Airline Cost Management through Operations Planning and Control
The focus of today’s presentation

- **Operations Planning**
  - To produce a plan or schedule that is operationally achievable, as well as recoverable and amendable at lowest possible cost

- **Operations Control**
  - A process to control and manage deviations from plan in a timely, service oriented, cost efficient manner

- **Relationship to Operations Cost Management**
The Industry Challenge

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Airline Operations

- Few industries have to profitably manage so many moving parts
- Expanding airline route and alliance marketing structures are extremely susceptible to impact from a myriad of world events
  - Weather
  - Political
  - Economic
  - Competitive
- The complexity and frequency of required planning changes and daily operational decisions are ever increasing
- Every day is an irregular operation --- from the planning phase to the day of execution.

All of which drive Cost
The schedule/operational model is one of the most complex.

Airline’s Schedule/Operational Design

-Controllable vs. Uncontrollable-

Main Reliability Drivers

1. Block Times
2. Turn Times
3. Turn processes
4. Contract Mgmt. processes
5. Crew staffing
6. Crew re-routing capabilities
7. Recovery time in schedule
8. Gating Plan
9. Spare Aircraft
10. % out and back flying

Controllable Factors

- Controllable Load Factors
- Controllable Technology
- Day of Execution
- Controllable Schedule/Operational Design

Uncontrollable Factors

- Slots
- Competitive Ops
- Weather
- ATC system capabilities
- Mechanicals ADs, Ground Damage
- Crews w/aircraft
Operations Planning and Cost Management
Where to Begin

➔ Does the Schedule or Plan work ???
Operations Planning - Cost Drivers

- Schedule Design
  - Marketing Objectives / Schedule Design Complexity
- Asset Management
  - Aircraft Assignment and Utilization
  - Crew Staffing, Training, and Utilization
- Planning Components
  - Blocktime Standard
  - Required Ground Time and Resources
  - Aircraft Maintenance Requirements
  - Schedule Reliability Objectives
  - Schedule Recovery Options
Blocktime Standard

Scheduling

- Early
- On-time
- Late

Variability

- Type of Aircraft
- Time of Day
- Airport Environment
  - Arrival/Departure Capacity
  - Airport Ground Congestion
  - ATC System Capability
- Seasonal Wind Variability
- Crew Operating Policy
Accurate Blocktimes

The “Essential” Building “Block” for the airline planning process

Used in estimating:
- How many Pilots & Flight Attendants do we need?
- How much Maintenance will we require?
- How the aircraft and crew patterns flow?
- How the airports operate?
- Passenger/baggage/crew connection times
- Number of aircraft to operate the schedule reliably?
- The Cost to Operate the Schedule
Airline IRROP Cause Distribution

- Air Traffic System: 38%
- Weather: 28%
- Air Carrier: 28%
- Late Arrival: 6%
Delay / Reliability Analysis Program

- Root Cause Analysis and Allocation of impact on
  - Performance
  - Cost
- Option Analysis
  - resources
  - time
  - schedule adjustment
- Coordinated Cost / Benefit Review
- Implementation of indicated changes
- Track Results
What Costs to Measure?

- Common airline cost measures include
Operational Cost Measures

- Safety - damage, injury, lost productivity rates
- Aircraft utilization per day
- Crew resource utilization per schedule period
- Maintenance
  - Reliability
  - Dispatch Rate
- Productivity / man hours per service event
  - per departure
  - per passenger served/cargo weight handled
- Revenue - % retained, lost
Operations Function - Cost Measures

- Flight Operations
  - block hours per pilot, pilots per aircraft
  - % actual hours flown vs. available hours

- Technical Operations
  - maintenance turn-time productivity
  - Check yield
  - LLP utilization

- Ground Operations
  - cost per station - per departure - per aircraft type
  - scheduled and minimum aircraft turn times (% achieved)
How to Plan?

