Percentage of airports meeting 100 percent (100%) of facility targets for specific system roles.

- Percentage of airports meeting at least 75 percent (75%) of service targets for specific system roles.

- Percentage of airports with primary runway Pavement Condition Index of 70 or greater.

- Percentage of airports with overall airport Pavement Condition Index of 70 or greater.

- Percentage of airports with aircraft storage for all based aircraft.

2.4 Accessibility Goal

Providing a system of airports that is adequately accessible from both the ground and the air will ensure that the residents and visitors have access to airports across the state. Providing accessibility to airports equipped with special services such as weather reporting equipment and instrument

> **Goal – Accessibility:**
>
> Provide a system of airports that is adequately accessible from both the ground and the air

approaches gives users the ability to utilize the system in varying weather conditions. A geographically distributed system of aviation facilities allows greater ground access to the air transportation network. Providing an adequately accessible system of airports supports the efficient and effective movement of goods, people, and services.

2.4.a Objectives to Achieve the Accessibility Goal

Specific objectives identified to achieve the Accessibility goal include:

- A 30-minute or less drive time to a commercial service or enhanced service airport for most Iowa residents.

- A two-hour or less drive time to a commercial service airport for most Iowa residents.

- A 30-minute or less drive time to an airport with weather reporting equipment for most Iowa residents.

- A 30-minute or less drive time to an airport with an instrument approach for most Iowa residents.

- A 30-minute or less drive time to an airport with a vertically-guided approach (Instrument Landing System or Localizer Performance with Vertical Guidance) for the majority of Iowa residents.

2.4.b Performance Measures to Evaluate the Accessibility Goal

To assess the system's progress in meeting the accessibility objectives, the following performance measures are evaluated:

- Percentage of population within 30 minutes of a commercial service or enhanced service airport.

- Percentage of population within two hours of a commercial service airport.

- Percentage of population within 30 minutes of an airport with weather reporting capabilities.

- Percentage of population within 30 minutes of an airport with an instrument approach.

- Percentage of population within 30 minutes of an airport with an Instrument Landing System (ILS) or Localizer Performance with Vertical Guidance (LPV) approach.

2.5 Economic Support Goal

Air transportation is a key contributor to Iowa's economy. The 2009 report *Uses and Benefits of Aviation in Iowa* documents the economic impact and uses of air transportation by various sectors of the economy. Airports are important assets to

> **Goal – Economic Support:**
>
> Support economic development through the air transportation system

communities and businesses. Airports that partner with local economic development organizations can potentially enhance the impact that the airport has on the local and state economy.

2.5.a Objectives to Achieve the Economic Support Goal

Specific objectives identified to achieve the Economic Support goal include:

- Airports coordinating with local economic development offices, chambers of commerce, and city and county officials to include airport information in business promotion materials.

- Most of the state's employment is located within a 30-minute drive time of a commercial service or enhanced service airport.

- Airports supporting aircraft owned and operated by companies doing business in proximity to an airport.

2.5.b Performance Measures to Evaluate the Economic Support Goal

To assess the system's progress in meeting the economic support objectives, the following performance measures are evaluated:

- Percentage of airports that have coordinated with local economic development/chamber of commerce, city, and county officials to include airport information in business promotion materials.

- Percentage of employment within 30 minutes of a commercial service or enhanced service airport.

2.6 Planning Goal

Planning on a local level provides guidance for future development, investment protection for local jurisdictions, and long-term viability of the aviation system. Airport layout plans provide the overall framework for local airports to plan for future development; local zoning ordinances and comprehensive planning ensure that incompatible land use is minimized to sustain the current and future aviation system.

> **Goal – Planning:**
>
> Establish local planning to guide the development and operation of airports in Iowa

2.6.a Objectives to Achieve the Planning Goal

Specific objectives identified to achieve the Planning goal include:

- Airports having a current master plan or airport layout plan.
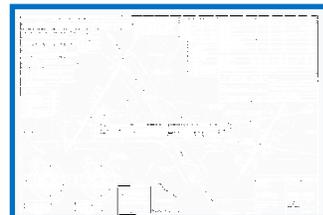
- Protection of airports by local height zoning ordinances.

- Development and use of city/county comprehensive plans or land use plans that address compatible land use around airports.

2.6.b Performance Measures to Evaluate the Planning Goal

To assess the system's progress in meeting the planning objectives, the following performance measures were evaluated:

- Percentage of airports with a current master plan and/or airport layout plans, appropriate to their role.

- Percentage of airports protected by airport height zoning according to their role.

- Percentage of airports with compatible land use planning through city/county comprehensive planning or land use plans.

2.7 Education and Outreach Goal

Education and public outreach contributes to the enhancement of the aviation system by creating a better understanding of airport uses, benefits, and safety needs for decision makers and non-aviation users.

> **Goal – Education and Outreach:**
>
> Provide local aviation education opportunities that promote understanding, safety, utilization, and career development

Education for the aviation community enhances safety and use of the system. Education and outreach may also foster new interest in aviation and strengthen community bonds.

2.7.a Objectives to Achieve the Education and Outreach Goal

Specific objectives identified to achieve the Education and Outreach goal include:

- Airports establishing regular communication programs – Communication programs developed by airports may include newsletters, press releases, web sites, or social media.

- Airports having based rental aircraft and availability of regular flight instruction.

- Airports hosting pilot safety programs.

- Airports hosting annual aviation events such as fly-ins, air shows, and static aircraft displays that may bring people to the airport to experience aviation.

- Airports hosting additional types of public events such as Business after Hours receptions or open houses.

- Airports hosting organized youth educational activities such as Young Eagles events or youth camps.

2.7.b Performance Measures to Evaluate the Education and Outreach Goal

To assess the system's progress in meeting the education and outreach objectives, the following performance measures are evaluated:

- Percentage of airports with regular communication programs.

- Percentage of airports that have rental aircraft based at airport and regular flight instruction.

- Percentage of airports that host pilot safety programs.

- Percentage of airports that host annual aviation events.

- Percentage of airports that host additional types of public events.

- Percentage of airports that host organized youth education activities.

2.8 Summary

The six goals described in this chapter provide the framework for the 2010 Iowa Aviation System Plan. These goals reflect the vision of the state aviation system to provide safe, quality facilities and services supporting the transportation needs, economy, and quality of life for all Iowa residents and visitors. Objectives and performance measures that have been identified help to quantify and measure the success of the system in achieving each goal. The goals, objectives, and performance measures provide the foundation for developing and evaluating the aviation system.