



Documentation Issues and Initiatives

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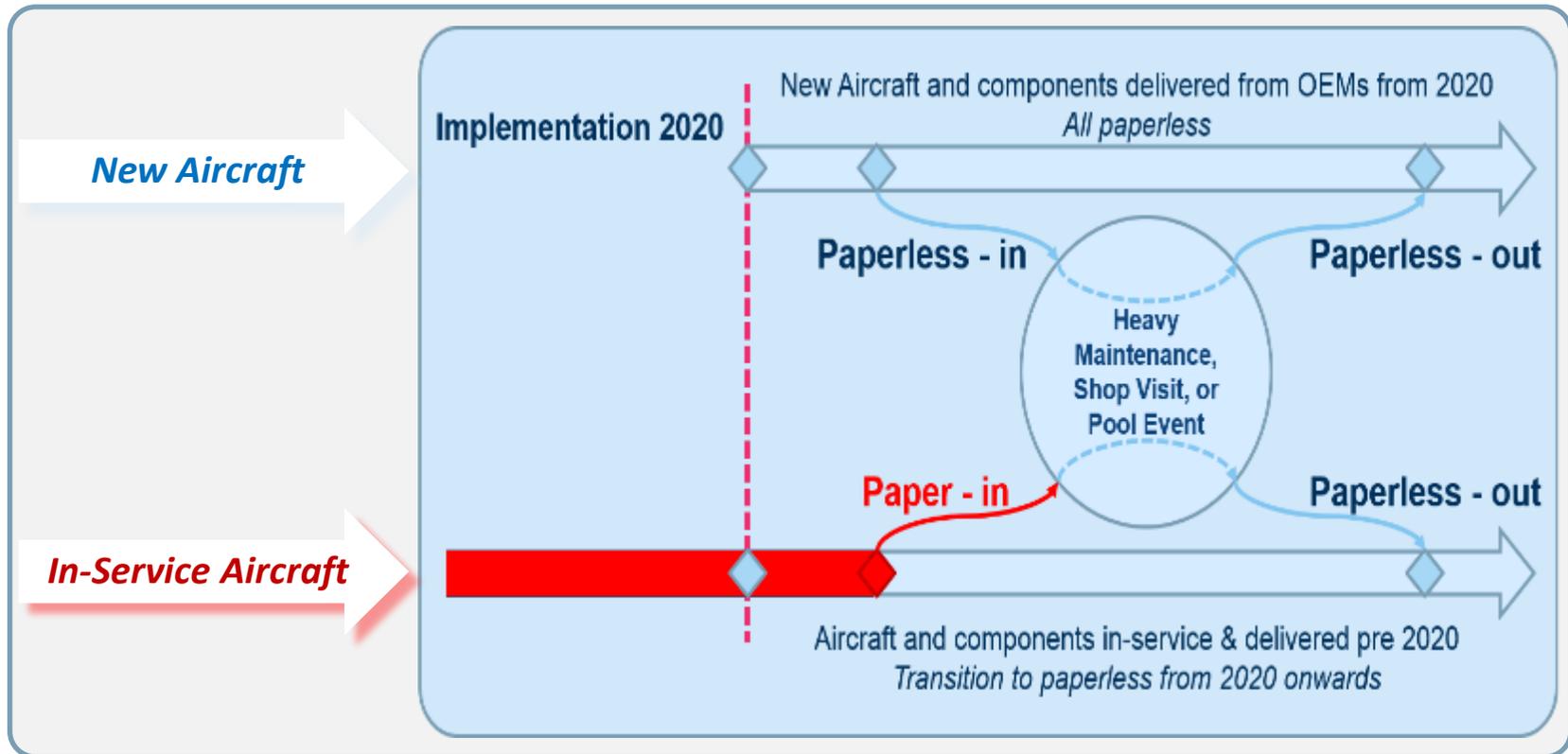


About IATA (Intern'l Air Transport Ass'n)

