

The background of the slide is a composite image. At the top, an airplane is shown from a front-on perspective, flying over a city skyline. In the bottom right, a man in a suit is standing at a desk, working on a laptop. In the bottom left, there is a large, detailed image of an airplane engine fan. The entire scene is overlaid with a blue, futuristic digital grid pattern.

Vietnam Aero Summit 2024

Simplifying Engineering and
Maintenance in the Digital Age

Nguyen Dang QUANG

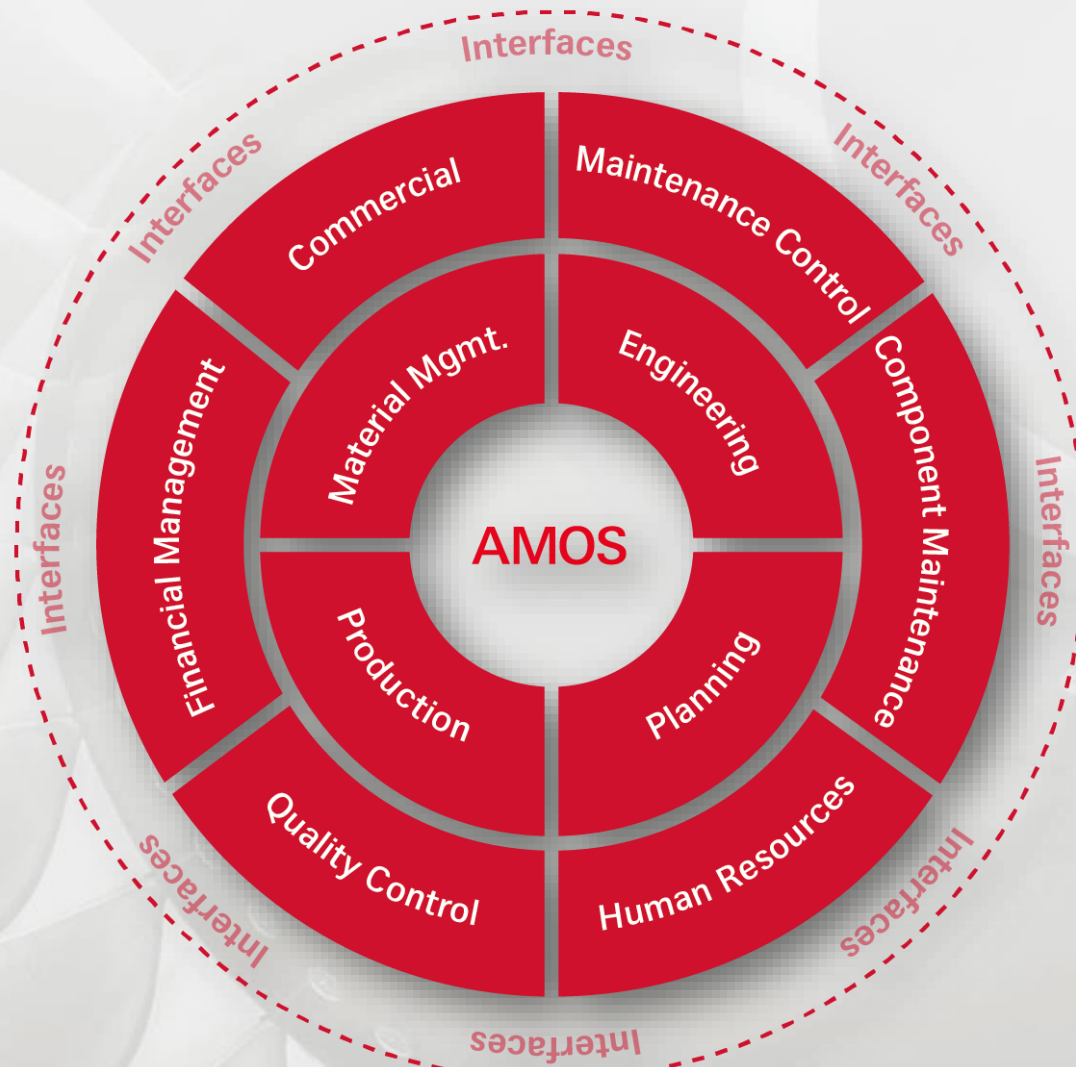


QUANG Nguyen

- Business Consulting and Project manager at Swiss Aviation Software
- Last 10 years working in Aviation Industry as:
 - Tech Services Engineer
 - Reliability Manager level
 - Safety & Quality Expert
 - Consulting & Project Management
- Talk to me in English, Vietnamese
- Email: quang.nguyen@swiss-as.com

What is AMOS?

AMOS is a fully integrated MRO solution that can manage the complex maintenance, engineering, and logistics requirements of any modern airline and MRO provider, regardless of its size.



AMOSeTL

Conduce AVIATAR
AVIOBOOK SKYPAQ
eTechLog

ATA e-Business Standards
S1000D
+ a b l e a u
pentaho Qlik
Data & Analytics

DR. THOMAS + PARTNER ASD
AEROSPACE SOFTWARE DEVELOPMENTS
AEROXCHANGE
Aviation Procurement & Logistic

