CONNECTED CABINS

Atlanta: September 19, 2018
IATA Maintenance Cost Conference

ROADMAP

- Premium by Class
- Seat Architecture
- Components, Systems, Traps
- Aircraft Health Monitoring
- Interfaces
- Connected Cabins
- Innovative Seat Designs
- OEM Expectations
- Summary

PREMIUM CABINS

PREMIUM IMPACTS

BRAND

GUESTS

LOYALTY

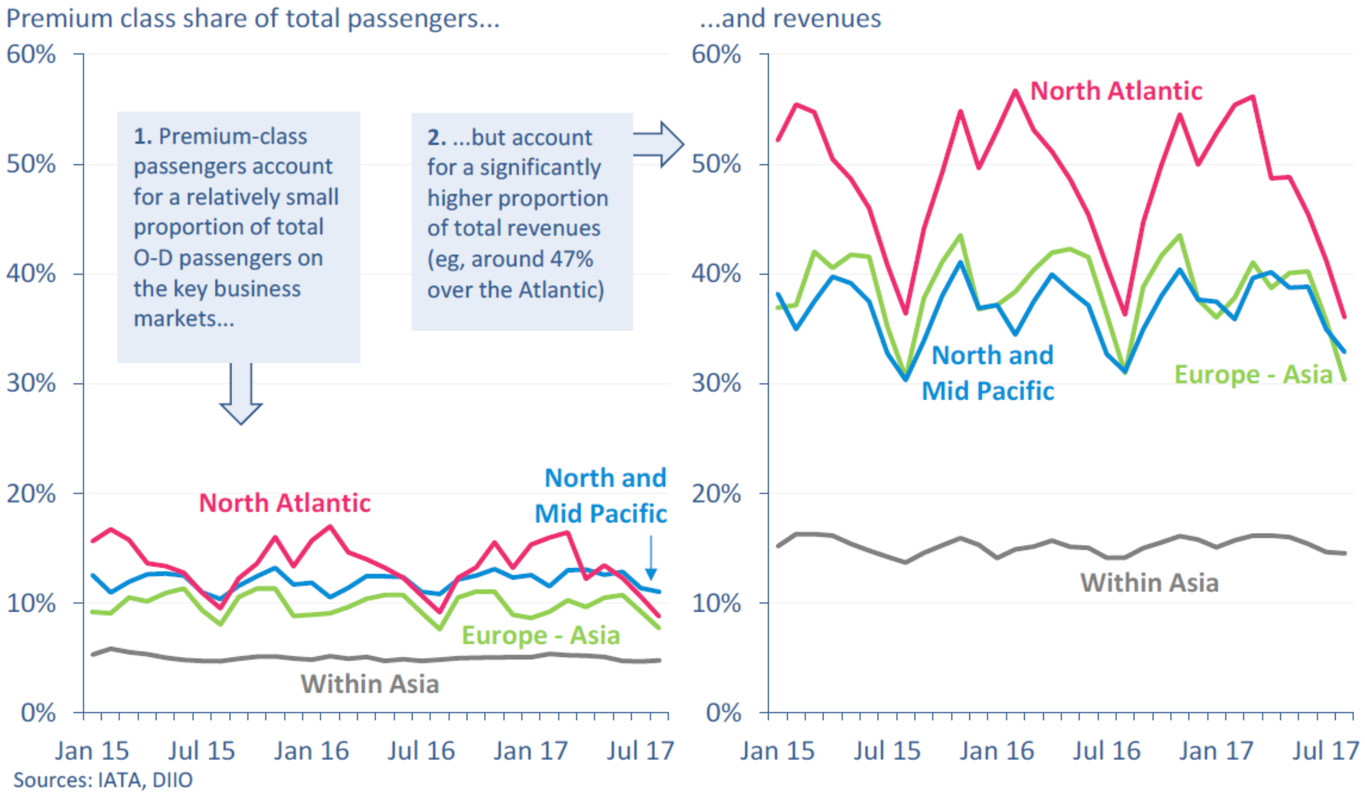
REVENUE

IATA ECONOMICS: PREMIUM CLASS

IATA ECONOMICS' CHART OF THE WEEK

10 NOVEMBER 2017

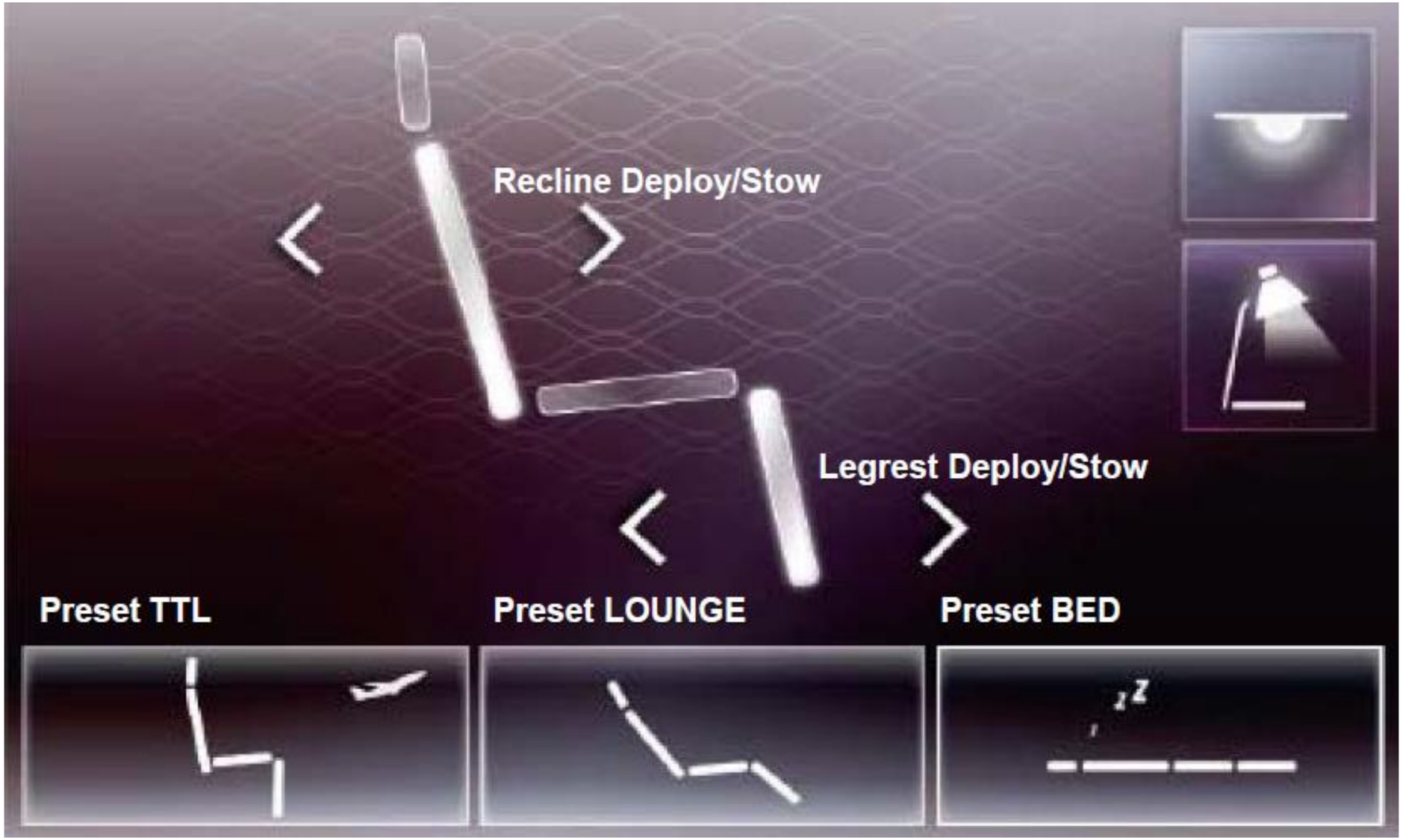
WHERE DOES PREMIUM-CLASS DEMAND MATTER THE MOST?