- Represents about 265 airlines or 83% of total air traffic
- Mission: represent, lead and serve the airline industry
- Tasks:
 - Safety procedures and audits
 - Clearing house services, account settlements
 - Data analysis on various aspects of airlines
 - Guidance materials, Training
 - Assigns airport and airline codes, accredits travel agents

...more at: www.iata.org

IATA's 2020 Paperless Vision



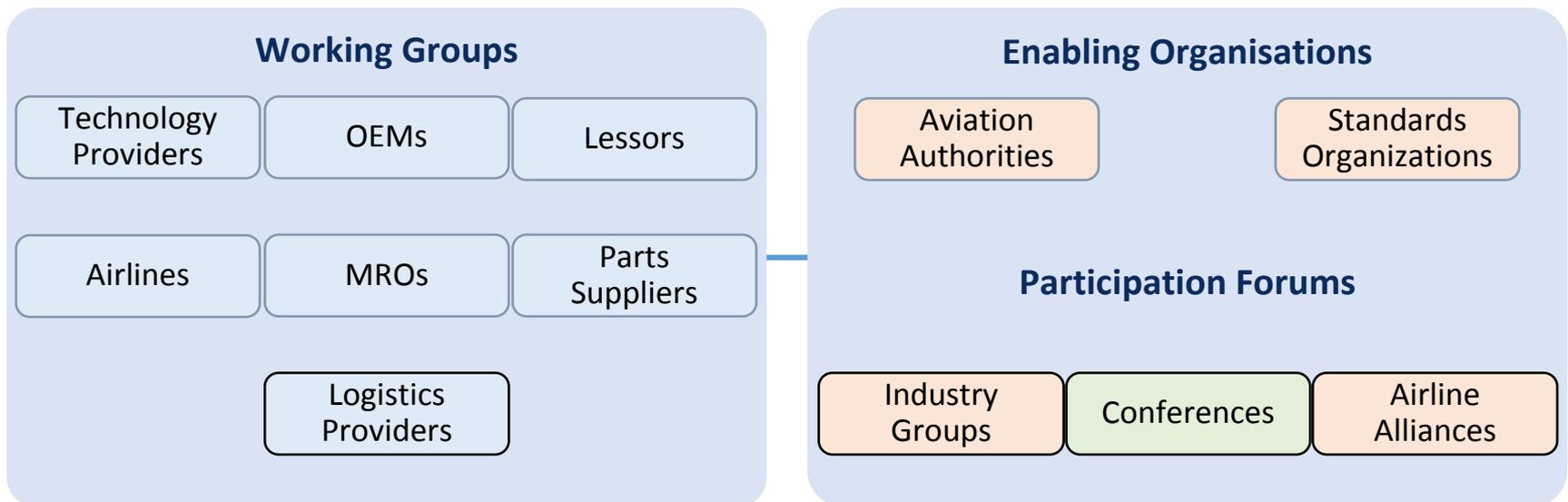
Digitising of current paper systems is a phase towards ultimate e-business

Why IATA is involved?

