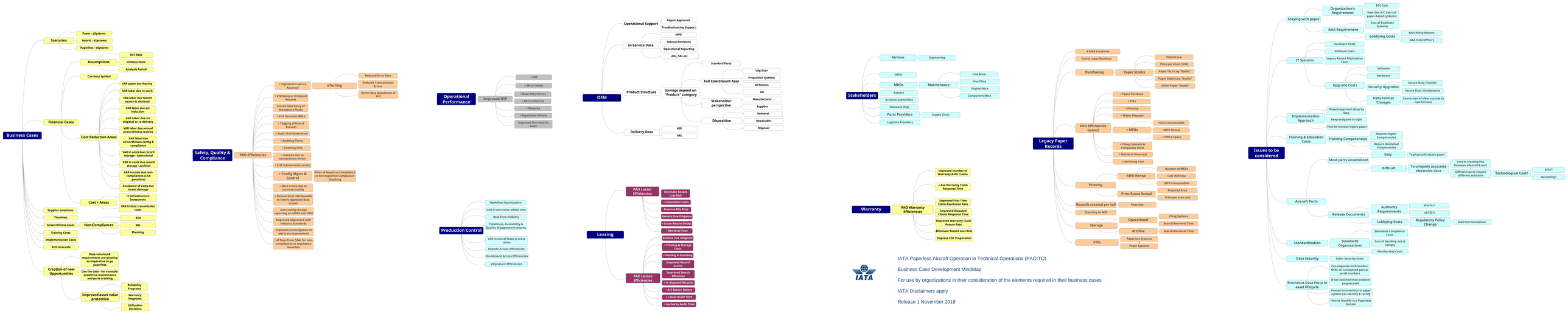
Business Cases
Scenarios
Paper - pSystems
Hybrid - hSystems
Paperless - eSystems
Financial Cases
Assumptions
DCF Rate
Inflation Rate
Analysis Period
Currency Symbol
Cost Reduction Areas
VAR paper purchasing
VAR labor due re-work
VAR labor due record search & retrieval
VAR labor due a/c induction
VAR Labor due a/c disposal or re-delivery
VAR labor due annual airworthiness reviews
VAR labor due airworthiness config & compliance
VAR in costs due record storage - operational
VAR in costs due record storage - archival
VAR in costs due non-compliances (CAA penalties)
Avoidance of costs due brand damage
Cost > Areas
IT Infrastructure Investment
VAR in data transmission costs
Supplier selections
Timelines
Airworthiness Cases
Training Costs
Implementation Costs
ROI Forecasts
Non-Compliances
ADs
SBs
Planning
Creation of new Opportunities
Data volumes & requirements are growing so imperative to go paperless
Use the data - for example: predictive maintenance and parts tracking
Improved asset value protection
Reliability Programs
Warranty Programs
Utilisation decisions
Safety, Quality & Compliance
PAO Efficiencies
> Signature Capture Accuracy
eTechlog
Reduced Error Rate
Reduced Transactional Errors
Direct data population of MIS
< # Missing or Unsigned Records
Forced Data Entry of Mandatory Fields
< # of Incorrect MELs
> Tagging of Data & Records
> Audit Trail Generation
< Auditing Times
< Auditing FTEs
> rewerks due to transactional errors
< # of maintenance errors
> Config Mgmt & Control
Point of Acquittal Compliance vs Retrospective Compliance Checking
< Mtce errors due to incorrect config
< Human Error attributable to timely improved data access
Auto config change reporting to CAMO and OEM
Improved alignment with Industry Standards
Improved promulgation of alerts etc to personnel
< of fines from CAAs for non-compliances or regulatory breaches
Operational Performance
Improved OTP
< NFF
< Mtce Delays
< Data Entry Errors
< Mtce Deferrals
< Reworks
< Repetitive Defects
Improved first time fix rates
Production Control
Workflow Optimization
VAR in non-value added time
Real-Time Visibility
Timeliness, Availability & Quality of paperwork returns
VAR in end-of-lease process times
Remote Access efficiencies
On-demand Access Efficiencies
eSignature Efficiencies
OEM
Operational Support
Repair Approvals
Troubleshooting Support
In-Service Data
MPD
Manual Revisions
Operational Reporting
ADs, SBs etc
Product Structure
Savings depend on "Product" category
Standard Parts
Full Constituent Assy
Ldg Gear
Propulsion Systems
Airframes
etc
Stakeholder perspective
Manufacturer
Supplier
Disposition
Removal
Repairable
Disposal
Delivery Data
AOR
ARs
Leasing
PAO Lessor Efficiencies
Eliminate Record Loss Risk
< Consultant Costs
Improve EOL Prep
Remote Due Diligence
< Lease Return Delays
< Retrieval Time
Remote Due Diligence
< Printing & Storage Costs
< Hosting & Securing
PAO Lessee Efficiencies
