

AIRPORT PLANNING

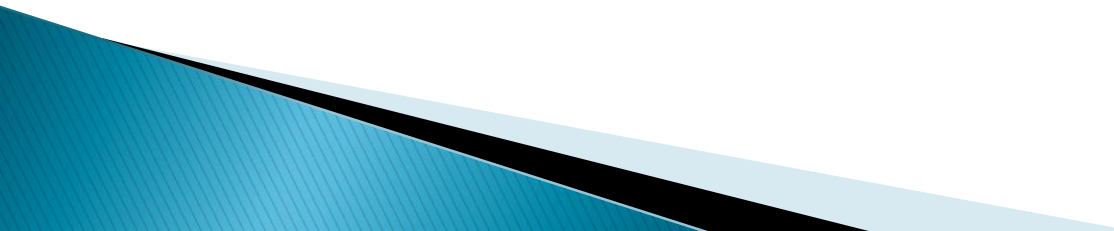
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Airport Planning

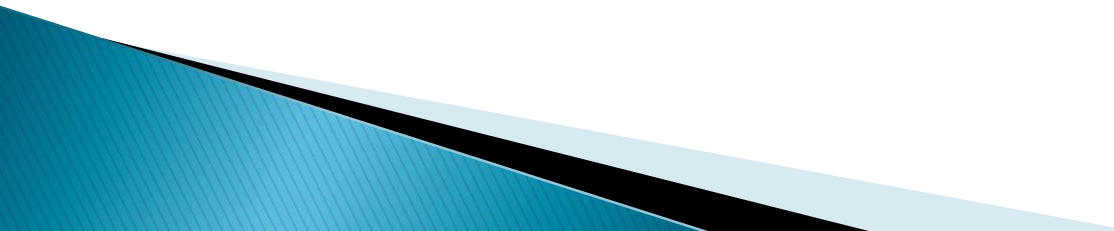
What is it-How is it achieved?

▶ **LET US GO OVER IT..**

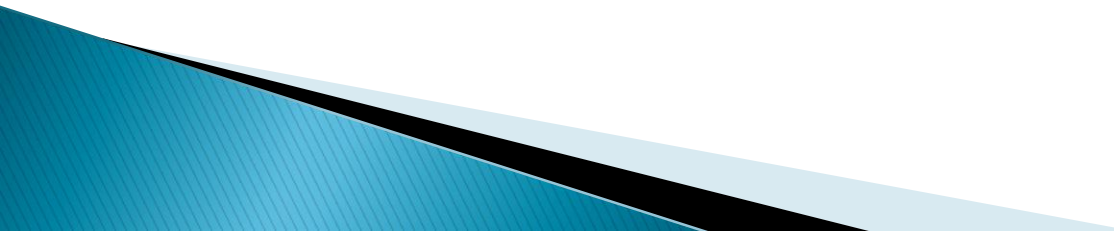
What is Airport Planning?

- ▶ While an Airport Management is responsible for **day to day operations**,
 - ▶ It is also responsible for
 - ▶ **planning for a coordinated system**
 - ▶ to meet the ongoing and
 - ▶ **future needs of the traveling public.**
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Airport Planning

- ▶ **Airport Planning** : “It is an organized strategy for the future management of
 - ▶ airport operations ,
 - ▶ facilities designs,
 - ▶ airfield configurations,
 - ▶ financial allocations and revenues,
 - ▶ environmental impacts, and
 - ▶ organizational structures to meet the future needs of the travelling public.
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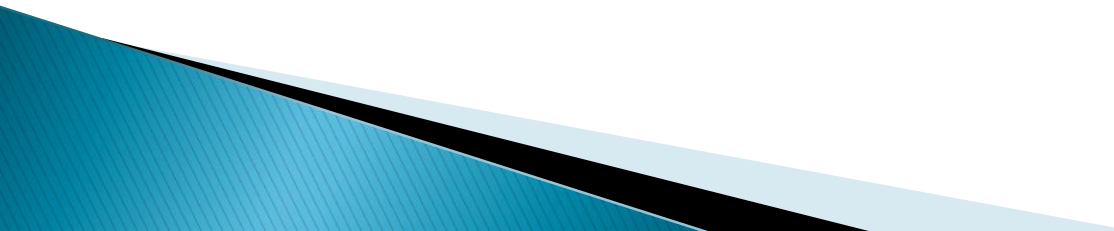
Inputs for Airport Planning

