

VLJ Operations & the European Airspace Network

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Assumptions

Performance

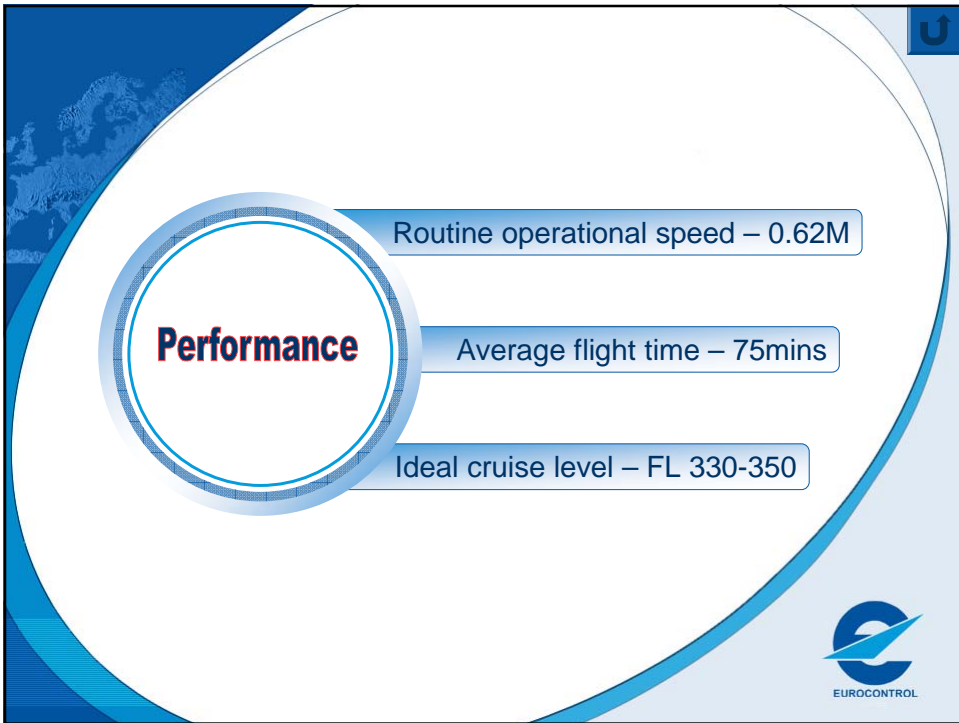


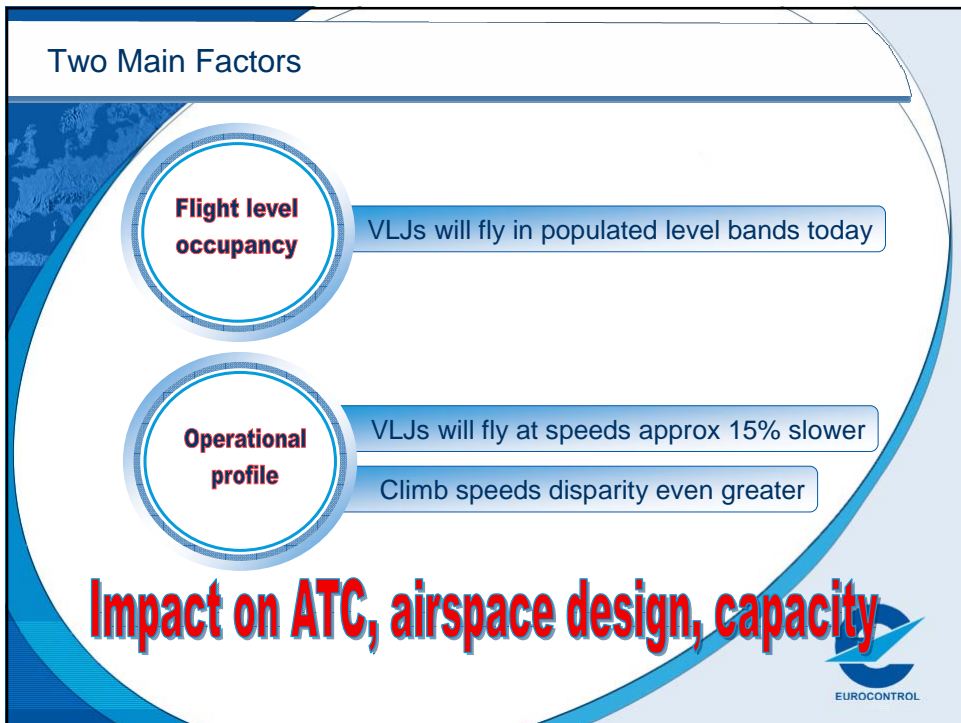
Numbers



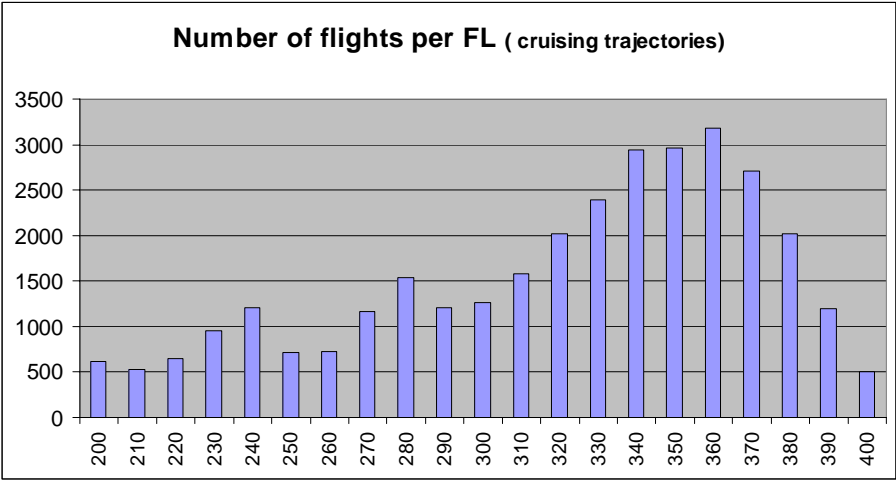
Area of Operation



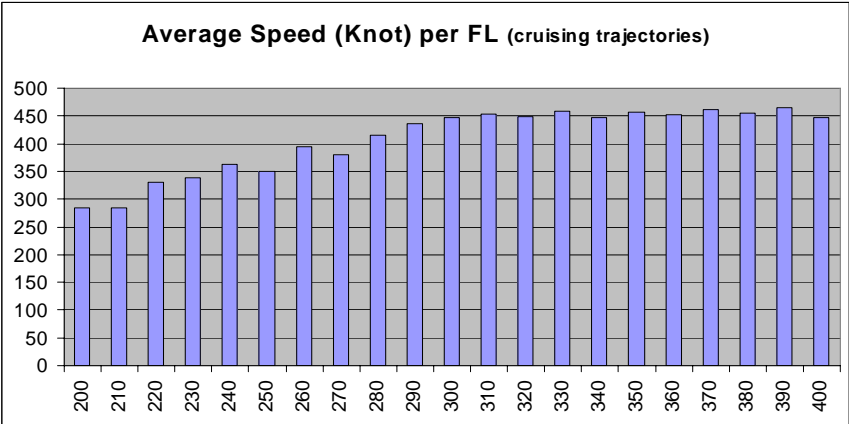




Current Flight Level Utilisation

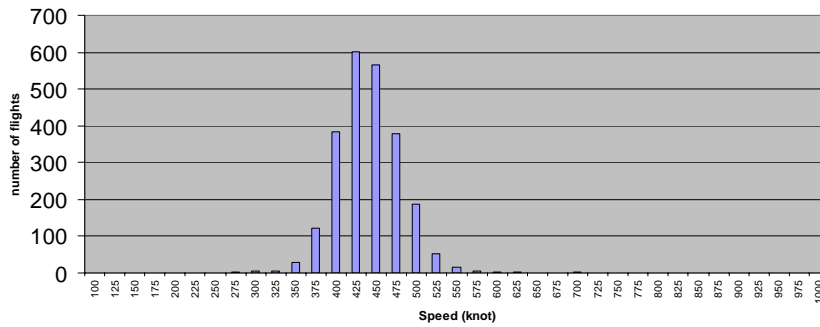


Average Operational Speed



How will VLJs fit?

Speed distribution for cruising flight at FL330



**We coped with the SMART,
we will have to cope with VLJs !!**

ATC Considerations

- ✓ Disparity of speeds en-route and in TMAs – significant controller workload impact if handled tactically
- ✓ Terminal airspace operations – needs an airspace design solution; impact on ATC workload/capacity substantial
- ✓ Wake vortex – climb/descent through occupied levels could be an issue
- ✓ If VLJs are range restricted when flying at non-optimum levels – impact on ATC re-clearances



Airspace Design Considerations

Terminal airspace design re-consideration,
dedicated SIDs and STARs

En-route airspace design, parallel offsets?

More feeder routes in/out of non-primary
airports?

**Research needed on possible
structural solutions**



Avionics & Navigation Capabilities

- ✓ RVSM & P-RNAV compliant
- ✓ No mandate for ACAS currently
- ✓ Mode S and 8.33Khz are requirements
- ✓ Cat 1 ILS is highest achievable approach standard for single pilot ops
- ✓ No conventional FMS – GPS navigation is primary system
- ✓ VOR, DME, ADF may be individually selected if fitted
- ✓ Changes will be required to meet future specs, in particular to meet GNSS failure modes



Need to prepare for VLJs in Europe

Comprehensive set of studies/modelling to be undertaken when we know:

how many?

from where to where?

definite & accurate profiles/characteristics

Workload increase assessment/Capacity Impact

Structural network design concepts to mitigate

Possible new ATC techniques



Conclusion

**VLJs are
coming**

**They are
different**

**ATM has to provide
them with a service
like any other user
category**

**We need
to start
preparing now**