AVIATAR skywise
BOEING ANALYTIX
Predictive Maintenance & Aviation Big Data

Sabre AIMS
NetLine/Ops ++
Flight Operations

SAP ORACLE
sage
Finance & HR

flydocs
STREAM Digital Aircraft Records AirVAULT
Asset & record management



Who is Swiss AviationSoftware Ltd.? - Ownership Structure

LUFTHANSA GROUP



Lufthansa Technik

100%



Lufthansa

Digital Tech Ops Ecosystem



AVIATAR



AMOS



flydocs



Lufthansa CityLine



Lufthansa Systems

Austrian Airlines

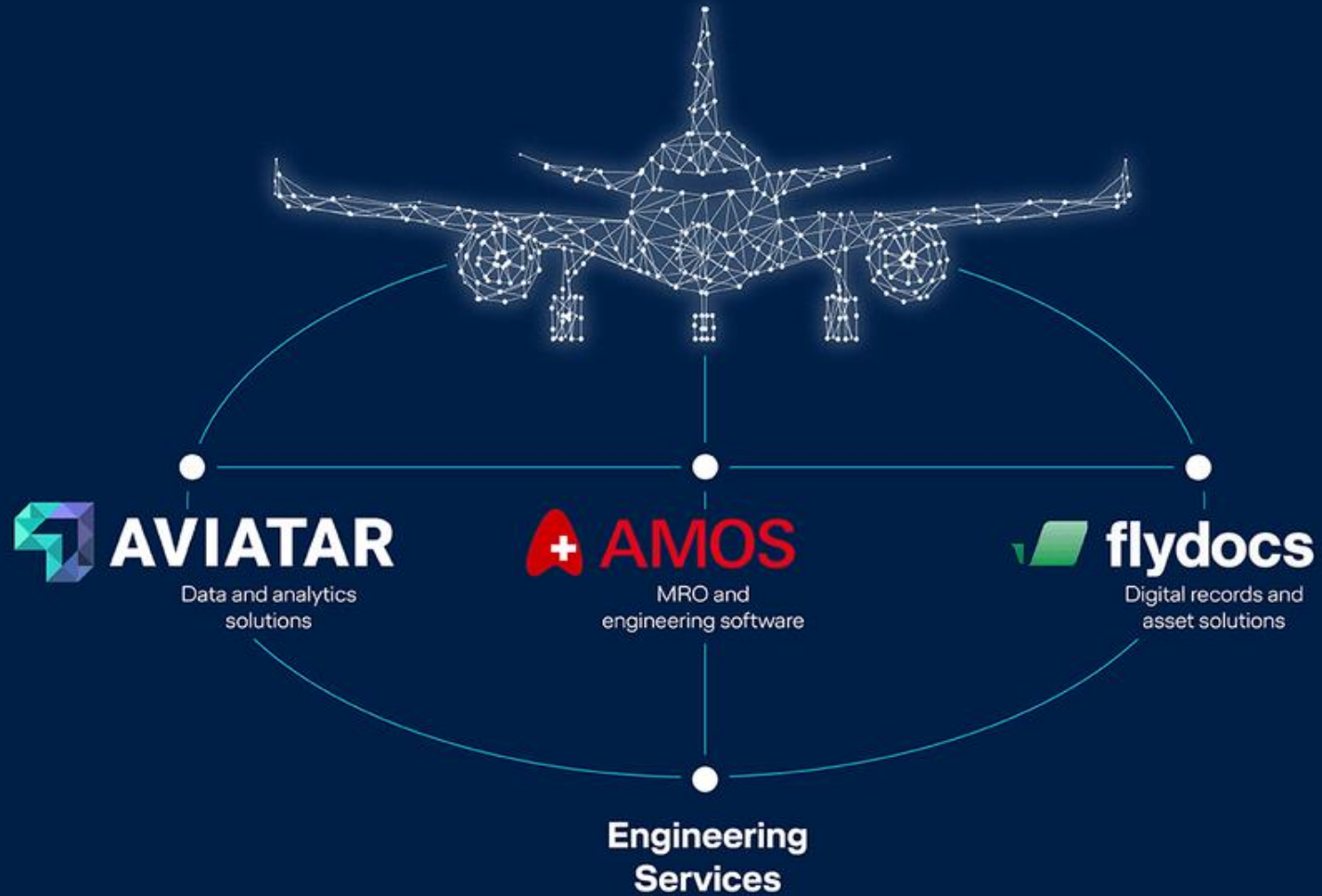
brussels AIRLINES

Eurowings



SWISS AviationSoftware

Digital Tech Ops Ecosystem



Simplifying Engineering and Maintenance in the Digital Age



What is the current Airlines Situation?



Recovery

- Domestic passenger traffic exceeding pre-pandemic levels in some countries, driven by factors like pent-up demand, rising disposable incomes, and **increased intra-regional tourism**. **Airlines expanding their fleets**.
- Air **cargo**, a crucial sector for many APAC economies, continues to **perform well**, supported by global trade and e-commerce growth.
- Ongoing **investments in airport** infrastructure expansion and regional modernization create growth opportunities.

What is the current Airlines Situation?



Challenges

- International long-haul flights lags behind domestic travel due to lingering business caution
- Rising fuel prices, **labour costs**, and airport fees are squeezing airlines' margins and dampening profitability.
- Trade and travel disruptions due to regional geopolitical tensions could impact airlines and routes.
- The industry faces pressure to reduce its environmental footprint, requiring investments in new technologies and operational changes

APAC MRO Forecast 2024

Market Growth Factors

- **Increased aircraft** demand
- **Aging fleets** in APAC require more frequent and comprehensive maintenance
- Airlines **Outsourcing to MRO** to optimize their operations and reduce costs
- **Adopting new technologies** like digital maintenance management systems and predictive analytics is transforming the MRO sector. These advancements are

Improving
Efficiency

Reducing Costs

Enhancing Safety

What can technology address?

Improving
Efficiency

Reducing
Costs

Enhancing
Safety

Digital
Transformation in
Aviation

- Increased Efficiency and Productivity
- Improved Customer Experience
- Enhanced Data-Driven Decision Making
- Innovation and Agility
- Cost Reduction
- Market Competitiveness
- Increased Revenue Opportunities
- Employee Empowerment and Collaboration
- Cybersecurity and Risk Management
- Adaptation to Market Trends
- Sustainability and Environmental Impact
- Supply Chain Optimization
- Long-Term Organizational Resilience

What can technology address?