- ▶ **Facilities Planning-**
 - ▶ **focus on future needs for airport infrastructure such as**
 - ▶ **runway, taxiway, aircraft parking facilities ,**
 - ▶ **support facilities,**
 - ▶ **non-aeronautical land uses etc.**
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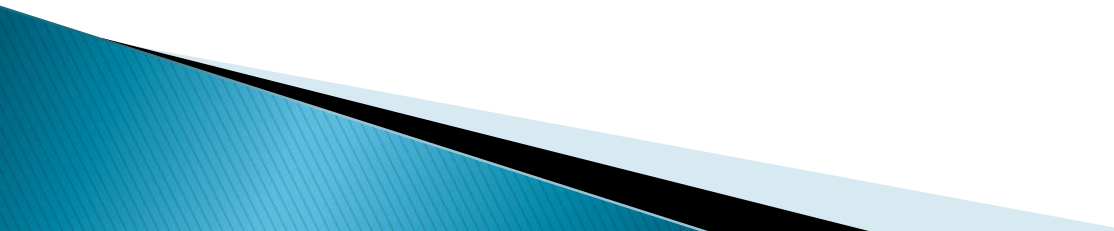
Inputs for Airport Planning

- ▶ **Environmental Planning:**
 - ▶ it concentrates on maintaining or improving
 - ▶ existing environmental planning includes
 - ▶ **land use plan,**
 - ▶ noise mitigation and
 - ▶ wildlife preservation
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Input for Airport Planning

- ▶ **Organizational Plg**– It entails the management future Human Resources requirement and Organization structure
 - ▶ **Strategic Planning**–All other planning activities into a coordinated effort to
 - ▶ **Maximize** the future potential of the airport.
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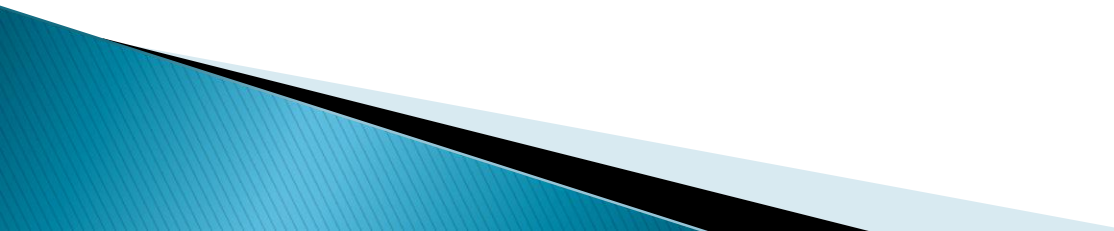
Input for Airport Planning

- ▶ **Financial/Economic Planning;** predicting future revenues and expenses, budgeting resources;
 - ▶ **Future economic** activities such as trade and commerce that exist on airport or off-airport property
 - ▶ **Either direct or indirect** result of airport operations.
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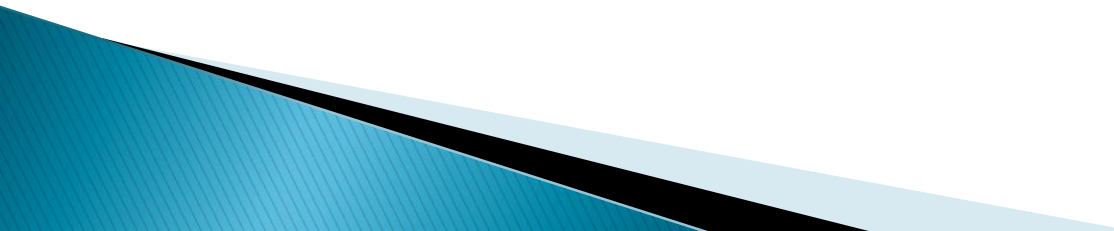
Planning Horizon

- ▶ **Planning Horizon:** length of time into the future that is considered is termed as planning horizon.
- ▶ Different planning efforts require different planning horizons.
- ▶ Say, organizational planning of staffing levels per shift for airport ops may require about three months. Where as facilities planning of an airfield including runway construction may take 2–3 years or more

