

CLEAR AS MOD?

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SERVICE DOCUMENTS

TO MOD OR NOT TO MOD?

IMPLEMENTATION FRAMEWORKS

*****DECISION

✤ FINANCE

EFFECTIVITY

THE TRAPS

OEM EXPECTATIONS

SUMMARIES



 Airlines are flooded with significant volumes of Service Literature from OEMs and Vendors

- Discretionary Mods are intended to
 - improve systems /component reliability
 - reduce operating costs



IN NUMBERS

MEGGIT SAFETY SYSTEMS



Discretionary ICA

6 MONTHS / 54 VENDORS / 175 PER MONTH = 1051 TOTAL

- MATSUSHITA
- AVIONICS SERVICES
- TELEDYNE CONTROLS
- GE AVIATION (FOMERLEY SMITHS)
- ZODIAC GALLEYS & EQUIPMENT
- ROCKWELL COLLINS
- SAFRAN ELECTRONICS & DEFENSE
- ZODIAC SEATS FRANCE
- ZODIAC ELECTRICAL INSERTS USA
- ZODIAC AERO EVACUATION SYSTEMS
- UTC AEROSPACE SYSTEMS

- PRATT & WHITNEY
- PANASONIC AVIONICS CORP
- L3 COMMUNICATIONS

- FLY-BY-WIRE SYSTEMS FRANCE



To Mod or not to Mod?

- Product improvement
- On-wing
- Off wing
- Free of Charge Modification
- Free of Charge Kits
- Warranty reimbursement
- Commercial Labour Hours
- Recommended / Optional

Mandatory

- Campaign
- Part Number Change or rollover
- End of Lease impact
- Pooling open or closed





To Mod or not to Mod?

Decisions to implement aircraft or component modifications can be..

✓ complex
✓ costly
✓ ineffective





MODIFICATION IMPLEMENTATION



Introduce decision logics and establish payback policies to ensure expected improvements are transparent and predictable



Decision Framework





Decision Drivers:

1. Safety or Compliance

2. Reliability Program retrofit / OTP

3. Operational impact

4. Economic impact





Establish an effective decision framework ✓ Company Policies determines what gets analysed and implemented

- ✓ Adopt a quick document review:
 - Park
 - Process



1. Arrive at an informed decision backed by data:

- Risk Analysis
- Cost Benefit

2. Define an Approval process for transparency

Mod approval panel/committee



Finance Framework





MODIFICATION BUDGET

MOD BUDGET

Establish a budget for mods?

- Historical data
- Forecast spend

Budget inclusions

- Mandatory modifications
- Discretionary improvements

FOC Modifications

Set policy for implementation

BUDGET	
	HISTORICAL
	FORECAST
	MANDATORY
	DISCRETIONARY



ACCOUNTING

Modification Costs Vs Repair Costs

- ✓ Monitor in repair cycle
- ✓ Separate mod & repair costs
- ✓ Accuracy of modification accounting



- ✓ Feedback actual MOD costs into analysis process
- ✓ Re-visit Cost Benefit decision



COST BENEFIT

- Set parameters for measuring ROI
 - ✓ OTP
 - ✓ D&C
 - ✓ Guest Satisfaction

BENEFIT COST BENEFIT PAYBACK

INVESTMENT

- Define and set policy on payback and period
- Use Standard Tools or business calculations



EFFECTIVENESS WEIGHTING





EFFECTIVENESS WEIGHTING

Modifications: Monitoring Effectiveness

□Introduce a post-mod timeframe to monitor effectiveness

DEnsure the weighting parameters are met or exceeded

- ✓ OTP improvements
- ✓ Delay & Cancellations reductions
- ✓ Delay costs improvements
- ✓ Guest Satisfaction

Review mod success internal & worldwide experience

Consider stopping or ceasing ineffective mod programs











FOC

SERVICE DOCUMENTS

.. There are no (off-wing) FOC retrofits !!

Cost Considerations:

- ✓ Labour/Maintenance Costs
- Shipping & Logistics
- ✓ Repair
- ✓ Testing
- ✓ Re-certification





Programs

Manage the mod programs elements of costs, scope and time to preclude unpredictable maintenance cost outcomes

Considerations:

- ✓ High Repair Costs
- ✓ BER
- ✓ Obsolescence





Materials

Manage materials and kits to meet with the commercial offerings in the service documents

Considerations:

- Program retrofit timeline around kit availability
- ✓ Ensure timely warranty lodgements
- ✓ Annual Price escalations





Forward Exchanges & Loans

Manage seed units, forward exchanges & loans to strict terms and conditions

Considerations:

- ✓ High Loan fees
- ✓ Repair costs for returned fwd exchange units
- ✓ Inconsistent shop TAT could extend loan costs



OEM EXPECTATIONS

1. INDUSTRY WIDE STANDARD TERMINOLOGY



✓ ICA Headings must reflect priority



OEM EXPECTATIONS

2. COMMIT TO REDUCING MAINTENANCE COSTS!

SOLUTIONS ON TIME & EFFECTIVE FIRST TIME

- Prioritise the high impact drivers
- Estimate Repair/Shop costs into ICA
- Continued support for OBSOLESCENCE

WARRANTY FOR FAILED SOLUTIONS

- Extend Warranties
- Retrofit support



OEM EXPECTATIONS

3. STANDARDISED TOOLING FOR MOD COST BENEFIT



EFFECTIVE & ACCURATE

- Aircraft type & model
- Utilisation
- # Seats
- Operation







SUMMARY

- 1. Control your component & aircraft modification costs
- 2. Introduce strict policies on implementation
 - Modification approval process
- 3. Monitor
 - Costs benefits and ROI
 - Weightings meet predictions (OTP; D&C's..)
 - Mod Vs Repair Costs
- 4. Watch out for TRAPS - Don't get FUME'd
- 5. Consider an Industry Standard tool for mod evaluations



CLEAR AS MOD? – Q&A









THANK YOU !!