Improved Record Access
Improved Search Efficiency
< in disputed Records
< A/C Return Delays
< Lessor Audit Time
< Authority Audit Time
Stakeholders
Airlines
Engineering
OEMs
MROs
Maintenance
Line Mtce
Hvy Mtce
Engine Mtce
Component Mtce
Lessors
Aviation Authorities
Standard Orgs
Parts Providers
Supply Chain
Logistics Providers
Warranty
PAO Warranty Efficiencies
Improved Number of Warranty & PIC Claims
< Ave Warranty Claim Response Time
Improved First Time Claim Resolution Rate
Improved Disputed Claims Response Time
Improved Warranty Claim Return Rate
Eliminate Record Loss Risk
Improve EOL Preparation
Legacy Paper Records
M&E Locations
End of Lease Retrieval
Purchasing
Paper Stocks
Volume p.a.
Price per sheet (US$)
Paper Tech Log "Books"
Paper Cabin Log "Books"
Other Paper "Books"
PAO Efficiencies Gained
< Paper Purchase
< FTEs
< Printing
< Waste Disposal
< MFDs
>MFD Consumables
>MFD Rental
< Office Space
< Filing Cabinets & Compactus Units
< Retrieval time/cost
< Archiving Cost
Printing
MFD Rental
Number of MFDs
Cost /MFD/yr
MFD Consumables
Print Room Rental
Required Area
Price per area unit
Records created per tail
Fleet Size
Scanning to MIS
Storage
Operational
Filing Systems
Search/Retrieval Time
Archive
Search/Retrieval Time
FTEs
Paperless Systems
Paper Systems
IATA
IATA Paperless Aircraft Operation in Technical Operations (PAO:TO)
Business Case Development MindMap
For use by organizations in their consideration of the elements required in their business cases
IATA Disclaimers apply
Release 1 November 2018
Issues to be considered
Staying with paper
Organization's Requirement
EOL Cost
New Gen A/C Cost (of paper-based systems)
NAA Requirement
Cost of Duplicate Systems
Lobbying Costs
NAA Policy Makers
NAA Field Officers
IT Systems
Hardware Costs
Software Costs
Legacy Record Digitisation Costs
Upgrade Costs
Software
Hardware
Security Upgrades
Secure Data Transfer
Secure Data Maintenance
Data Format Changes
Conversion of older records to new formats
Implementation Approach
Phased Approach (Step by Step
Keep endgame in sight
Training & Education Costs
Training Competencies
Require Digital Competencies
Require Analytical Competencies
Most parts unserialized
Easy
To physically attach paper
Difficult
To uniquely associate electronic data
Cost in creating link between eRecord & part
Different parts require different solutions
Technological Cost?
RFID?
Barcoding?
Aircraft Parts
Release Documents
Authority Requirements
eForm-1
ei135.3
Lobbying Costs
Regulatory Policy Change
ICAO Harmonization
Standardization
Standards Organizations
Standards Compliance Costs
Cost of deciding not to comply
Membership Costs
Data Security
Cyber Security Costs
Erroneous Data Entry in asset lifecycle
Can originate with Vendor/ OEM, ie: transposed part or serial numbers
If not rectified then problem perpetuated
Human intervention in paper system can identify & rectify
How to identify in a Paperless System