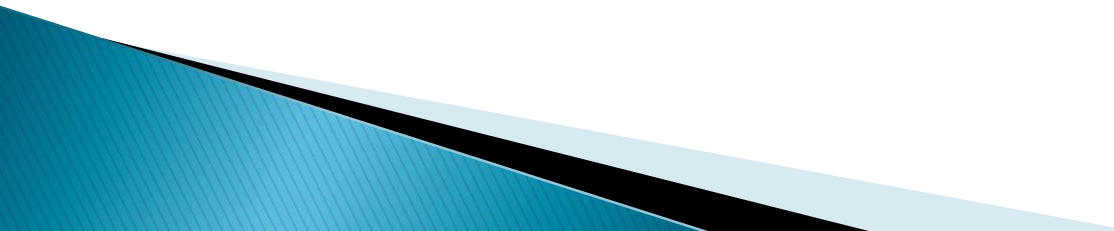
Airport Planning– Why Complex?

- ▶ Airport Planning is **a complex process** that the analysis of one activity without regard to the effect on other activities will not provide acceptable solutions.
 - ▶ An airport encompasses **a wide range of activities which have different and often conflicting requirements**. Yet, they are interdependent so that a single activity may limit the capacity of the entire complex
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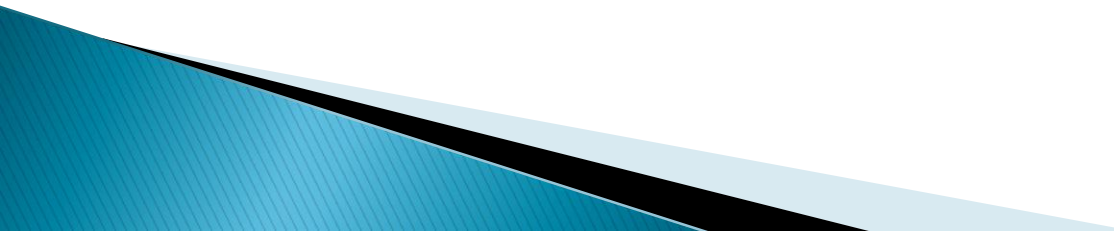
Why Complex?

- ▶ **Functional Domains** of an airport are: Landside– Terminal–Airside. Each of the domains are linked to each other and while planning, it is very important to keep this interactions.
 - ▶ The passenger and shipper of goods are interested primarily in **the overall door-to-door travel time** and not just the duration of the air journey. For this reason **access to airports is an essential consideration** in planning.
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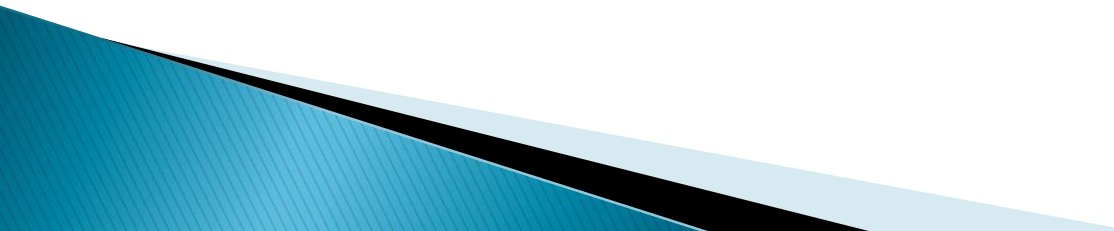
Key Input for Planning

- ▶ **Airport System plan** is a representation of the aviation facilities required
 - ▶ To meet the immediate and future needs of a Metropolitan area, Region, State, or Country.
 - ▶ The **National Plan** is a system plan
 - ▶ Representing the airport development needs of the Country/States..
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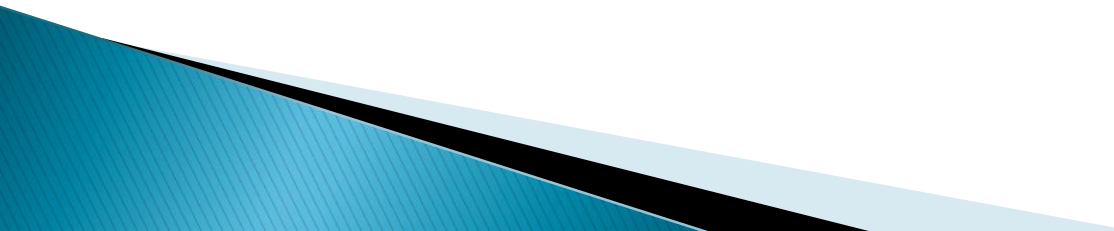
Key Input for Planning