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Digital
Transformation in
Aviation

Integration of IoT
and Sensor
Technologies

Data-Driven
Decision Making

Adoption of AI

AR & VR for
Training and
Maintenance

Digital Twin

Blockchain for
Maintenance
Records &
Supply Chain

Cybersecurity in
Aviation Systems
& ERP

Collaboration
Platforms for
Airlines and
MROs

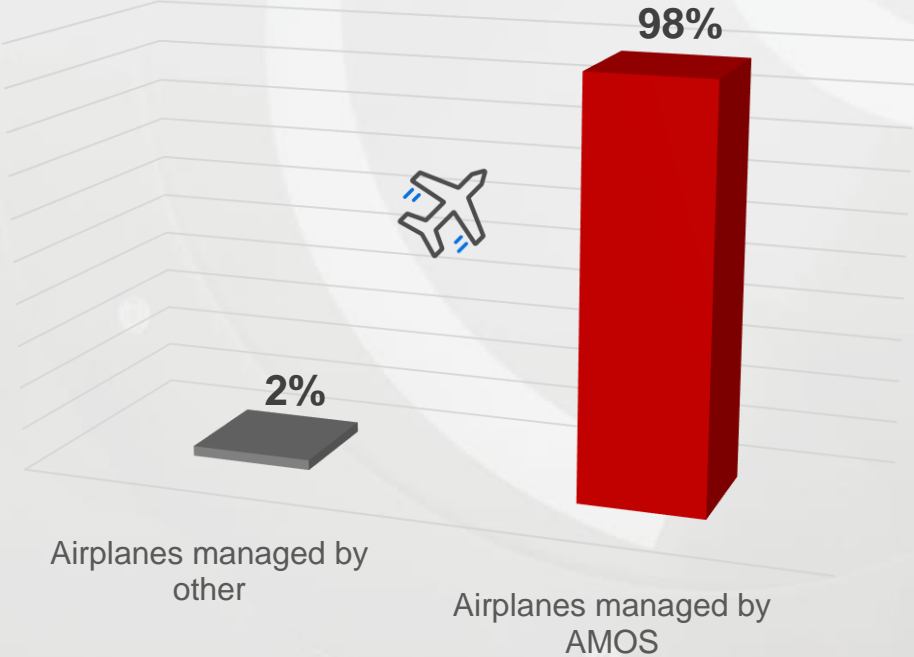
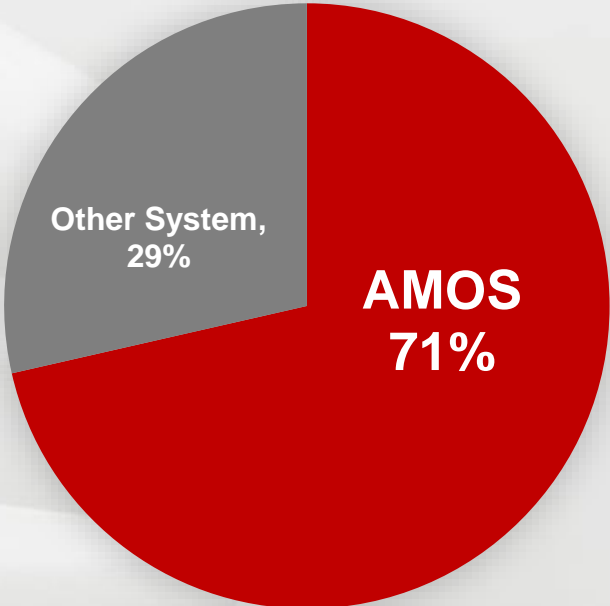
Mobility /
Paperless

The foundations for all these technologies are:

- Modern Engineering and Maintenance System
- Efficient Business Processes

Viet Nam technological adoption is good, but not yet high

Most Airlines use a modern E&M System (AMOS covers 98% of Vietnamese Airplanes)



- Digital Transformation in Aviation
- Integration of IoT and Sensor Technologies
- Data-Driven Decision Making
- Adoption of AI
- AR & VR for Training and Maintenance
- Digital Twin
- Blockchain for Maintenance Records & Supply Chain
- Cybersecurity in Aviation Systems & ERP
- Collaboration Platforms for Airlines and MROs
- Mobility Paperless



How many Airlines in the room use in E&M has:



