



## Attracting MRO Activities to International Airports The Glasgow Airport Case Study

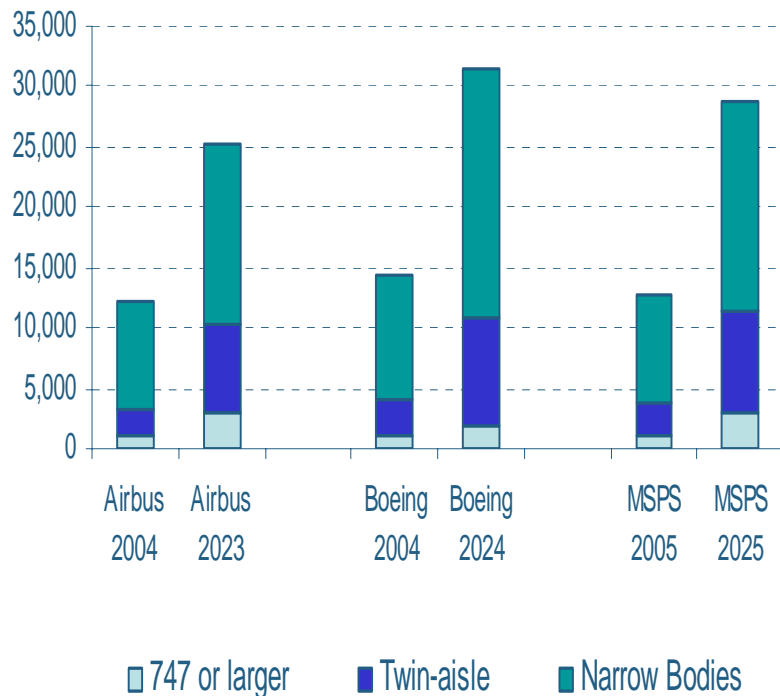
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## Attracting MRO Activities to International Airports Forecast Growth in Commercial Aircraft

Airbus, Boeing & MSP Solutions Fleet Forecasts



- Global fleet expected to triple by 2035.
- European fleet will double in same period.
- More than half the aircraft will be narrow bodies.



## Attracting MRO Activities to International Airports Forecast Growth in Commercial Aircraft

In 2025 commercial aircraft numbers could grow to:

- Global fleet will be around 29,000 aircraft
- 2,500 B747/A380s
- 9,000 wide-body twins/trijets/A340s
- 17,500 narrow body (single aisle)



## Attracting MRO Activities to International Airports Forecast Growth in Commercial Aircraft

### Forecast Maintenance Opportunities

- Narrow-body aircraft demand is much bigger than wide-bodies.
- Narrow body aircraft require more maintenance per flying hour due to much higher cycles.
- Aircraft maintenance will continue to reduce as new aircraft types are introduced.
- In Europe wide-body aircraft maintenance will face intense competition from the new MRO facilities in the Middle East and Asia.
- Major engine and component maintenance is increasing done off-site.
- The best MRO opportunities in Europe appear to be for narrow body aircraft.



## Attracting MRO Activities to International Airports

### Critical Factors to Consider for Attracting MRO

#### MRO Work Loads

- Driven by both flying hours and cycles.
- Specified in detail by the manufacturer.
- Agreed / modified by the regulator (FAA, EASA, etc.)
- Works ranges from daily up to major checks (A, B, C, D).
- Generally falling as new aircraft technology is introduced.
- Manufacturers sometimes change their specifications over time.
- Airlines look at MRO as a percentage of total operating costs.



## Attracting MRO Activities to International Airports Critical Factors to Consider for Attracting MRO

### Barriers to Entry

- Airport slots
- Land Availability
- Capital Availability
- Potential Market
- Labour Availability
- Security of Tenure
- Track Record
- Business Return on Capital Employed



## Attracting MRO Activities to International Airports

### Critical Factors to Consider for Attracting MRO

#### Evaluating and Managing Capacity

- Provided on basis of estimated loads.
- Difficulty of balancing loads over time.
- Winter demand can be higher than in summer.
- Costs are virtually fixed – so need to use facilities efficiently and intensively.
- Today airlines are generally looking for fleet total care packages rather than one-off overhauls.
- Returns on spot work are unpredictable
  - Work may be more than anticipated.
  - Rates for the work depend on supply/demand balance.



## Attracting MRO Activities to International Airports

### Critical Factors to Consider for Attracting MRO

#### What is required to succeed?

- A reputable MRO provider with a good track record that can attract or already has airline MRO business.
- Financing.
- Skilled labour availability with a good reputation for high quality work.
- Sensible geographic location (with an airport having some slot availability and ability to rotate aircraft in and out of maintenance on commercial flights).
- Government grants, launch aid or other regional incentives.
- Leasing opportunity for the facility is generally more attractive than purchasing.
- Space to expand as the opportunities to grow the business emerge.