- ▶ The system plan presents the
 - ▶ **recommendations for the general location and characteristics**
 - ▶ Of new airports and heliports and
 - ▶ The nature of expansion for existing ones **to meet forecasts** of aggregate demand.
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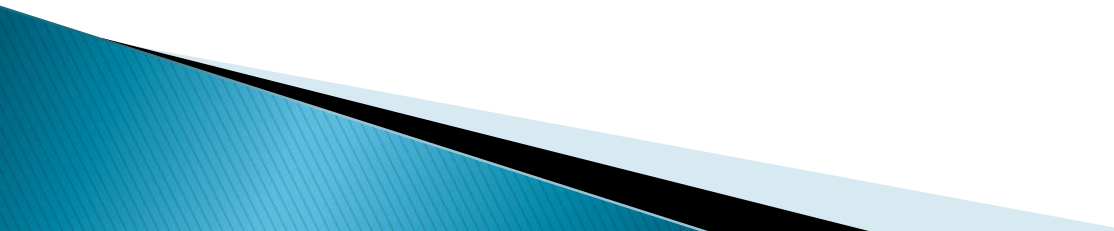
Elements in a Typical Airport System Planning

- ▶ The airport system planning process must be **consistent with state, regional, or national goals**
 - ▶ for transportation, land use, and the environment.
 - ▶ Exploration of issues that impact aviation in the study area
 - ▶ Inventory of **the current system**
 - ▶ Identification of **air transportation needs**
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Airport System Planning

- ▶ Forecast of system demand
 - ▶ Consideration of **alternative airport systems**
 - ▶ Definition of airport roles and policy strategies
 - ▶ Recommendation of **system changes**, funding strategies, and airport development
 - ▶ **Preparation** of an implementation plan
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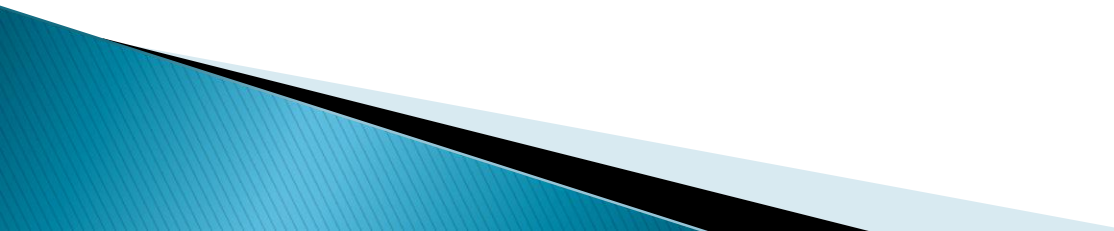
Airport System Plan

- ▶ It identifies the aviation role of **existing and recommended new airports and facilities**.
 - ▶ Its overall purpose is to **determine the extent, type, nature, location, and timing** of airport development needed to establish a viable, balanced, and integrated system of airports.
 - ▶ The airport system plan provides **both broad and specific policies, plans, and programs** required to establish a viable and integrated system of airports to meet the needs of the region.
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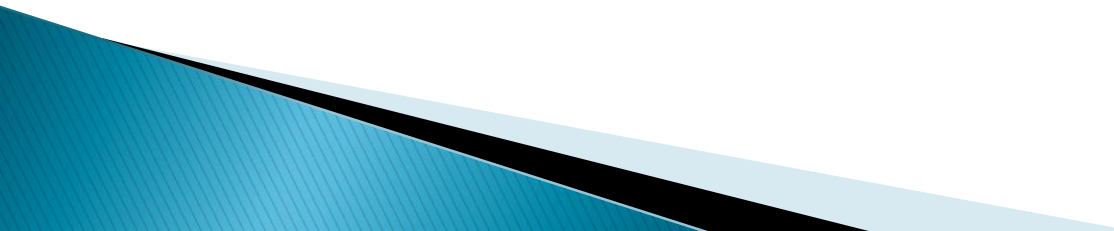
Objective of System Plan

- ▶ The orderly and timely development of a system of airports adequate **to meet present and future aviation needs** and
- ▶ to **promote the desired pattern** of regional growth relative to industrial, employment, social, environmental, and recreational goals.
- ▶ Airport Planning at **the state level** involves issues that are different from those of local, regional. **State is typically concerned with developing** airport system that will provide
- ▶ adequate service to all parts of the state.