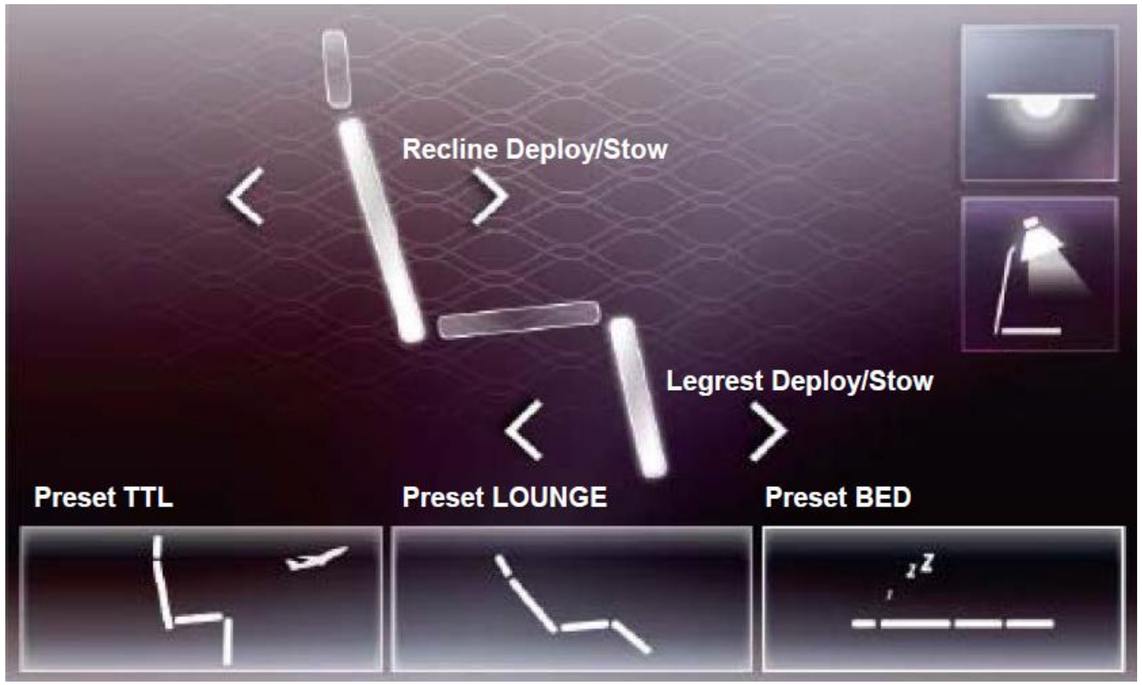
Sources: IATA, DIIO

- IMPORTANT MARKET
- SEASONAL VARIANCES
- AIRLINE ECONOMICS

PREMIUM SEAT: ARCHITECTURE



BONES & MUSCLES

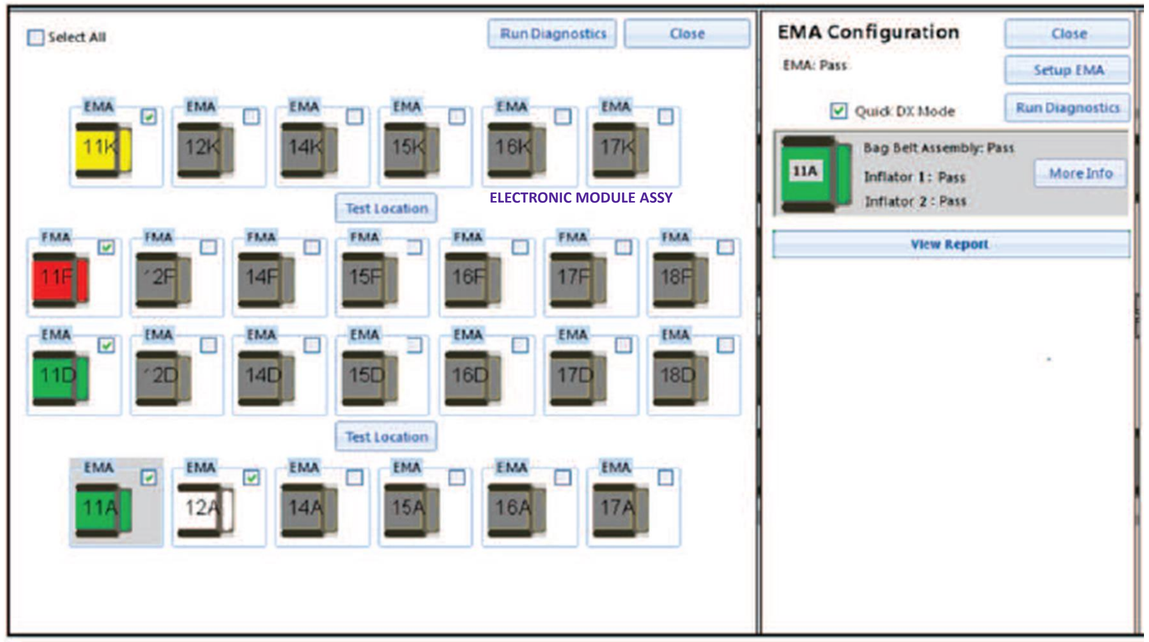


- *Power Supply Module*
- Smart Actuator Module
- *PAX Control Module*
- Harnesses & Cables