Digital Transformation in Aviation

Integration of IoT and Sensor Technologies

Data-Driven Decision Making

Adoption of AI

AR & VR for Training and Maintenance

Digital Twin

Blockchain for Maintenance Records & Supply Chain

Cybersecurity in Aviation Systems & ERP

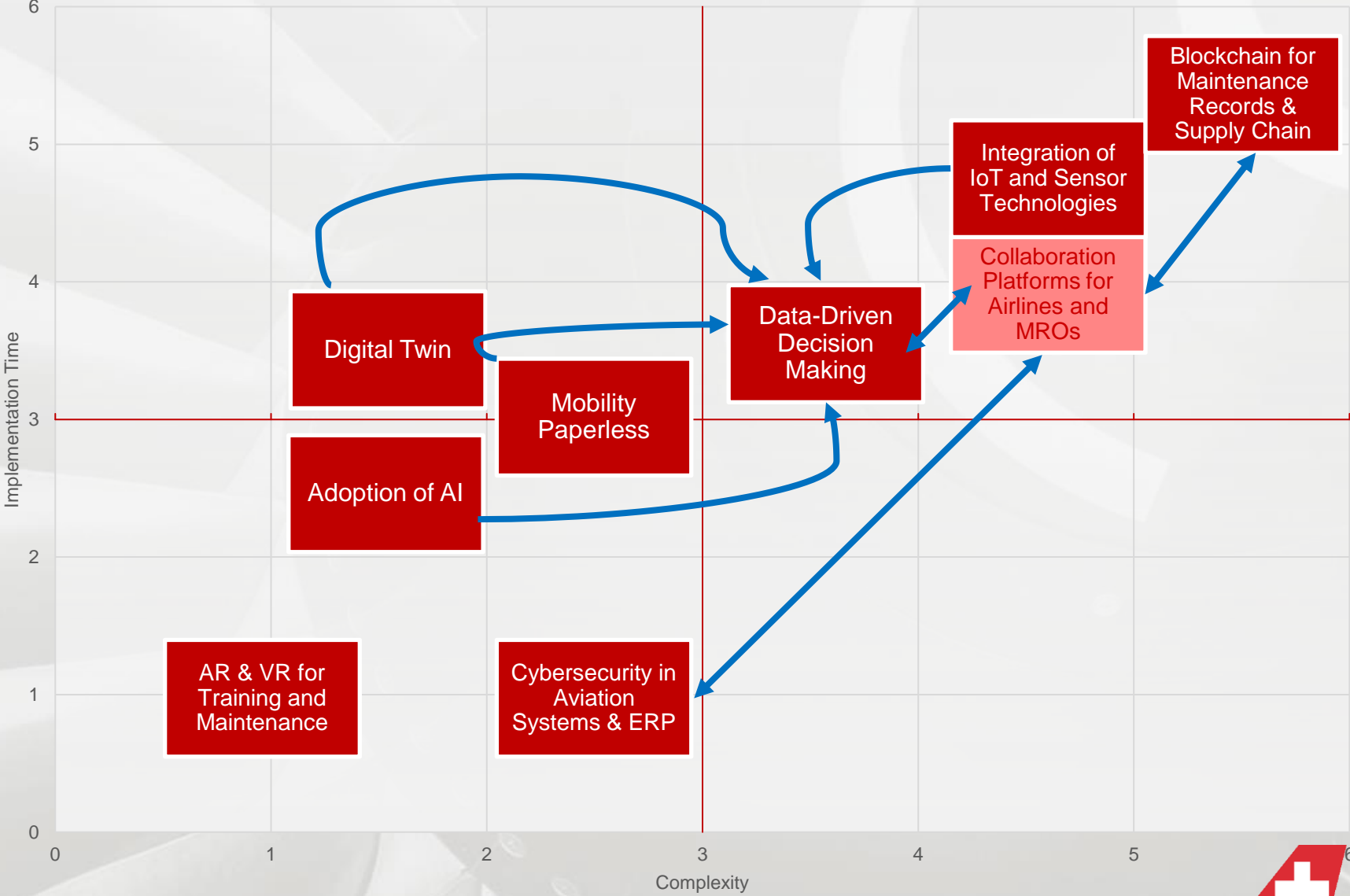
Collaboration Platforms for Airlines and MROs

Mobility Paperless



How Easy is adopting these technologies?

Digital Transformation in Aviation



Swiss-AS Vision to address these opportunities

is to leverage on our big customer base and allow them to collaborate seamlessly using AMOScentral



Collaboration Platforms for Airlines and MROs

Mobility
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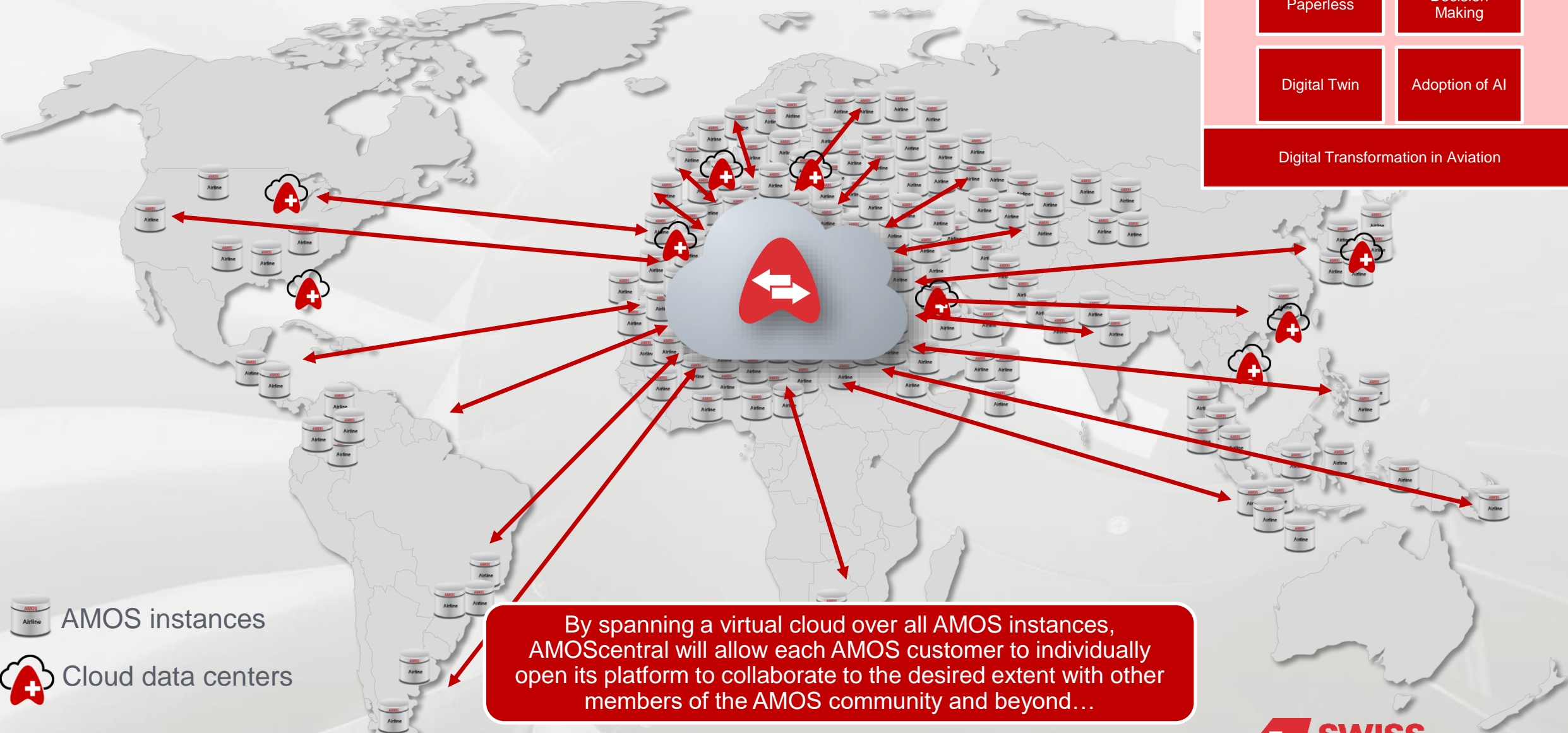
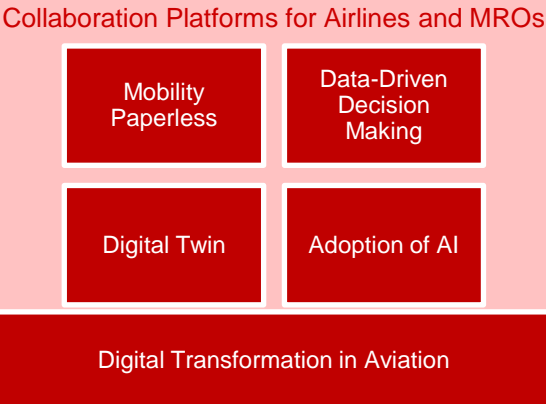
Data-Driven
Decision Making