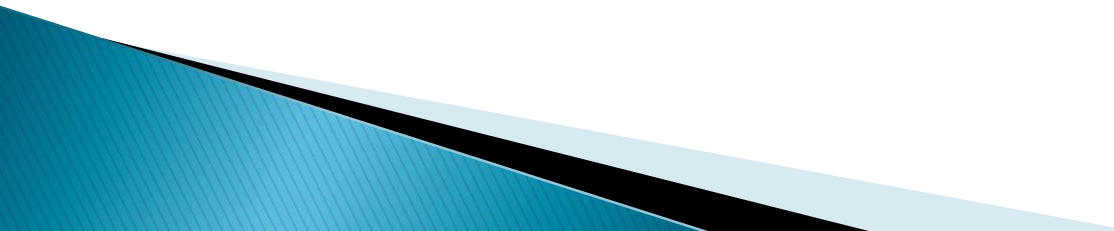
Objectives of System Plan

- ▶ The **protection and enhancement** of the environment
 - ▶ through the location and expansion of aviation facilities in a manner which avoids ecological and environmental impairment.
 - ▶ **The provision of the framework within** which specific airport programs
 - ▶ may be **developed consistent with** the short- and long-range airport system requirements.
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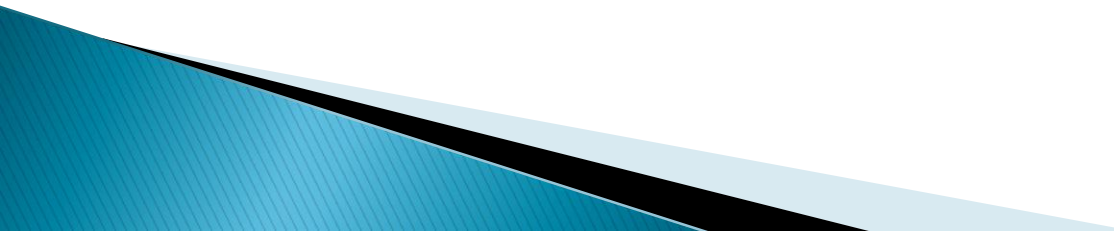
Objectives of System Plan

- ▶ The development of long-range fiscal plans and
 - ▶ the establishment of priorities for airport financing
 - ▶ within the governmental budgeting process.
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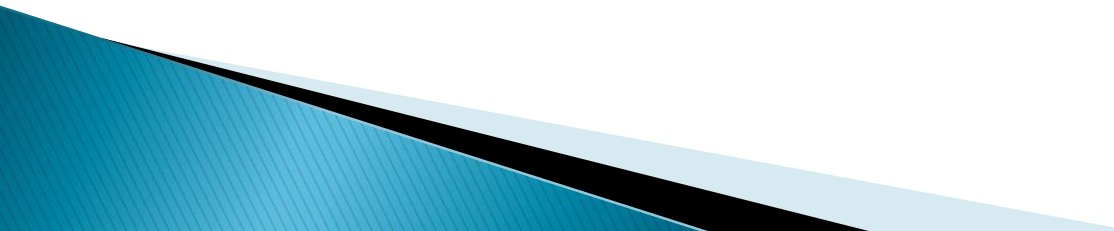
Airport System Plan

- ▶ The airport system planning process must be **consistent with state, regional, or national** goals for transportation, land use, and the environment.
 - ▶ Although the process involves many varied elements, **the final product will result in the identification**, preservation, and enhancement of the aviation system to meet current and future demand. The ultimate result of the process **will be the establishment of a viable, balanced**, and integrated system of airports.
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Airport Master Plan