Complex Design

- MULTIPLE MOVING PARTS
- DIFFICULT ACCESS
- NO EFFECTIVE SCHEDULED MAINT
- UNPREDICTABLE FAILURE RATES
- LONG LEAD TIMES

MAINTENANCE DIAGNOSTICS



GREEN	PASS
RED	FAIL
YELLOW	SERVICE LIFE END
WHITE	NO RESPONSE

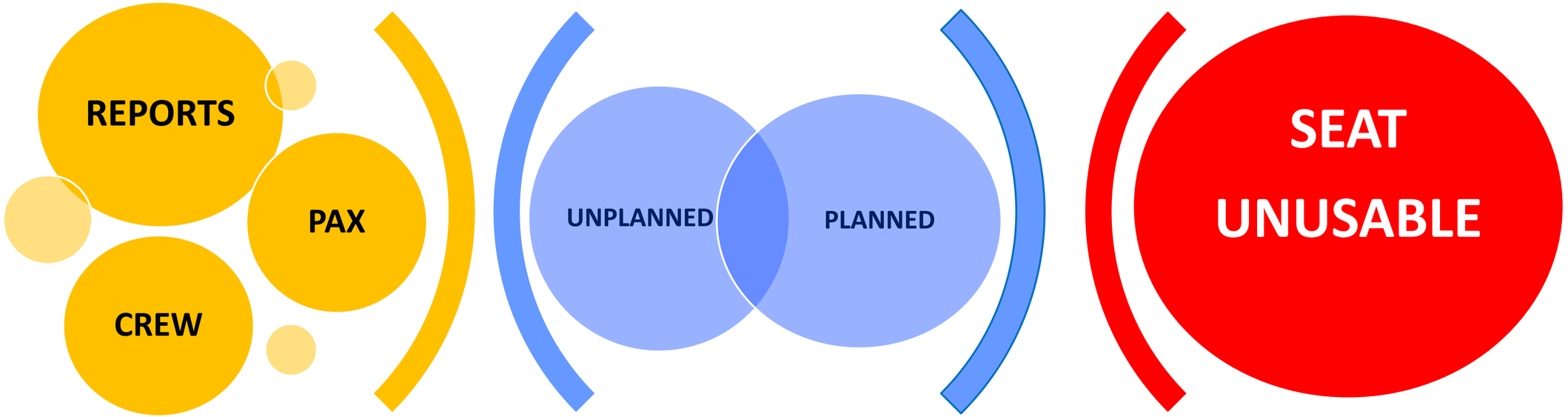
MAINTENANCE

- NOT SCHEDULED
- UNPREDICTABLE
- COMPONENT FAILURES

LIMITATIONS

- SPECIAL TOOLS
- SPECIALIST TRAINING
- SPECIALIST SOFTWARE

SYSTEM FAULTS



- Resolving System Faults after they present… **undesired outcome**
- Analysing impending faults… **… predictable outcome**

COMPONENT FAULTS

- **T** TROUBLESHOOT DEFECT
- **R** REPAIR COSTS
- **A** ACCESS REQUIREMENTS
- **P** PART LEAD TIMES

RELIABILITY

- Low MTBUR
- Inconsistent Time on Wing
- High Repair Costs

AIRCRAFT HEALTH MONITORING

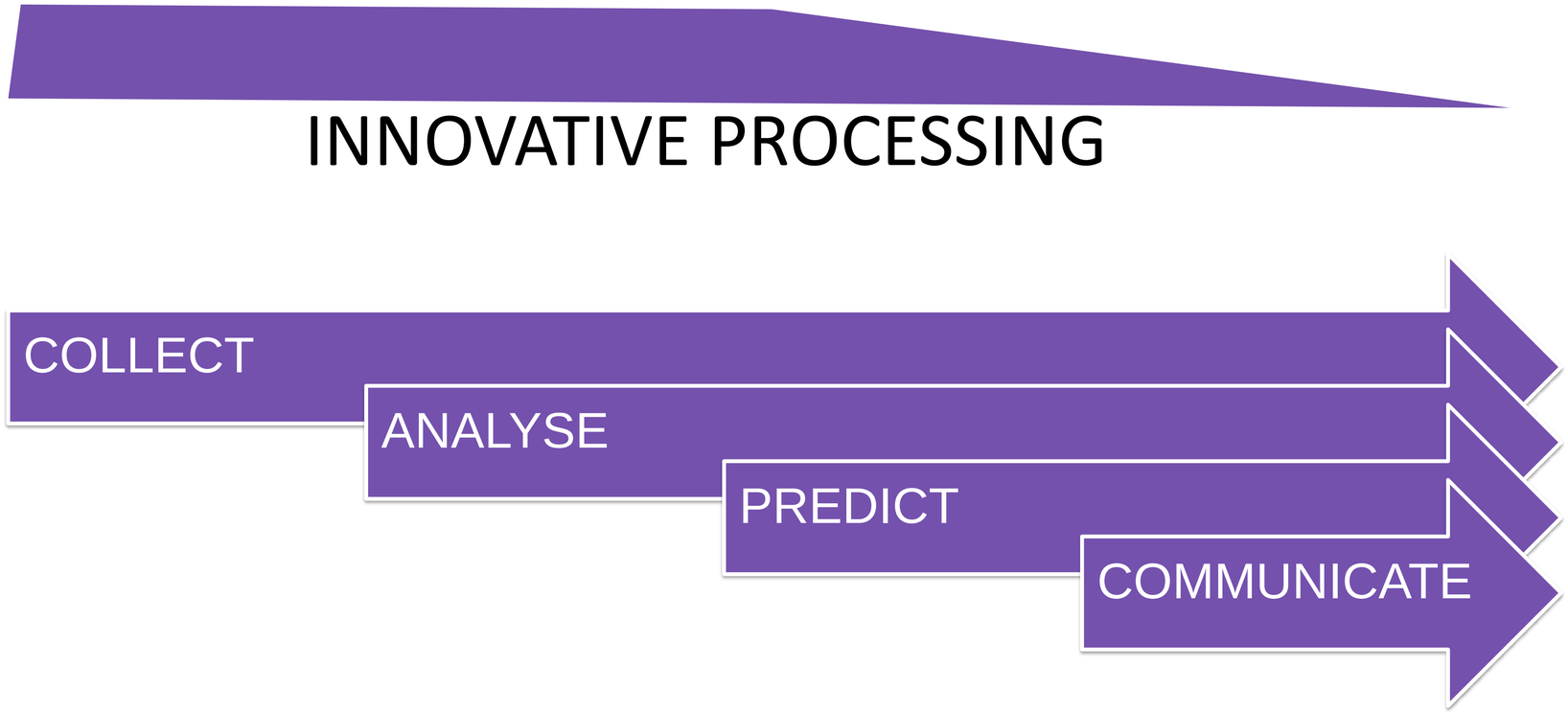
- Modern aircraft are data-rich and designed with significant advancements in digital technologies