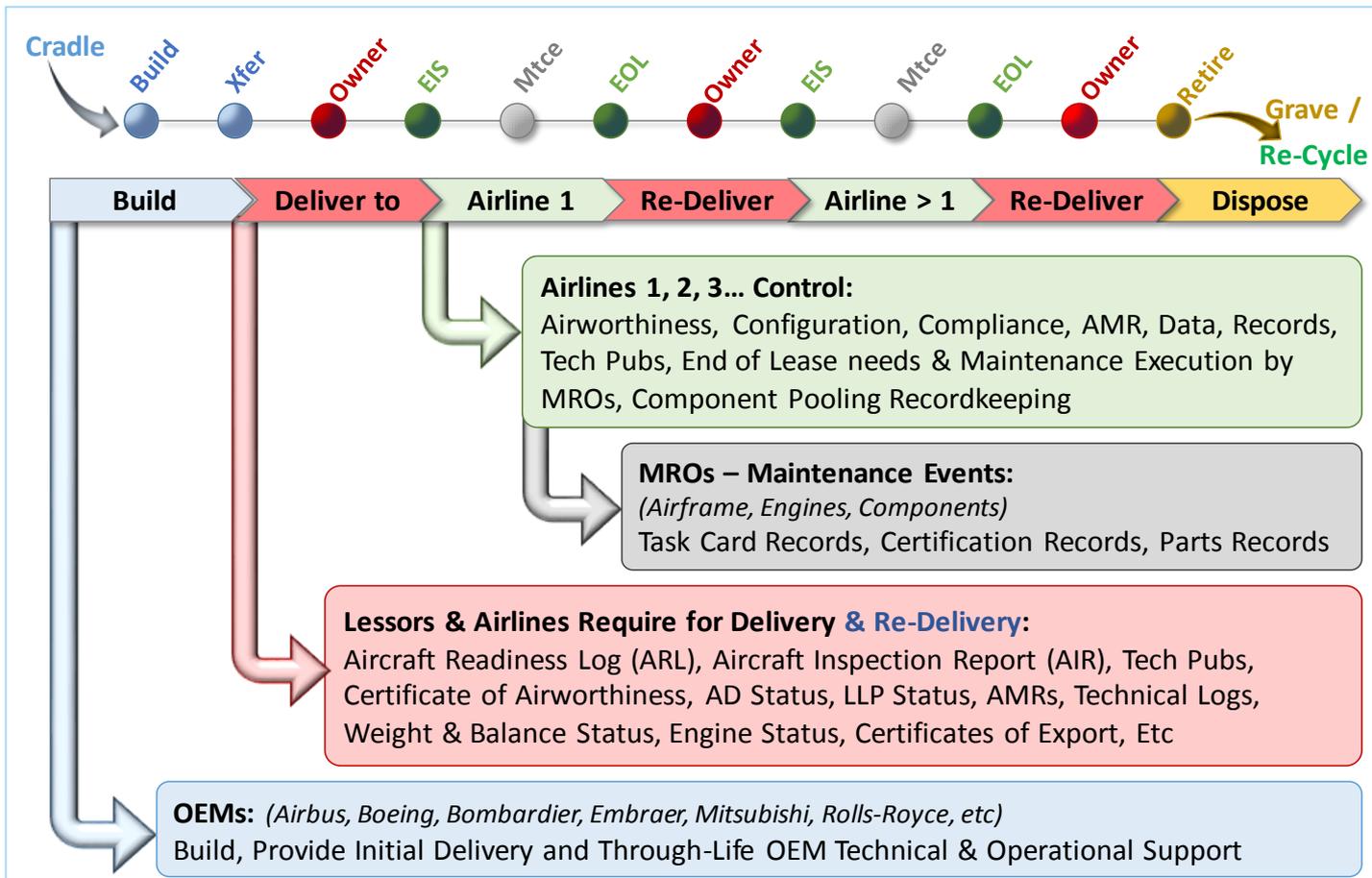
- Need to “Simplify the Business” in Aircraft Operations; need to educate
- Industry requests for standards (strong cooperation w. ATA e-Business)
- Harmonize implementation of new technologies; facilitate deployment
- E.g.: Annual cost of redelivery is enormous (www.iba.aero; Oct 2016)
 - Narrowbody redeliveries cost, on average, \$1.65m more than they need to
 - Widebody costs can be easily double that of narrowbodies
- Applications from Aircraft Delivery to Operations and from Leasing to “Part-outs”

IATA's efforts to simplify the business...

- Paperless Aircraft Operations; Technical Operations
- Aircraft Leasing Advisory Group (ALAG)



Moving towards paperless environment...



Benefits of e-documentation

- Compliance; ensure accurate record keeping
- Accuracy; minimize or eliminate manual input/error
- Efficiency; search ability, remote reviews, quick response etc.
- Cost reduction; avoidance of mundane work, transportation, travel expenses to review docs etc.
- Full traceability & completeness; full historical record/trace

Challenges within Stakeholders (1)...