- ▶ Airport Master plan is a document **that charts the proposed evolution of the airport to meet the future needs.**
 - ▶ An airport master plan is a concept of the ultimate development of a specific airport. **The term development includes the entire airport area, both for aviation and non-aviation uses, and**
 - ▶ **the use of land adjacent to the airport. It presents the development concept graphically and contains the data and rationale upon which the plan is based.**
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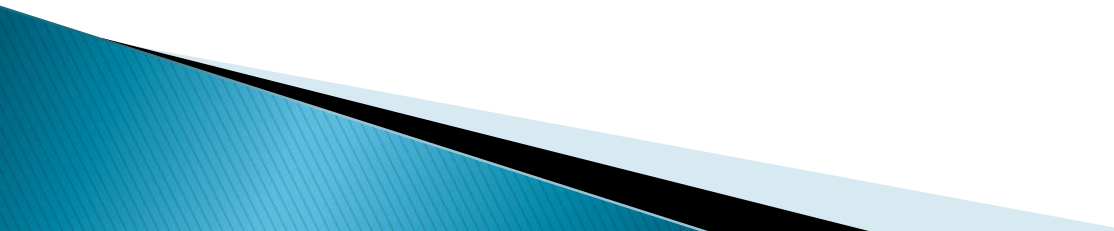
Airport Master Plan

- ▶ Master plans are prepared to support **expansion and modernization of existing** airports and guide the development of new airports.
 - ▶ The overall objective of the airport master plan is **to provide guidelines for future development which will satisfy aviation demand** in a financially feasible manner and
 - ▶ be compatible with the environment, community development, and other modes of transportation.
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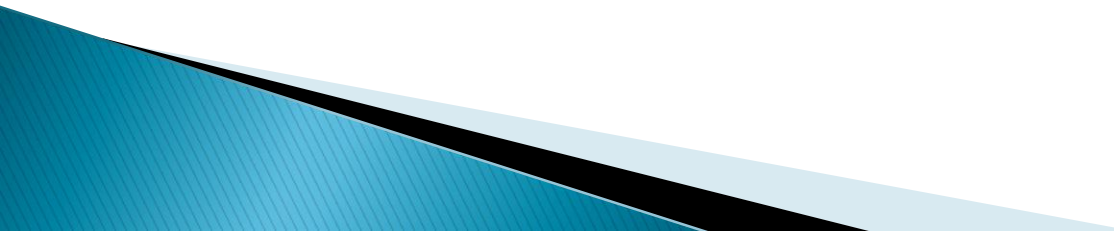
Airport Master Plan

- ▶ It is a guide for
 - Developing the physical facilities of an airport
 - Developing land on and adjacent to the airport
 - Determining the environmental effects of airport construction and operations
 - Establishing access requirements
 - Establishing the technical, economic and financial feasibility of proposed developments through a thorough investigation of alternative concepts.

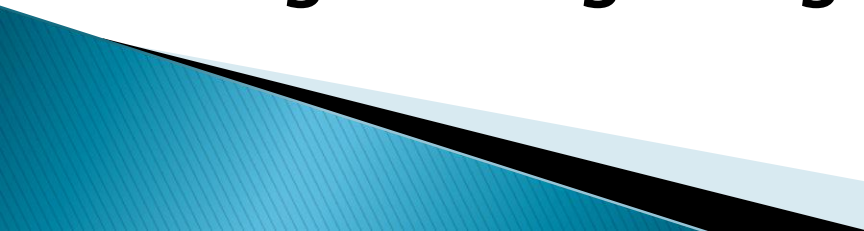
Airport Master Plan

- Establishing a **schedule of priorities** and phasing for the improvements proposed in the plan
 - Establishing an **achievable financial plan** to support the implementation schedule
 - Establishing a **continuing planning process** which will monitor conditions and adjust plan recommendations as circumstances warrant.
 - Should be as per **ICAO Guidelines** of Master Plan
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Airport Project Plan