- Data transmitted from these modern-talking aircraft is harnessed to **enhance the aircraft health monitoring and prognostic maintenance capabilities**

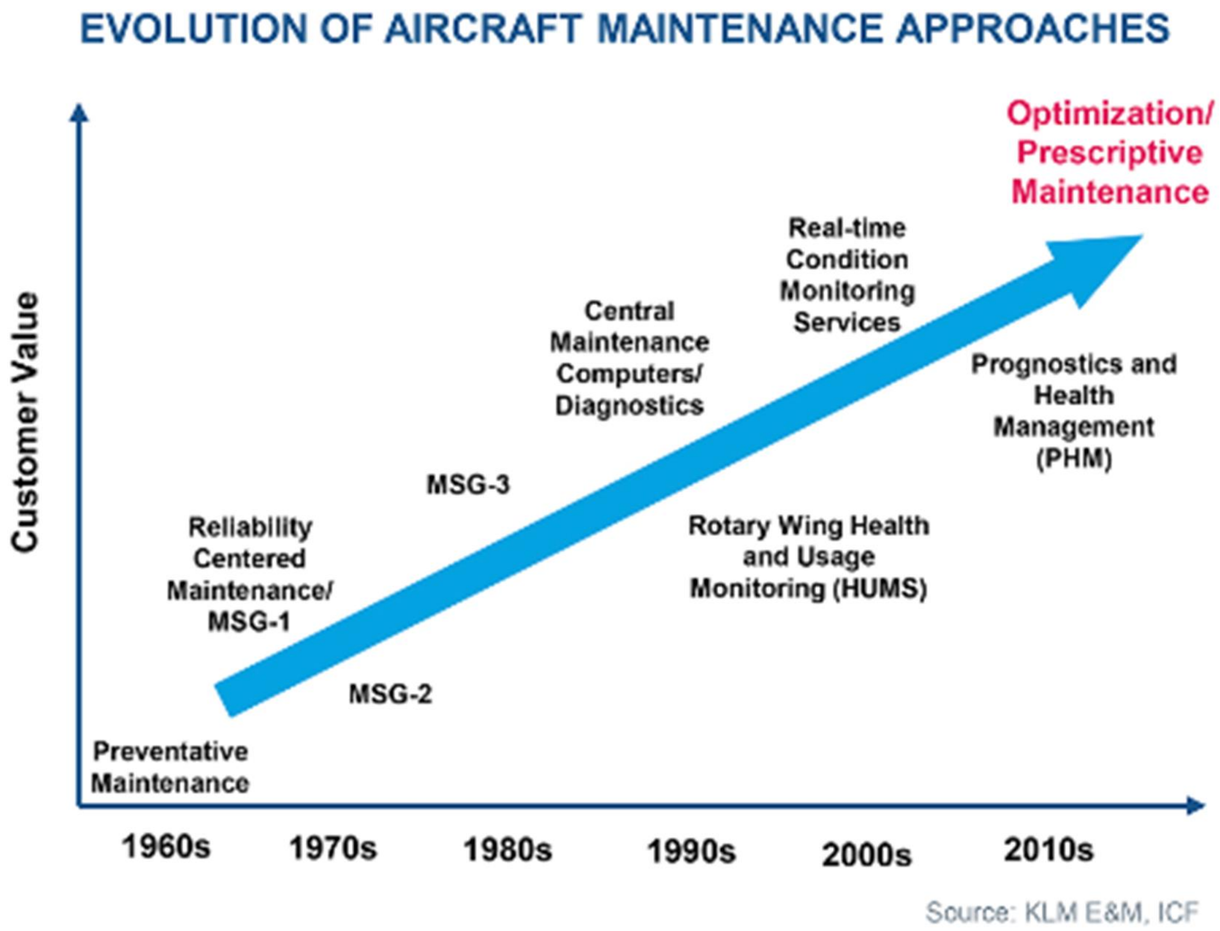
- Data streams into the AHM system can also be applied to optimise aircraft maintenance programs; consequently **reduce direct maintenance costs**