Digital Twin


Adoption of AI

Digital Transformation in Aviation

AMOS landscape with AMOScentral



 AMOS instances

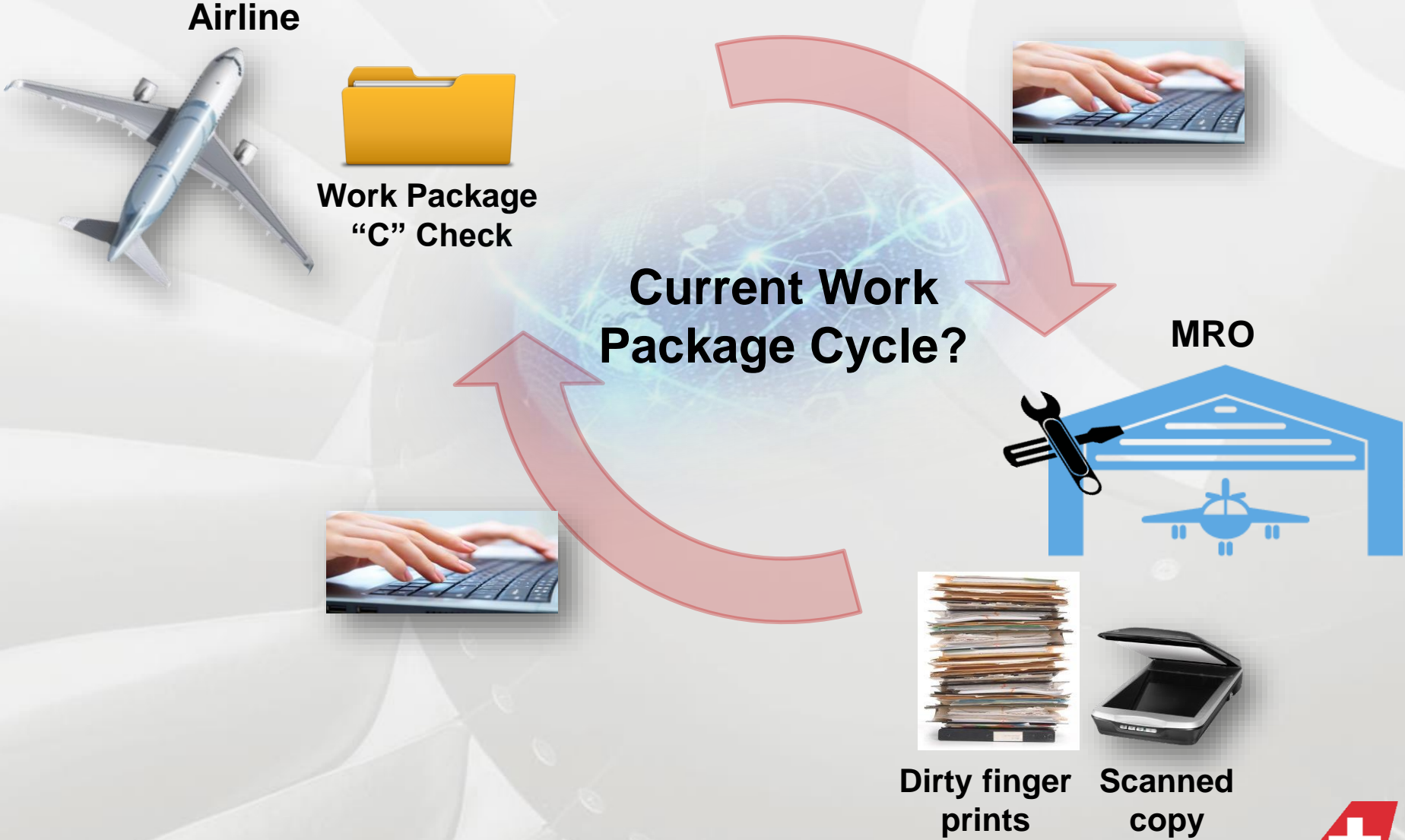
 Cloud data centers

By spanning a virtual cloud over all AMOS instances, AMOScentral will allow each AMOS customer to individually open its platform to collaborate to the desired extent with other members of the AMOS community and beyond...



