

OUTLINE

- Part I Maintenance System
- Part II Work and Production Elements
- **Part III** Resource Availability
- **Part IV** Organization and Structure
- **Part V** Achieving Operational Requirements
- Systems and programs that support and form part of the operational segment of the organization will be reviewed.

A/C MAINTENANCE SYSTEM

- The required capabilities of maintenance organization and structure are:
 - Achieve the work/production elements
 - Ensure the availability of resources
 - Permit achievement of aircraft operational requirements
- These are in direct relation with operating plan, regulatory approval, and maintenance requirements for each specific aircraft, powerplant and component.
- Each individual company have also specific philosophies and strategies for maintenance system.

A/C MAINTENANCE SYSTEM

- The maintenance organization's mandate is to develop objectives to support the operator company objectives.
- The system is dynamic as if it is alive! By means of each and interactions of:
 - Culture
 - Ageing aircraft
 - Technology
 - Passenger
 - Competition
 - Operation

A/C MAINTENANCE SYSTEM

- The system need to have these capabilities starting from the design concept and also includes:
 - The initial maintenance program
 - The dynamic and continuous review to achieve improvements to the program while considering the changing physical aspects of the product due to age, environment, and operations.
 - The incorporation of the program into clear, concise, and appropriate manuals
 - The transfer, in a straightforward manner, of these instructions to permit their correct accomplishment within the existing maintenance environment



A/C MAINTENANCE SYSTEM

- To be effective, each element of the foundation must be accountable and responsible for its function
- The aircraft manufacturer has the sole responsibility to design the aircraft and specify its maintenance requirements.
- The certifying and regulatory authorities must ensure that the design conforms with the airworthiness rules and meeting all the certification requirements.

A/C MAINTENANCE SYSTEM

- The maintainer must implement the maintenance requirements as defined by the manufacturer.
- The maintainer is audited and monitored by the regulatory authorities.
- If one of the above requirements are not fulfilled the maintainer can not function.



WORK AND PRODUCTION ELEMENTS

- To produce serviceable aircraft, an integrated system that establishes;
 - What work is required
 - When it is required
 - Where will it be performed
 - And how it is checked
- This requires;
 - Planning
 - Scheduling
 - Production management
 - Programs/specifications/processes
 - Inspection/audit/records

RESOURCE AVAILABILITY

- The resources needed for work and production elements;
 - Personnel
 - Training
 - Materiel
 - Facilities
 - Equipment



ACHIEVING OPERATIONAL REQUIREMENTS

 The benchmark by which the achievement of operational requirements are measured involves reporting, monitoring, and evaluating each of the elements that impact on the operation:

- Fleet
- Aircraft
- Powerplant
- Component reliability
- Production
- Economics



ORGANIZATION AND STRUCTURE

- Organization and structure required for safe, efficient, and reliable aircraft maintenance are defined by regulatory authorities.
- There must be an individual in a position to have the authority and overall responsibility for managing and implementing the entire maintenance system and program
- Besides at minimum;
 - Head of maintenance
 - Head of safety and compliance
 - Chief inspector



ORGANIZATION AND STRUCTURE

- For major carriers there are also
 - Engineering department
 - Maintenance control department
 - Planning
 - Scheduling
 - Record keeping
 - Publications



ORGANIZATION AND STRUCTURE

- Within this structure, the regulator requires at least 3 organizational levels:
 - The mechanics or inspectors and other maintenance personnel carry out the first level maintenance function.
 - Mid-level managers such as maintenance foreman or supervisor, the maintenance manager or supervisor, and/or chief inspector. They provide resources and organize, control, and supervise the fist-level function.
 - Head of maintenance. This individual has the authority and overall responsibility for the maintenance program; provides leadership, financial management, provides vision, scope, size and structure of organization. Forecasting, planning the need for new technologies.