- Recommendation:
  - Integrated Operations Planning
Integrated Ops Planning Objectives

- Provide enterprise view, organizational structure, and processes to enable collaboration between Commercial objectives and Operational requirements in planning and scheduling.
- Optimize financial results from a balanced design perspective taking into account revenue, cost, and operational performance.
- Enable an airline to efficiently manage and respond to changes in global and competitive environment.

Integrated Operations Planning is critical for success in today's airline industry environment.
General Rule

 empres An airline can "build in" the operational requirements and infrastructure to support its commercial and planning objectives, the more reliably and cost effectively the airline will perform.
Operations Control
OCC

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Airline Operations Management

- All airlines have some form of daily operations management process

- But, many do not fully realize the service improvement capability and cost management potential of a pro-active, fully integrated, collaborative, Operations “Control” process
Operations Control (OCC) - Mission

▫ Corporate business unit(s) or operational department(s) tasked with managing and coordinating execution of the daily airline schedule as planned

▫ Primary goal to anticipate and minimize the performance, service, and cost impact of irregular operations (IRROP)
“What should the OCC contribute to an airline?”

- To support positive business results, an effective OCC must
  - **Manage the Operation** of the airline schedule as planned
  - **Minimize the Impact** of schedule disruptions on the airline
  - provide **Quality Service** to the maximum number of passengers
  - maximize **Revenue Retention**
  - direct most **Cost Effective** plan to return to planned schedule

- Every decision, action, or inaction will significantly impact the resulting Company performance, including
  - Operational
  - Service
  - and, Financial (Cost/Revenue)
Where to begin?

- **Organization/Process**
  - Representation for every department or function which can impact, or will be impacted by, an OCC decision concerning the operation of the flight

- **Information/Communication**
  - Comprehensive, real-time, dynamic (including revenue and cost) to enable and enact balanced decisions

- **Authority**
  - Ideally a separate reporting department (similar to Safety) but, must have decision autonomy
OCC IRROP Cost Management

- To tactically manage daily operations and make correct business decisions, the OCC needs good, timely, accessible information
- Resource Availability – Aircraft, Crew, Support
- IRROP Cost
  - Operational – crew, maintenance, services, resource utilization
  - Passenger – lost revenue, interrupted trip expenses
  - Service impact – customer, regulatory, Good Will
- Revenue and Reservations
  - total $ onboard, booking class, potential for loss, market considerations
  - re-accommodation options / projected length of delay to destination
  - special circumstances (ex: high school band, cruise connection)
IRROPS Cost Distribution

- **Revenue/Psgr**: 40%
- **Crew**: 24%
- **Fuel**: 12%
- **Labor/OT**: 12%
- **Maintenance**: 10%
- **Other**: 2%

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Delay Cost vs. Length of Delay

- :01 - :15 Min $1,000
- :16 - :30 min $5,000
- :31 - :45 Min $11,000
- :46 - :60 min $17,000
- >1 hour Delay
OCC Recommendation

- Develop an Operations Control Process (OCC) to support cost management objectives and
  - Serve as the *center* of airline’s operational decisions
  - Facilitate *collaborative* decisions among all affected disciplines
  - Support *Planning* for disruptions – Enable *pro-active* action
  - *Mitigate* IROPS impact - Recover *quickly* – *Limit* next day impact
  - Optimize for *Company* business objectives
- Incorporate as part of an overall integrated airline planning, performance improvement, and cost management process
Operations Cost Management

Are you achieving the results you expect?

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IATA Support Activities

Provide a wide range of customized services to reduce costs and improve efficiency
Self - Assessment

Key Questions to determine how to assess your airline’s cost management capability and performance
Operations Cost – Planning & Control

- Is there a fully Integrated Schedule Planning process?
- Is there a process to track and validate planning components?
- Is there an effective process to manage and control / react to daily and near-term deviations from plan?
- Is there an effective process to determine associated delay cause and cost impact?
- Is there a focused corporate Operational Reliability or Punctuality program and culture?
Summary

- Effective Operations Planning and Control must continuously seek the optimal cost-effective balance between:
  - operational reliability
  - service quality
  - cost management
  - revenue maximization
Thank You
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