DATA RICH CULTURE

- Thousands of sensors measuring data every second
- ~ 1-10TB of data per flight

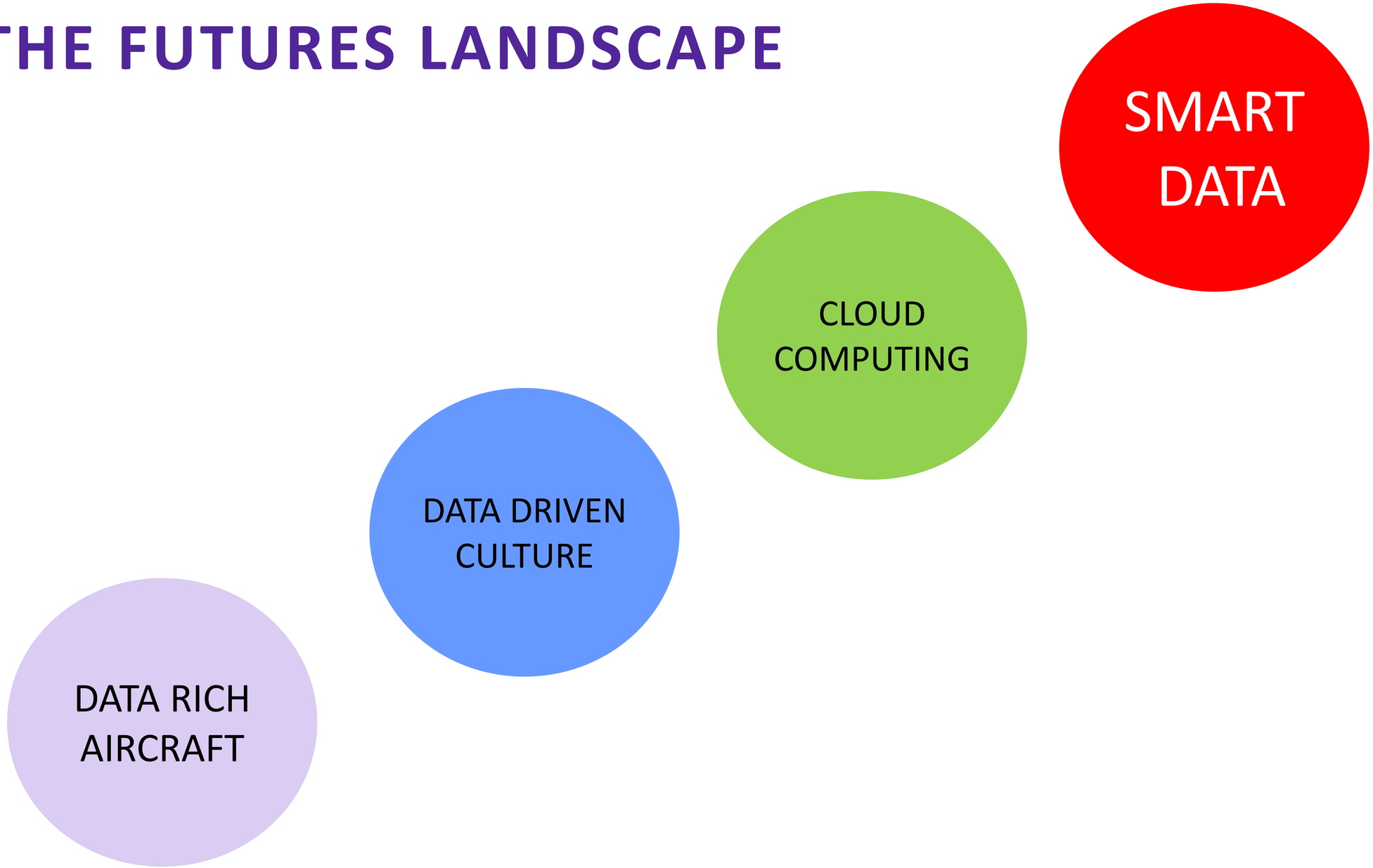


MAINTENANCE CONCEPTS

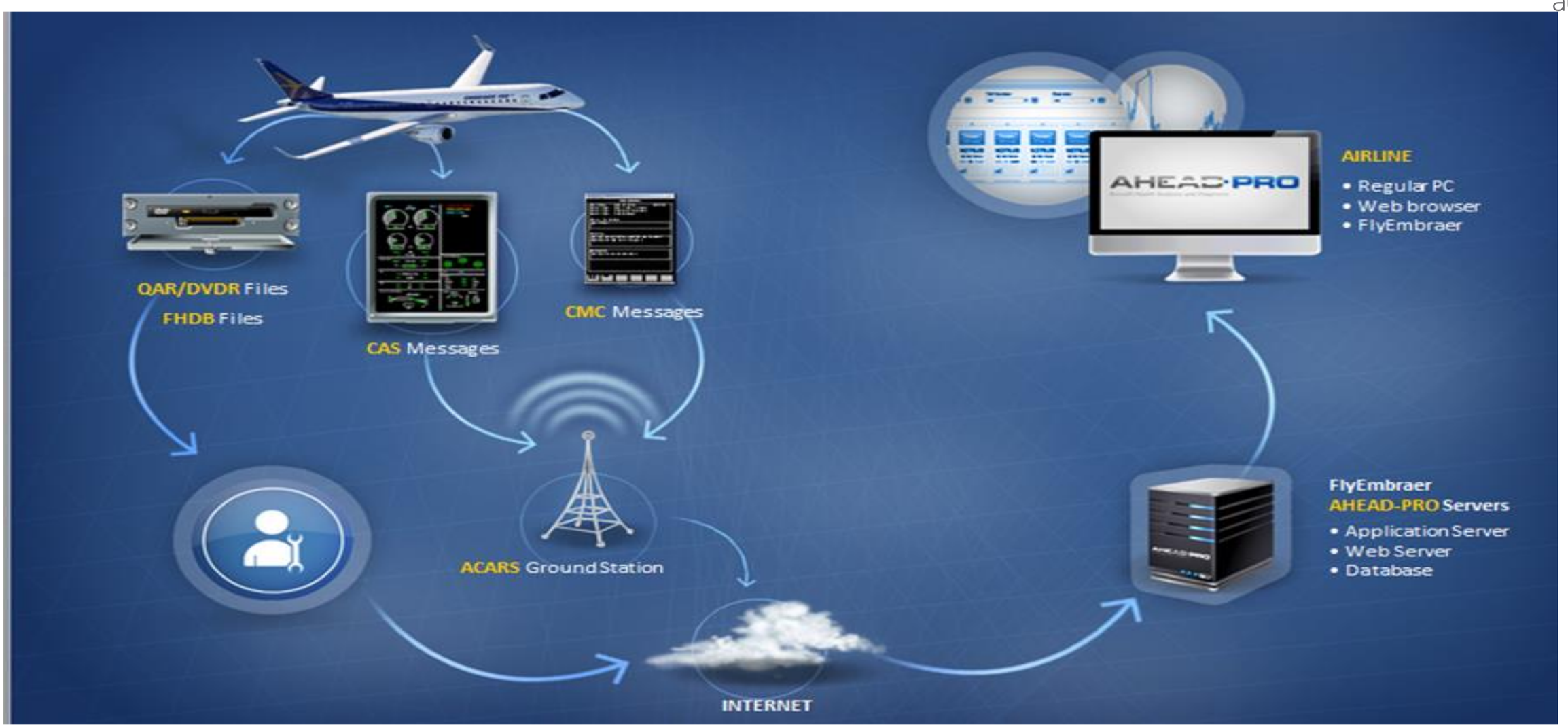


Source: http://aviationweek.com/aviation-maintenance-and-support-software/sharing-data-predictive-maintenance