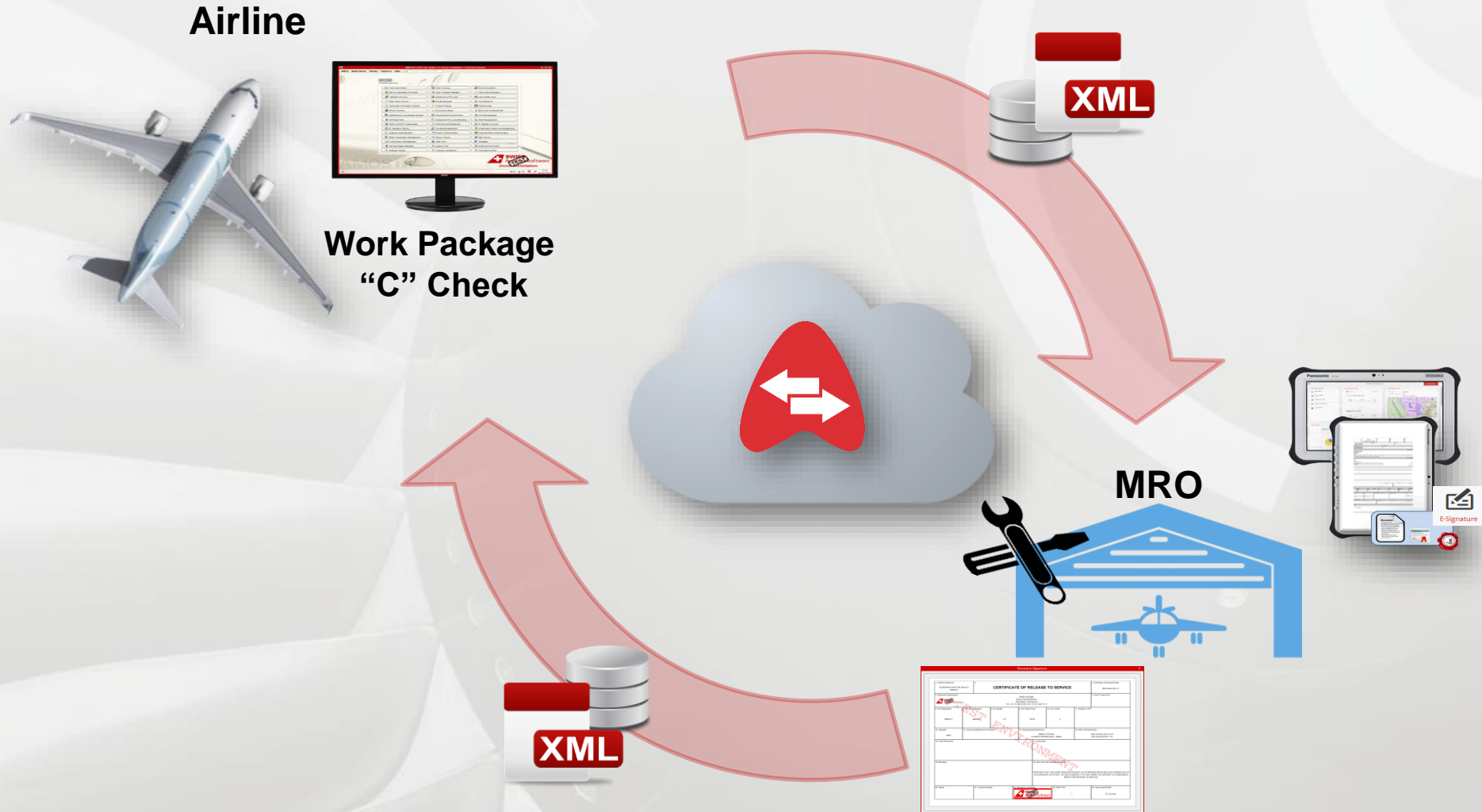
AMOScentral – Collaboration Between Airlines

Work Package Cycle – Paper Based



AMOScentral – Collaboration Between Airlines & MRO

Work Package Cycle – XML via AMOS Central



AMOScentral – Collaboration Between Airlines & MRO

AirAsia and ADE aiming to be the first group integrating via AMOScentral

Airline



Work Package
“C” Check

AirAsia

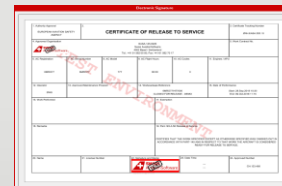


MRO



ADE

ASIA DIGITAL ENGINEERING



AirAsia and ADE have kicked off the project to integrate via AMOScentral, aiming to be the 1st in the APAC!