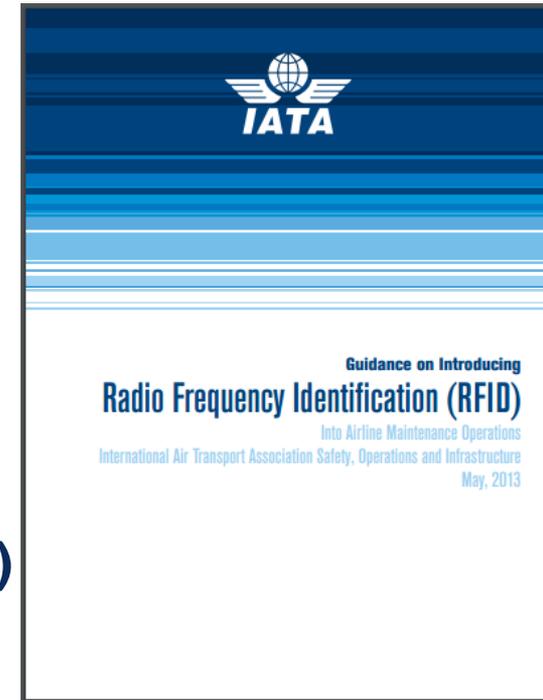
Aviation Authorities	OEMs	Lessors	Standards Organizations
<p><i>Challenges</i></p> <ul style="list-style-type: none"> • A “void” exists re regulation for Electronic Records Need cross-state interoperability • Acceptance of “e-signature is critical • E-Records need to be = to dirty fingerprint • Authorities are resource constrained • <i>Some acceptance on case-by-case</i> 	<p><i>Challenges</i></p> <ul style="list-style-type: none"> • Varying standards applied by each OEM in data configuration. Eg; AIR versus ARL • Varying standards for delivery of service literature • Varying standards for delivery of maintenance program updates • Varying standards applied to in-service operational reporting 	<p><i>Challenges</i></p> <ul style="list-style-type: none"> • Reluctant to accept EMARS for re-delivery due potential non-acceptance by next Aviation Authority • Lease agreements predominantly specify that lessees provide certification “paperwork” • <i>Some acceptance on case-by-case basis</i> 	<p><i>Challenges</i></p> <ul style="list-style-type: none"> • Standards are underdevelopment • Challenges associated with data transfer standards between organisational IT systems

Challenges within Stakeholders (2)...

Technology Providers	Airlines	Parts Suppliers
<p data-bbox="421 634 587 658"><i>Challenges</i></p> <ul data-bbox="311 686 691 1096" style="list-style-type: none"><li data-bbox="311 686 691 772">• Technology exists and is in use in other business sectors<li data-bbox="311 801 691 982">• Challenges associated with IT system intellectual property and no standard for transfer of data between systems<li data-bbox="311 1011 691 1096">• <i>Some acceptance of e-signature – mainly with task cards</i>	<p data-bbox="871 634 1037 658"><i>Challenges</i></p> <ul data-bbox="761 711 1078 1011" style="list-style-type: none"><li data-bbox="761 711 1078 796">• Different stages of paperless journey<li data-bbox="761 825 1078 911">• \$\$ committed to internal solutions<li data-bbox="761 939 1078 1011">• May not be to an industry standard	<p data-bbox="1340 634 1506 658"><i>Challenges</i></p> <ul data-bbox="1230 711 1611 1153" style="list-style-type: none"><li data-bbox="1230 711 1611 825">• Multiple suppliers across entire asset lifecycle<li data-bbox="1230 868 1611 939">• OEM, SFE, BFE, PMA, Aftermarket<li data-bbox="1230 982 1611 1053">• Need standards for data transfer<li data-bbox="1230 1096 1611 1153">• Need acceptance of e-Release Certificates

What IATA has done (1)...

