



JURG

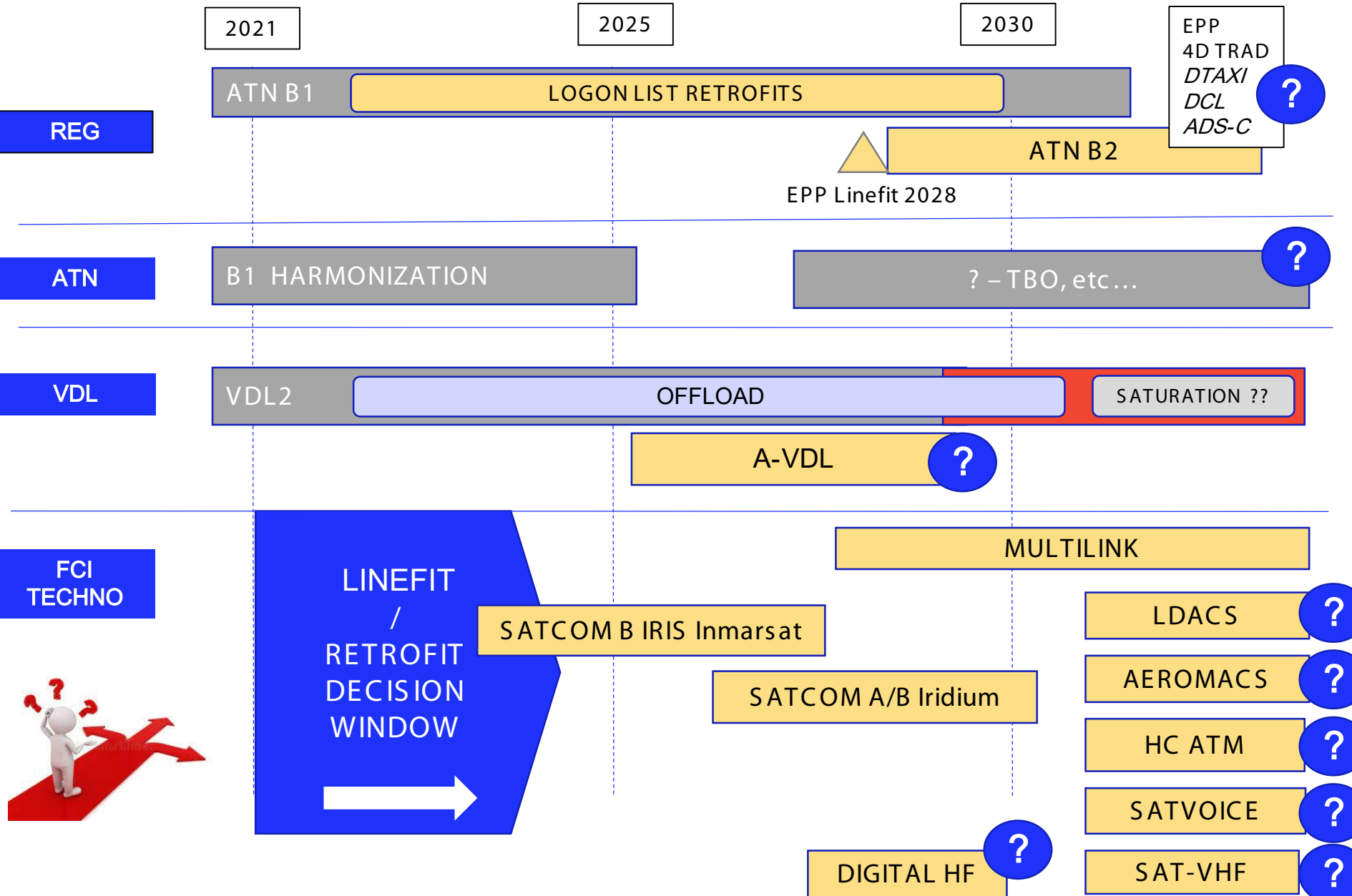
Joint Users Requirement Group

# LDACS - Airline perspective

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# CNS: COM context



- New FCI DSP ?
- US/EU alignment ?
- OSIVs IPS



# LDACS is very promising !

Very promising technology, we fully support LDACS potential benefits

- Performance (RCP60, bandwidth)
- Secured IPS technology
- Aviation spectrum
- Opportunities for AOC / EFB
- Digital voice
- GBAS
- COM + NAV + SUR
  - A real A-PNT solution
  - Setup in a DFMC GNSS architecture ?