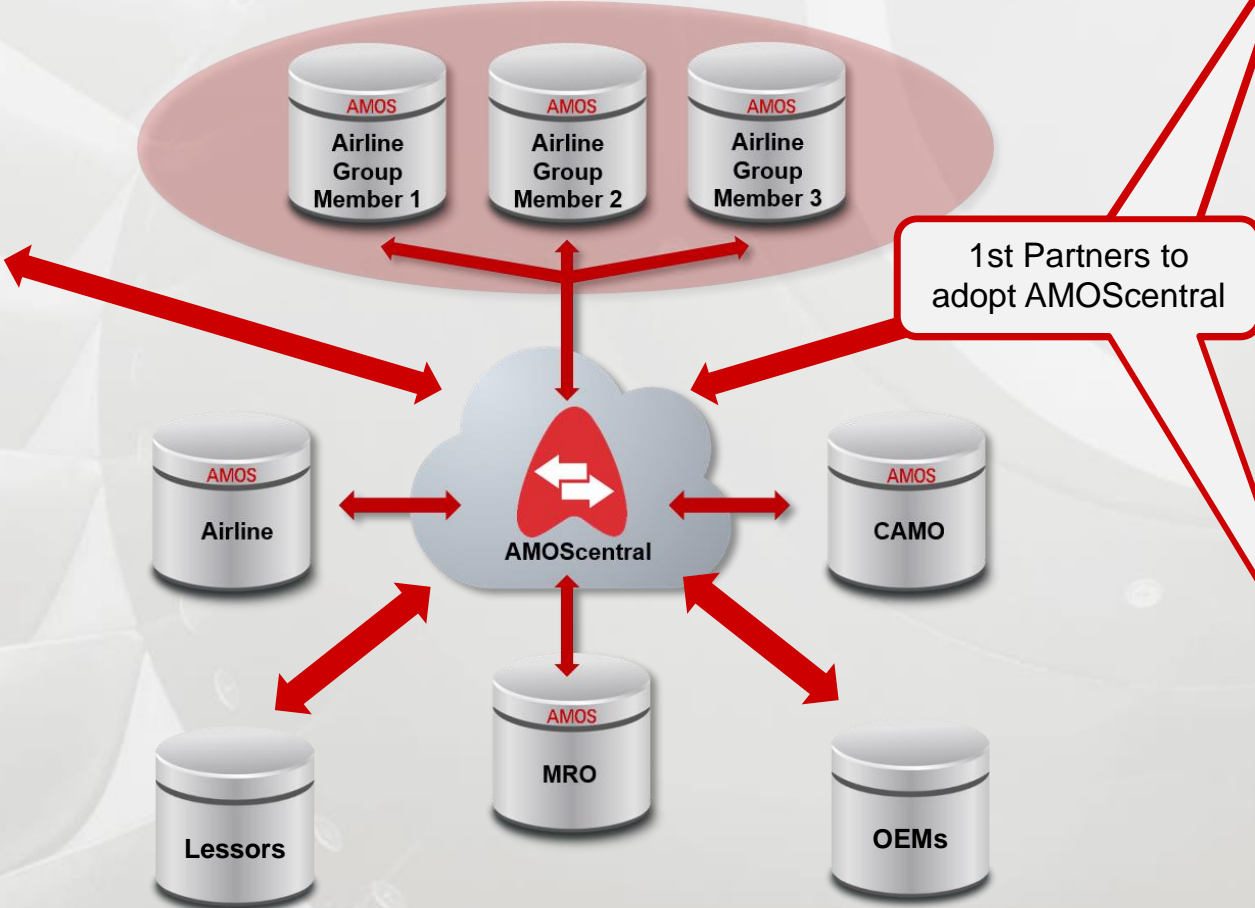
AMOScentral empowers collaboration by shifting boundaries & accelerate digitalisation by offering the most number of standard APIs to connect your ecosystem autonomously, without development

Empowering collaboration by shifting boundaries & accelerate digitalization

AMOSeTL

ATA e-Business Standards
\$1000D
+tableau
pentaho
BIG DATA
Qlik
Data & Analytics

DR. THOMAS - PARTNER
ASD AEROSPACE SOFTWARE DEVELOPMENTS
RFID/Aero
AEROXCHANGE
Aviation Supply Chain Solutions
Aviation Procurement & Logistic



AVIATAR skywise
BOEING ANALYTX
Predictive Maintenance & Aviation Big Data

Sabre AIMS
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Flight Operations