- Paperless Aircraft Operations Initiative;
www.iata.org/pao
- 4th Paperless Operations and RFID Conference
- Industry Groups; RFID, Aircraft Leasing (ALAG)
- RFID Guidance; 2nd ed. (drafted)
- ICAO Airworthiness Manual (Doc 9760; 2017?);
recognition of e-records and e-signatures



Technical documents

- Electronic records (checklist)
- LLP traceability template - standard
- LLP supporting documentation
- Technical documentation requirements
- Moving from an NIS* to ICS** to ...
- Harmonization of “paperwork” (AIR, ARL...)
- What is the birth record of the aircraft?

 **Guidance Material and Best Practices for Aircraft Leases**

E	020	Customer Checklist Document (if applicable).
F	Item	Engine Records (Separate folder for each respective Engine)
F	001	Manufacturer Delivery Documents (EDS, Log book, Test Data/Performance Summary, Configuration Listing and SB Status at Manufacture).
F	002	Certificate of Airworthiness for Export at Manufacture (if applicable).
F	003	Certified statement of Total Time in Service (Hours and Cycles).
F	004	Certified status of Engine Airworthiness Directives (including applicability status and statement as to method of compliance e.g. modified/repaired/inspected).
F	005	Certified status of incorporated Engine Manufacture Service Bulletins.
F	006	Certified status of incorporated Engine Non-Manufacturer modifications including STC's with applicable regulatory approval.
F	007	Certified Life Limited Parts listing indicating cycle limit, cycles consumed since new, and cycles remaining.
F	008	Individual total cycle substantiation data for each Life Limited Part since manufacture.
F	009	All historical Engine/Module Shop Visit reports (which may not include engine DFP records and shop task cards).
F	010	Condition Monitoring Report (current Trend Data)
F	011	Engine Log Book and/or Master record of Installation & Removals (as applicable).
F	012	Last Borescope report (including video) (if required by lease).
F	013	Last Engine Test Cell report.
F	014	Last On-wing Maximum Power Assurance Ground Run (as performed during end of lease maintenance check if applicable)
F	015	Certified Engine Incident & Accident Clearance Statement for period of operation with Lessee (IATA / AWG format or equivalent, if not covered by Aircraft ICS in B016)
F	016	Certified Power Rating Operation statement (including (if applicable) cycles of operation at different thrust ratings) - may be included in Disc Sheet or LLP tracking template.
F	017	Certified maintenance task cards for Specialist Engine Field Repairs since last shop visit (if applicable)
F	018	Certified maintenance task cards for Fan Blade Distribution (including P/N, S/N, and Moment Weight information)
F	019	Certified inspection status and maintenance task card for last inspection of installed Engine Mounts (if required and if not already covered by Last Done / Next Due listing).
F	020	Certified High Pressure Turbine Blade listing to include TSN/CSN/TSO/CSO.
F	021	Copy of current OEM concessions, (e.g. Customer Departure Record (CDR-GE/CFM), One Time Concession (OTC-PW/IAE) or Technical Variance (TV-RR)) as applicable.

What other initiatives are in place?

- Worldwide LLP Registry/Clearinghouse (database)
- ICAO Doc 9760; recognition of e-records and e-signature
- ICAO Guidance on Cross Border Transfer of Aircraft; XBT
- Criteria for regulatory approval of AMOs*
- Aircraft Health Monitoring (AHM)
- e-signature concept using the internet domain name system
- Aircraft part-out and decommissioning

*Approved Maintenance Organizations

Key Message...

- Please **get involved** and provide input to:
 - www.iata.org/pao

- Paperless technologies allow for smooth aircraft, records and parts transitions; protect asset value

- Provide feedback on the LLP Traceability template and database/clearinghouse



to represent, lead and serve the airline industry

תודה
Dankie Gracias
Спасибо شکرًا
Merci Takk
Köszönjük Terima kasih
Grazie Dziękujemy Děkojame
Ďakujeme Vielen Dank Paldies
Kiitos Täname teid 谢谢
Thank You Tak
感謝您 Obrigado Teşekkür Ederiz
Σας Ευχαριστούμ 감사합니다
ඔබටතක
Bedankt Děkujeme vám
ありがとうございます
Tack



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