THE FUTURES LANDSCAPE

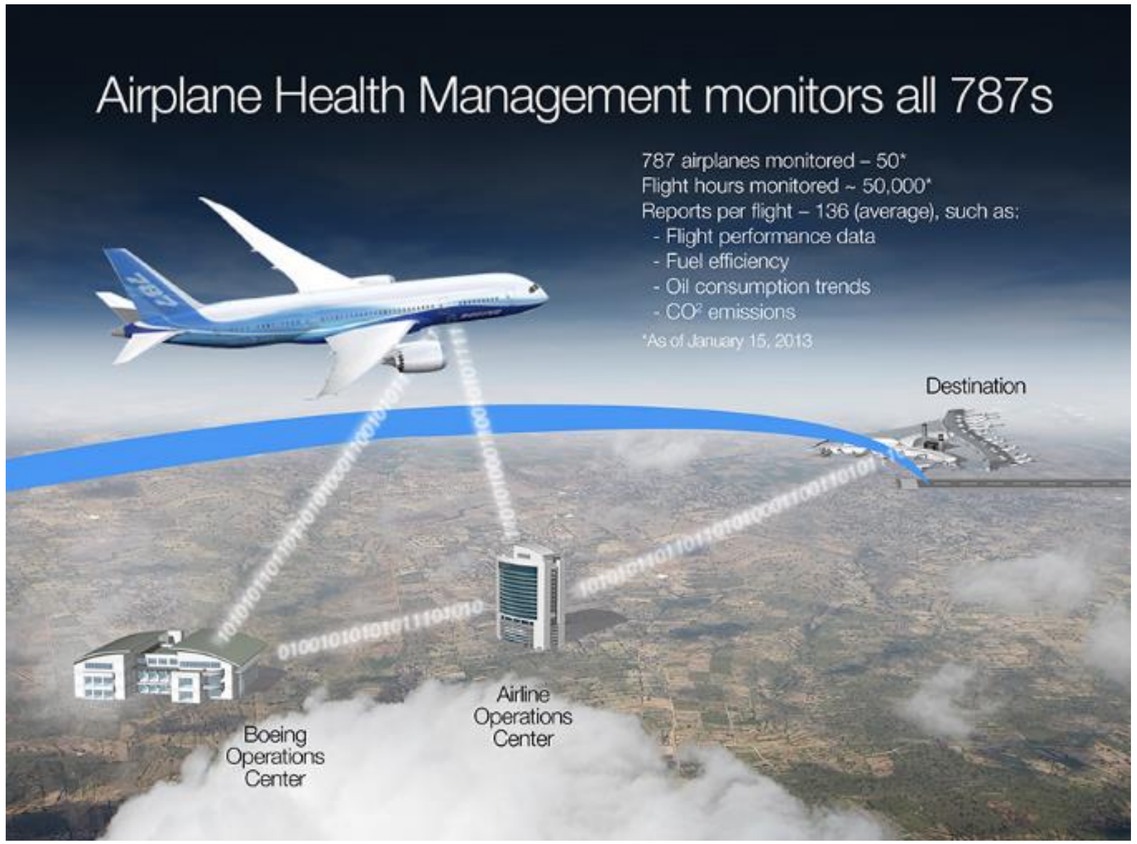


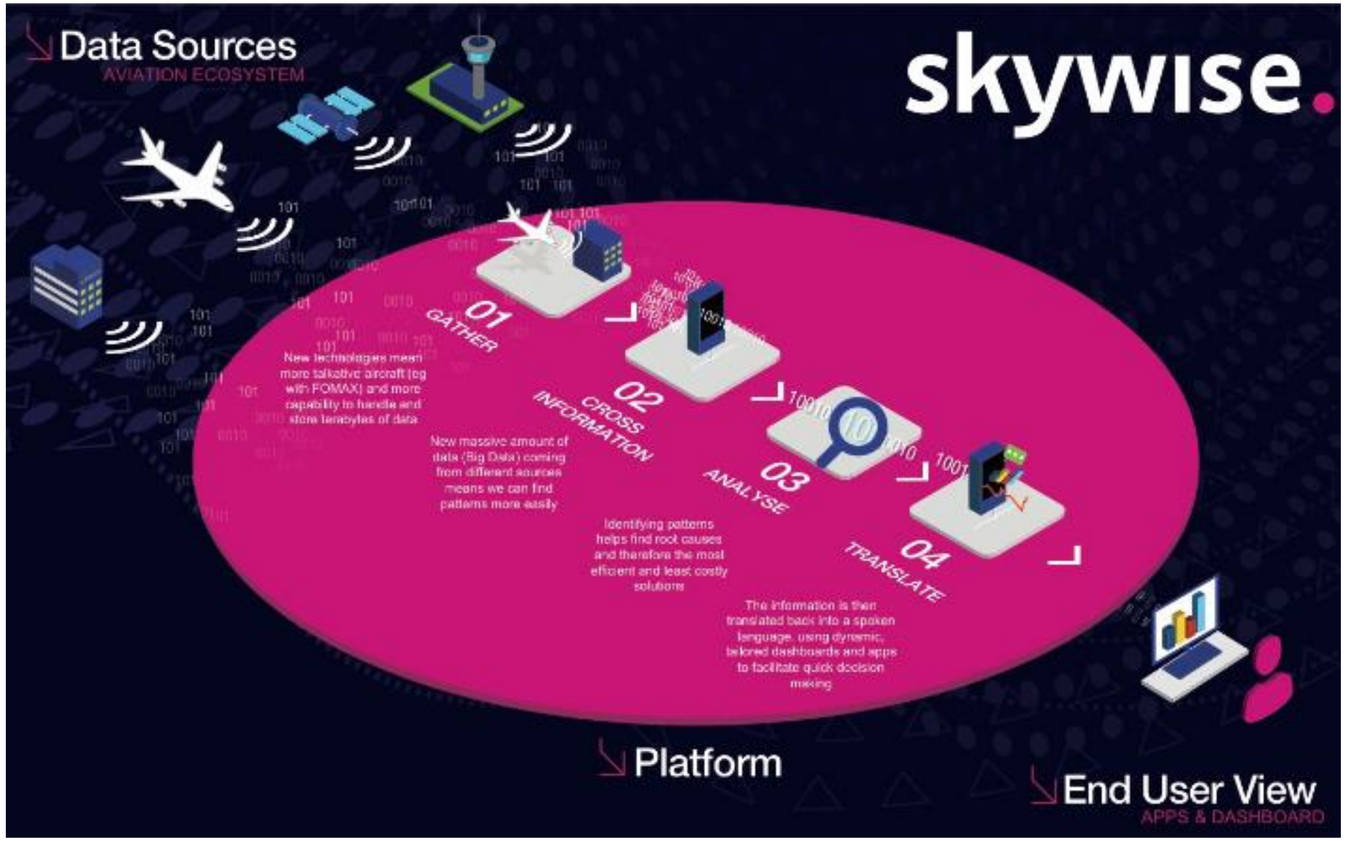
SYSTEM APPLICATIONS



Source: Customer AHEAD Pro Presentation by Embraer (2014)