- ▶ A project plan focuses on a specific element of the **airport master plan** which is to be implemented in the short term and
 - ▶ may include such items as the addition of a **new runway, the modification** of existing of runways, the provision of taxiways or taxiway exits, the addition of gates,
 - ▶ the addition to or the renovation of terminal building facilities, or **the modification of ground access facilities.**
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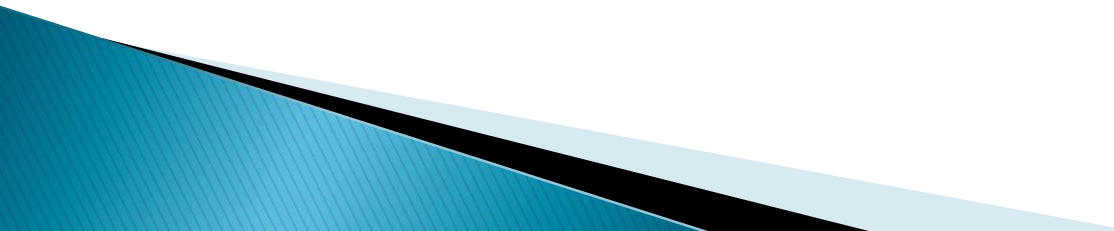
Airport Project Plan

- ▶ The overall objective of the airport project plan is to provide
 - ▶ the **specific details of the development** which will satisfy immediate aviation needs and be consistent with the objectives and constraints identified in the airport master plan.
 - ▶ **More specifically** it is a detailed plan for
 - ▶ Developing the specific physical facilities at an airport **including the architectural** and engineering design for these facilities
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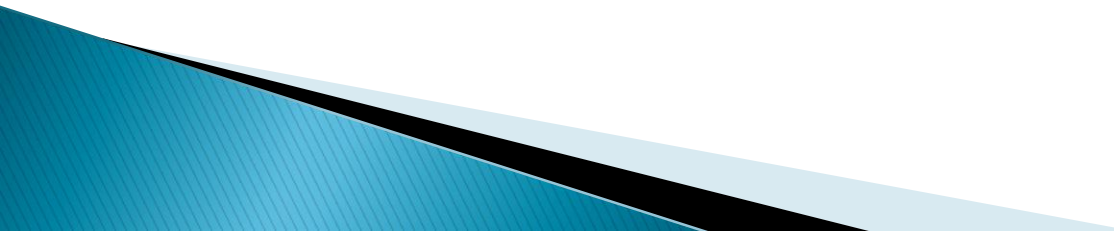
Airport project Plan

- Determining the environmental effects of this development through the construction and operational phases
 - Determining the detailed costs and financial planning for the development
 - Establishing a schedule for the construction and phasing of the specific items of development in the plan
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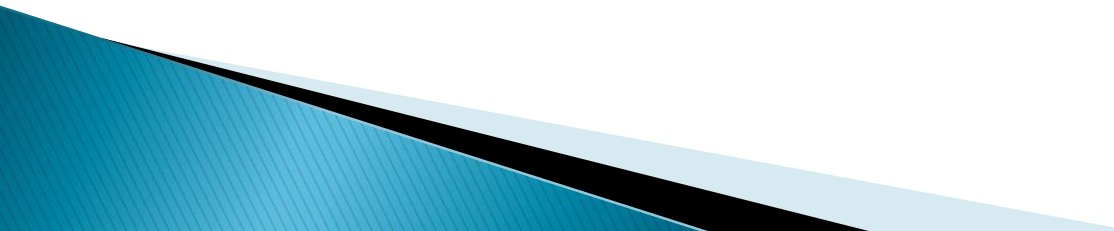
LAND –Use Plan

- ▶ A land–use plan for property within the airport boundary and in areas adjacent to the airport **is an essential part of an airport master plan.**
 - ▶ The land–use plan on and off the airport is an integral part of an area wide comprehensive planning program, and
 - ▶ therefore it **must be coordinated** with the objectives, policies, and programs for the area which the airport is to serve.
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Land-Use Plan