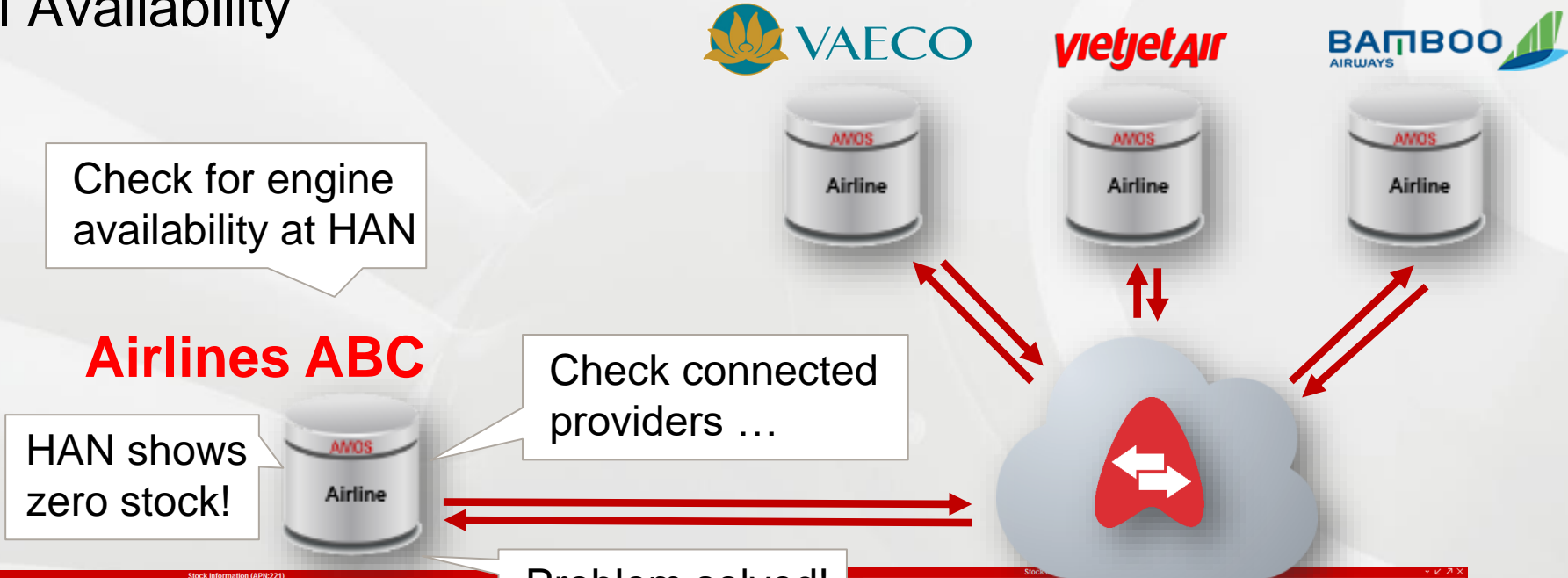
SAP ORACLE
sage
Finance & HR

flydocs
STREAM Digital Aircraft Records
AirVAULT From GE Digital
Asset & record management



AMOScentral – Collaboration Between Airlines

Material Availability



Problem solved!

Stock Information (APN:221)

Part Number: RB211TRENT772B09

Description: ENGINE RB211 772B-6016

Material Class: R Measure Unit: EA

Remarks: PICKSLIP PART REMARKS: Lst. QTY = Forbidden Pkg.Inst. see 950 Passenger NO LIMIT Pkg.Inst. see 950 Cargo ACFT NO LIMIT Special Provisions A87 / A70 / A87 / A134 and A176 ERG-Code 9L

⚠ This part has special marking(s): DGR

Stock Info	Stock Detail	Part Details	IPC Reference	EPA	Transfer	Quarantine	Hangar	US	Assemblies	Kitz 2.0	Forecast	Pools
PQC 1 STORE U7:1	DAD 0	CXR 0										
SGN 0	HAN 0											
TOTAL STOCK QTY: 1												

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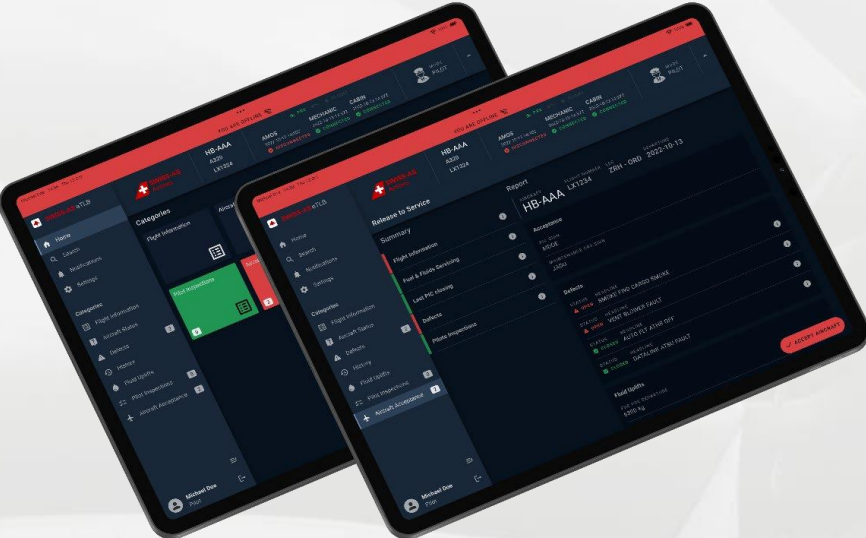
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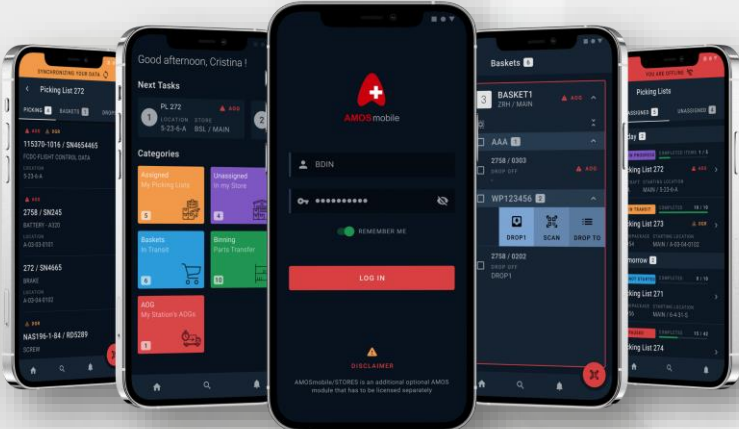
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PQC 1 STORE U7:1	DAD 0	CXR 0										
HAN 2 VAECO	HAN 1 vietjetAIR	HAN 1 BAMBOO AIRWAYS										
TOTAL STOCK QTY: 1												

Mobility & Paperless



AMOSeTL



AMOSmobile Stores



AMOSmobile Mechanics

In conclusion

The MRO sector is changing by using advanced technologies like digital maintenance systems and predictive analytics.

This shift brings unprecedented efficiency, data-driven decisions, and collaborative innovation to aviation engineering and maintenance in the digital age...

And to succeed

“

To shape the future of aviation digitalization successfully, we need to work together to embrace, create, and use digital technologies.

This collaborative effort will create a strong and innovative environment for the industry to progress!



And MORE ...