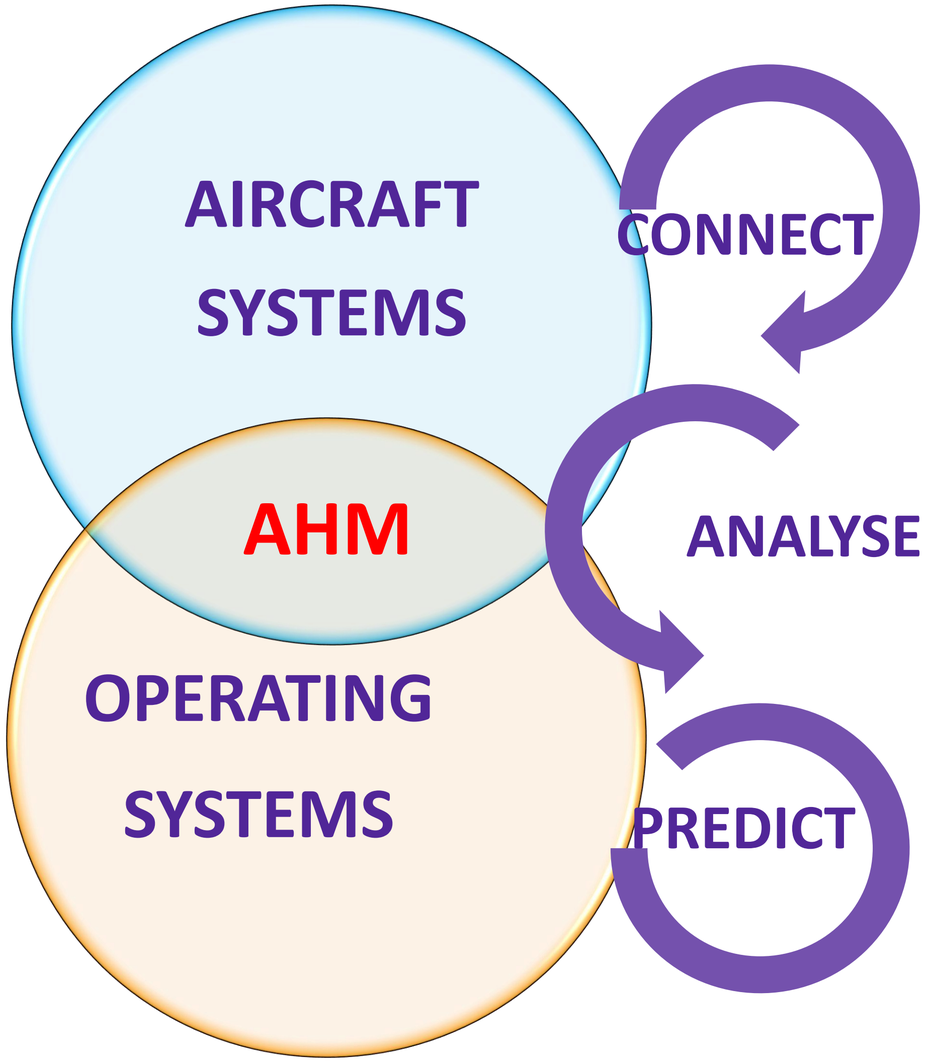
OPERATING SYSTEMS



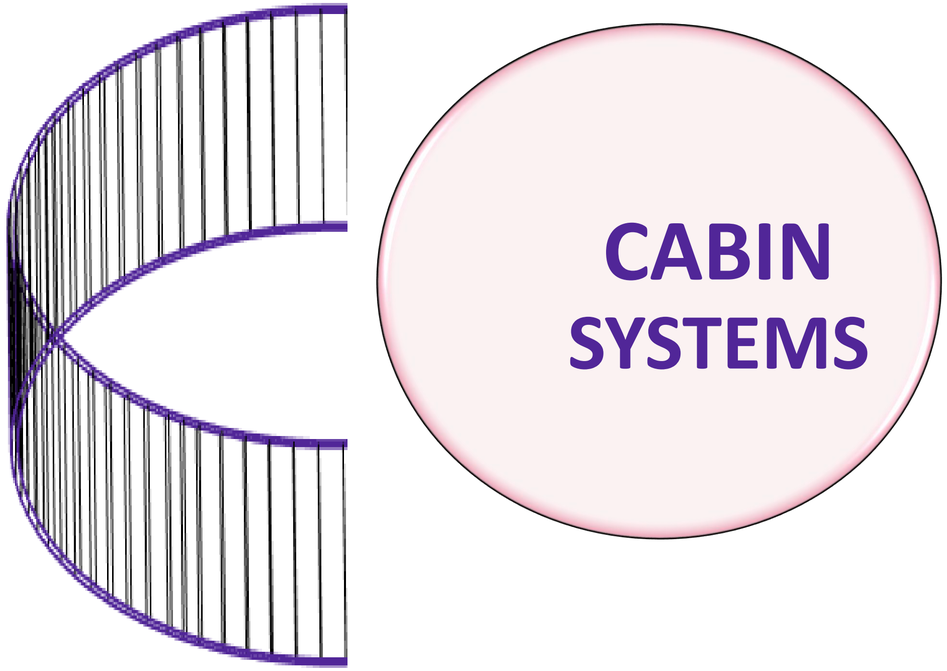


Source: Internet 08/05/18

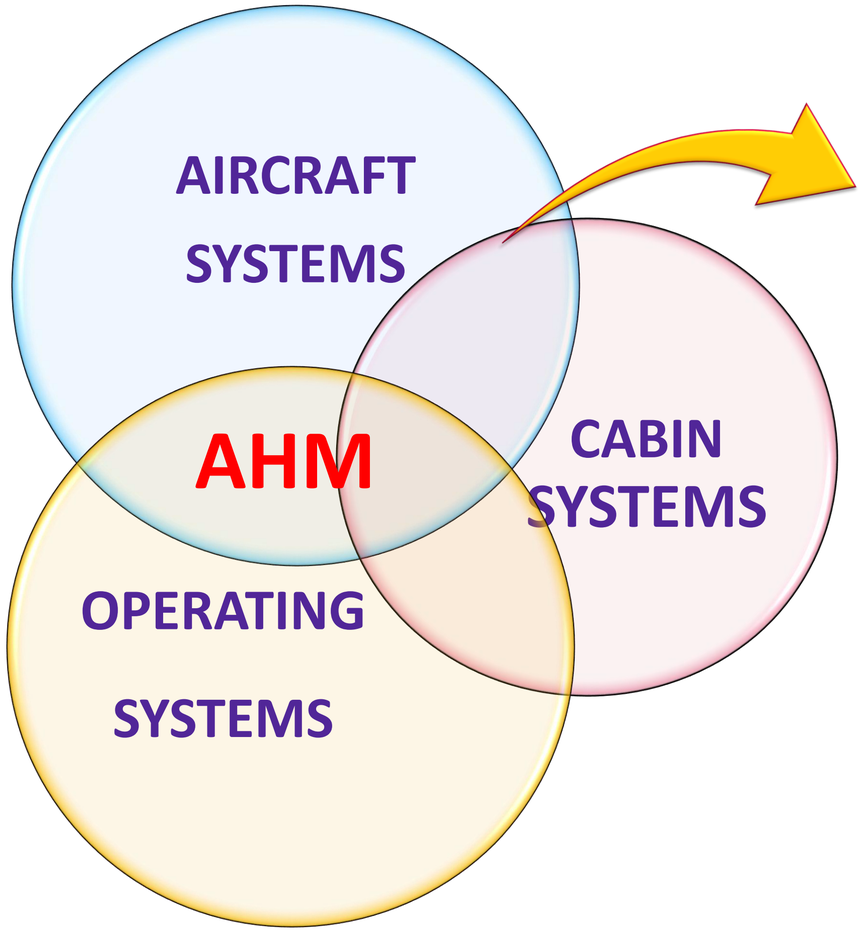
INTELLIGENT INTERFACE



FENCED INTERFACE



CONNECTED CABINS



Leverage Existing Data Platforms

Convert -

Digital Opportunities

Interface -

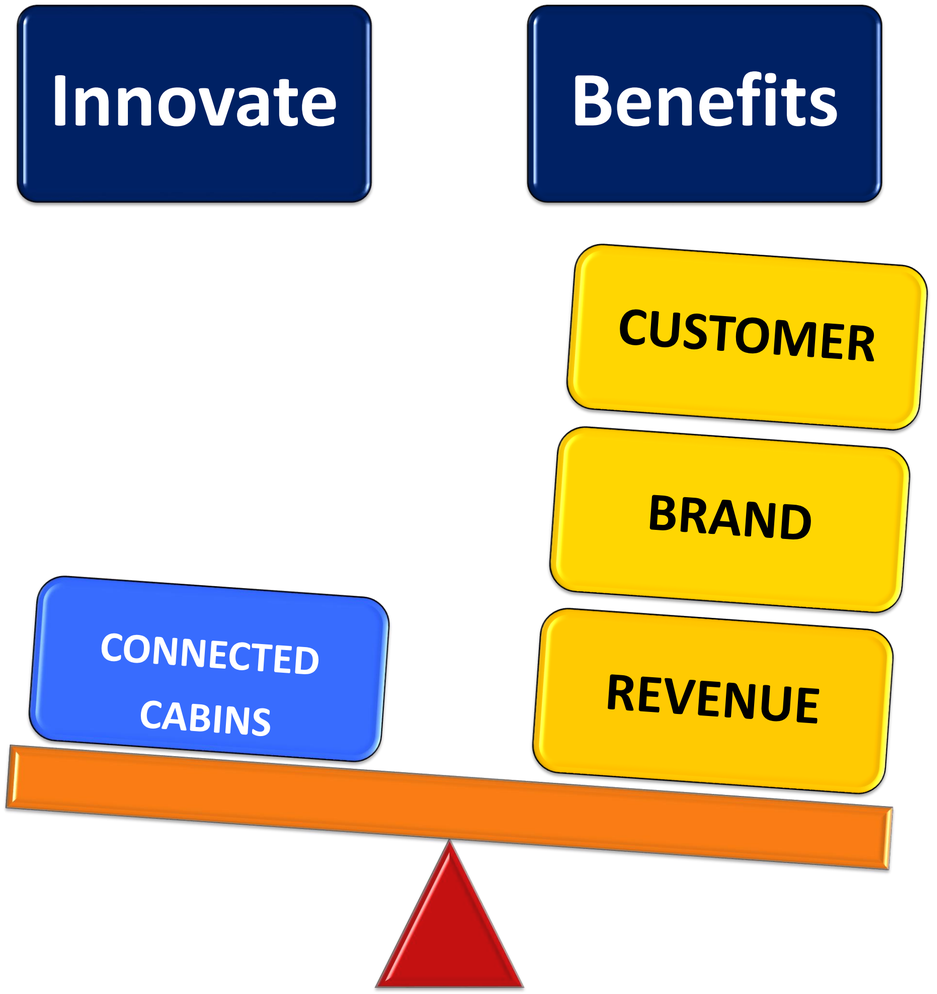
Cabin/Aircraft/OPS Systems

Drive -

Tangible Benefits

Innovative Seat Design Considerations

- Intelligently hardwired
- AHM Technology into Product
- Maintainability / Reliability
- Operational/Customer Benefits



OEM EXPECTATIONS

Innovative Solutions

SEATS

PREDICITIVE MAINTENANCE TECHNOLOGY

- Enhances intelligent fault isolation and identification
- Eliminates unscheduled maintenance, Operational Delays
- Enhances Guest Satisfaction and Brand

RELIABILITY

Seats, Cabin Systems & Components

- Enhance Time on wing with effective technology
- Reduce maintenance & repair costs, NFF
- Reduce long lead times on key components

SUMMARY

Premium Seats

- Complex Design
- Significant Brand & Revenue & Guest Impacts
- High Maintenance & Cost Impacts

Predictability Technology

- Leverage existing data platforms
- Connect Cabins to Aircraft & Operating Systems
- Introduce AHM Capability into the design

Innovate

- Design the next generation of intelligence!
- Enhance Product Reliability
- Reduce Life Cycle Costs


COMING HOME IS NICE BUT
TAKING
OFF
IS WHERE THE
EXCITEMENT LIVES
australia
HERE'S TO LOOKING UP

Thank you !!