# LDACS is very promising !

## Ground Vs Space...

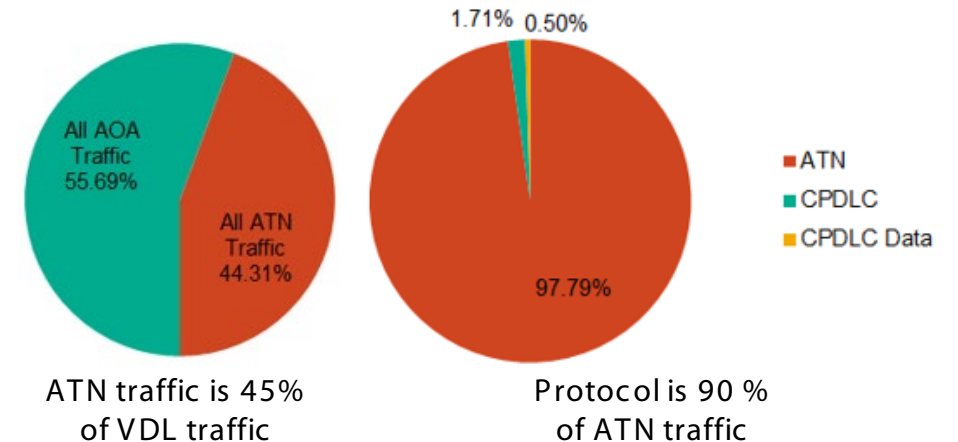
- SATCOM: interesting, but...
  - Already several on-board
  - Costs
  - Monopoly
- LDACS a lighter solution ?

# LDACS should... (1/2)

- Worldwide adoption is a must.
  - EU/US : divergence or convergence ?
  - We can't transport one system per region (anymore...) !
  - What about a SB-LDACS ?
- Ground deployment
  - Harmonized – Coordination by one entity
  - Take advantage of existing ground network
- Multilink is key. Airlines want to have hands on
- An opportunity to rationalize and mutualize on-board architecture

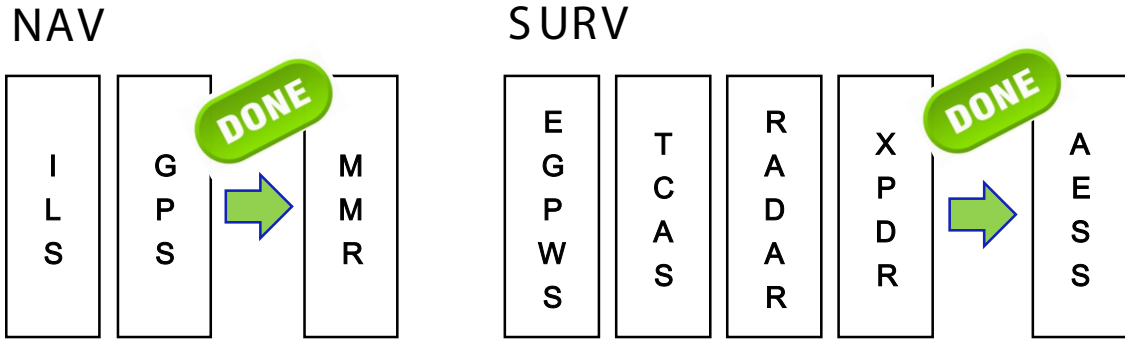
# LDACS should... (2/2)

- Why do we need a new communication system ?
  - Application driven
  - ATN B2/B3 perimeter ?
- LDACS Fully open to AOC & EFB
  - A secured open pipe to allow new ideas (EFB...)
  - LDACS CBA to consider AOC & EFB
- Will VDL be outdated and saturated soon ?
  - VDL will still have benefits (short messages – QoS)
  - ~2030 Saturation date ? Mitigations to postpone it
    - Optimize AOC (reports size, new workable solutions, etc...)
    - Optimize ATN protocol optimization (IDRP ?)



