THE GAIN IS WORTH THE PAIN!
1. Value, value, value
A/L spend money only if it helps the top/bottom lines or increases availability

2. Mixed Fleet Solutions
Whatever you do, do it for the whole fleet

3. The Solution adapts to me, not the other way around
Every airline operates differently, customization is a must

4. Return on investment in 18-24 months
Because chances are that opportunity will never be realized, Time to Market and Time to Savings is everything

5. Pervasive solutions through true Mobility
Forget mobile access! Remove the barriers for change management

6. Pre-integrated with existing systems
Need to mitigate the risk and shorten deployment time
## Guidance on current and future EFB applications

<table>
<thead>
<tr>
<th>Category</th>
<th>Installed</th>
<th>Planned (0-12 months)</th>
<th>Planned (12-24 months)</th>
<th>Planned Future &gt; 24 months</th>
<th>Not Interested</th>
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</tbody>
</table>

84% of Airlines plan to deploy **now!**
The story so far

2017
- All Airbus Fleet Class II

2016
- A350 Class II
- A380 Class III

2015
- All Fleet – Class I (AIB/non AIB)

2007
- A380 Class III
IATA 3rd RFID and Paperless Aircraft Operations Conference

1st MVP proposed by Airbus based on market needs

2nd MVP designed with a reduced group of customers

Staged Product development with customer feedback

Time to savings for the Airline

<table>
<thead>
<tr>
<th>1st MVP</th>
<th>2nd MVP</th>
<th>Staged Product development</th>
<th>Time to savings for the Airline</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>YES</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$\text{Time to savings for the Airline}$
The current process works, is cheap, flexible – learning from pass experiences, need to **leverage the benefits of digital** (the gain is worth the pain!)

The process will evolve – **driven by customers requirements** and experiences, use the MVP model

**Why airbus?** – fundamentally linked to the aircraft, we want Airlines to be able to leverage the full capability of their aircraft. The aircraft Airbus are developing today are fully integrated hardware and software solutions (unlike 40 years ago)
EIS Assistance: 9 months

1. NDA
2. Detailed process analysis, recommendations & specifications for the customization
3. Customization of the knowledge base of defects
4. Move Into Production
5. Delivery and testing of the customized CrossLogbook
6. Training to your instructors
7. Check your readiness
8. Assistance to Operational Approval
9. EIS
“...you may not always see the light at the end of the tunnel, but if you keep moving, you will come to a better place”

Avatar

“Have patience. All things are difficult before they become easy”

Saadi
The Gain

... 

... the Pain

- Sponsor
- OS Choice
- Connectivity
- MIS Interface
- Authority Approval

- Standardize
- Optimize
- Liability
- Security
- Man Hours
- Workflow
- Data Accuracy
- Cost Saving
- Flexibility
- Traceability

Workflow Deployment
An e-Logbook is in the middle of two worlds

- Flight Operations / Engineering

Engineering is the Process Owner, Flight OPS is the Main contributor

Finding a Sponsor, and a focal point, is a key success point.
An e-Logbook is a **shared tool** for both Pilots and Maintainers. It could rely on synchronized tools that require Connectivity.

Connectivity is used both to ensure Ground segment and On-Board synchronization, and that Reports are “Ground based” before flight.

At stations with low bandwidth or no network coverage, back-up processes should be used
- external media
- paper process

**Way Forward**
- be compatible with multi-connectivity (3G/4G; WiFi; Direct IP; SATCOM)
- offer an Off-Line mode
- improve “Tablet” capabilities to ensure back-up processes (IOS vs Windows)
- Develop Local Storage On-Board
USER attached vs A/C attached

- **User Attached** → One Device per User, the e-logbook leaves the A/C at arrival. Maintainers should use other devices
- **A/C attached** → One Device (or more) per A/C, the e-Logbook always stays in the A/C, all the Users share the same device

When moving to a “paper-less” solution Airlines want to take benefit of all the Technology improvements (full integration, auto-population), thinking it is very simple and very quick…!!!

From a paper based process where the Logbook is located into the Cockpit and shared between all users, Airlines expect to move to a full “Mobile” solution

→ Tablet “Pilot Attached” (Most often, Tablet is used as a standalone solution for EFB application)
Depending on the Airline’s expected process and known connectivity issues, the OS choice could lead to an abnormal usage of Back-up processes.

Main Points to be taken into account:
- Connectivity thru the A/L network
- Chosen Deployment of the solution (A/C vs User attached)
- Authority feeling/Trust into technology (Authentication, Signatures, Back-up mode)

**Today**, a Windows based Solution offers more flexible capabilities than an iOS application:
- USB port, SD card support for back-up processes
- IT Integration with all other (already) existing solutions
- Easy Printing capability (On Ground/On-board)
- Cockpit integration (Class II)
ATA Spec 2000 Ch 17 is used as a std by MIS provider, but… No harmonisation seen across MIS providers, Integration is a long journey
ATA Spec 2000 Ch17 is not Plug & Play

Depending on the MIS provider, real effort is required in order to create the link with an e-Logbook

Application & data hosted by Airbus

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IATA 3rd RFID and Paperless Aircraft Operations Conference
Logbook definition is highly dependent on an “Approved Maintenance Process” with the Local Authority

→ For each Airline, the story is always a new story

Depending on knowledge and trust in technology, this approval could be a long journey

Coming from a Paper Based process, where everything is based on “trust”, most of the Authorities are reluctant to accept a simple application. They want us to implement a level of security not always compatible with a simple way of working (e-signature, authentication,…)

→ DSWG (Spec 42) coordination is a priority
And Sometimes
Due to recent budget cuts, the light at the end of the tunnel has been turned off.