- ▶ A land-use plan must project the **extent of aircraft noise that will be generated** by airport operations in the future.
 - ▶ If the land outside the airport is underdeveloped, the contours are the basis for establishing comprehensive land-use zoning requirements.
 - ▶ **Although zoning is used** as a method for controlling land use adjacent to an airport,
 - ▶ it is not effective in areas **which are already built-up because it is usually not retroactive.** Furthermore jurisdictions having zoning powers may not take effective zoning action.
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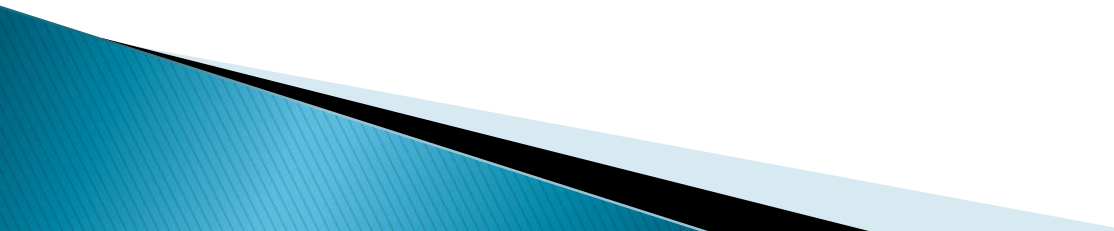
Land– use Plan

- ▶ The principal objective of the land–use plan for areas outside the airport boundary **is to minimize the disturbing effects of noise.**
 - ▶ Although the responsibility for developing land uses adjacent to the airport lies with the governing bodies of adjacent communities, the **land–use plan provided by the airport** authority will greatly influence and assist the governing bodies in their task of establishing **comprehensive** land–use zoning.
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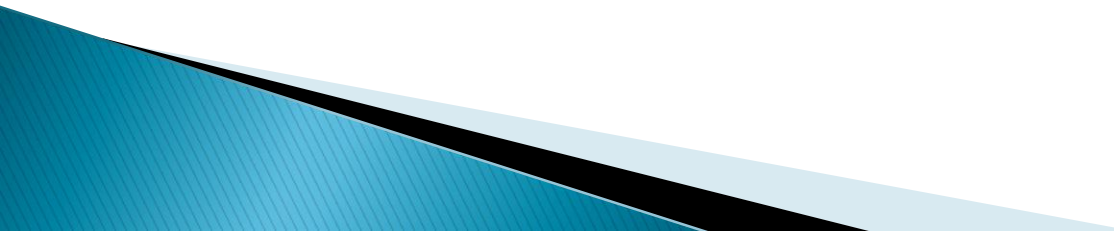
Continuing Planning Process

- ▶ A continuous **airport planning process** is necessary in order to respond to the needs of air transportation in a changing environment.
- ▶ **Changes in aviation demand**, community policies, new technology, financial constraints, and other factors can alter the need for and the timing of facility improvements.
- ▶ **Current data** must be continually collected and assessed relative to airport needs.

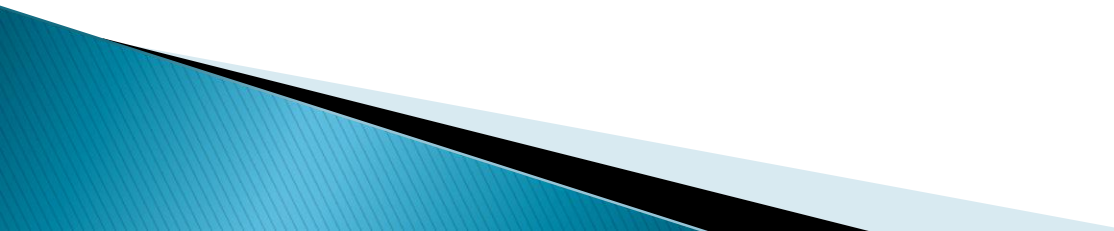
Continuing Planning Process

- ▶ In the airport planning process, the overall objective of **establishing and maintaining a continuous process** is to ensure that
 - ▶ the airport system plan and airport master plan remain responsive to public needs.
 - ▶ As a result, **the airport system plan** and airport **master plan** should be formally reviewed and updated at least every 5 years.
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Conclusion

- ▶ Considering the **high cost and long lead time** for building or improving airports, planning is the **key in determining what facilitates will be needed** in creating programs for providing them in a timely manner
 - ▶ Airport development plans affect other aspects of community life
 - ▶ **Airport planning must be weighed against other societal needs and plans.**
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What Did we Cover?

- ▶ So, you know what is Airport Planning?
 - ▶ What is it?
 - ▶ Why Is it?
 - ▶ What are the Critical Elements?
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Any Question?

- ▶ **Thank you..**