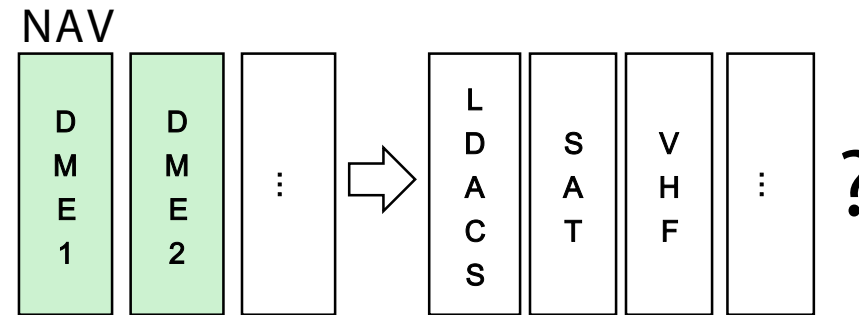
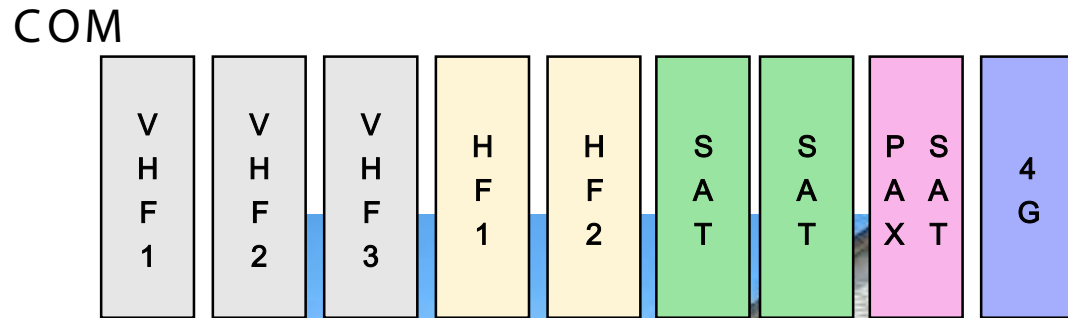
Source : Collins Aerospace

# An opportunity to rationalize COM & NAV avionics



Linefit : integration - rationalization

- Why 3 VHF ?
- Why DMEs ?
- Integrate cellular
- Pax com ?



Retrofit:

Take benefit of aircraft installation  
(antenna, wiring, racks, etc...)

# Other questions

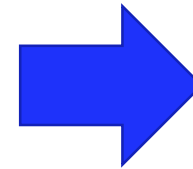
- Do we still need to continue with Aeromacs ?
  - We believe no...
- SESAR 3 opportunities
  - Encourage demonstration ASAP
  - Bring LDACS to V4



# Transition period to FCI

2021 to 2028+

- Airline investments
  - Covid : massive impact
  - CNS
    - Huge investments made on C (datalink) and S (ADS-B)
    - Time to invest on N (SBAS- GBAS)
  - Other systems. An aircraft is not just a telecom device
  - Anticipation needed (linefit option validation – retrofits)
  - Fleets changes
- Take benefits of our on-board investments
  - Harmonize and get benefits from ATN B1
  - Secure our ATN and AOC operations
  - KA/KU - SBB
- Which benefits and when ?
  - Clarify ATN B2 content, deployment and benefits before we go
  - FCI CBA
- New SATCOM outcomes



- A few years before deciding new communication investments
- Accelerate LDACS feasibility
- Need quick decisions and roadmap to anticipate aircraft definition Vs other technologies

LDACS KNOWN SINCE YEARS  
DECISION IS NEEDED

# Conclusions

- Airlines support LDACS and its potential benefits
- Multilink is a must. Airlines want to keep some control on priorities
- Worldwide system
- Transition period to FCI:
  - Take benefit of installed systems
  - Stabilize house before building a nice first floor
  - Need to accelerate actions/decisions before time decides of LDACS future
- Consider opportunity to rationalize on-board communication equipment's
- Focus SESAR COM activity on LDACS – Target V4

➤ MAKE DECISIONS ASAP

