

The CASCADE Programme

From Concept to Operations

LFV- EUROCONTROL

Live Trial and Workshop Norrköping

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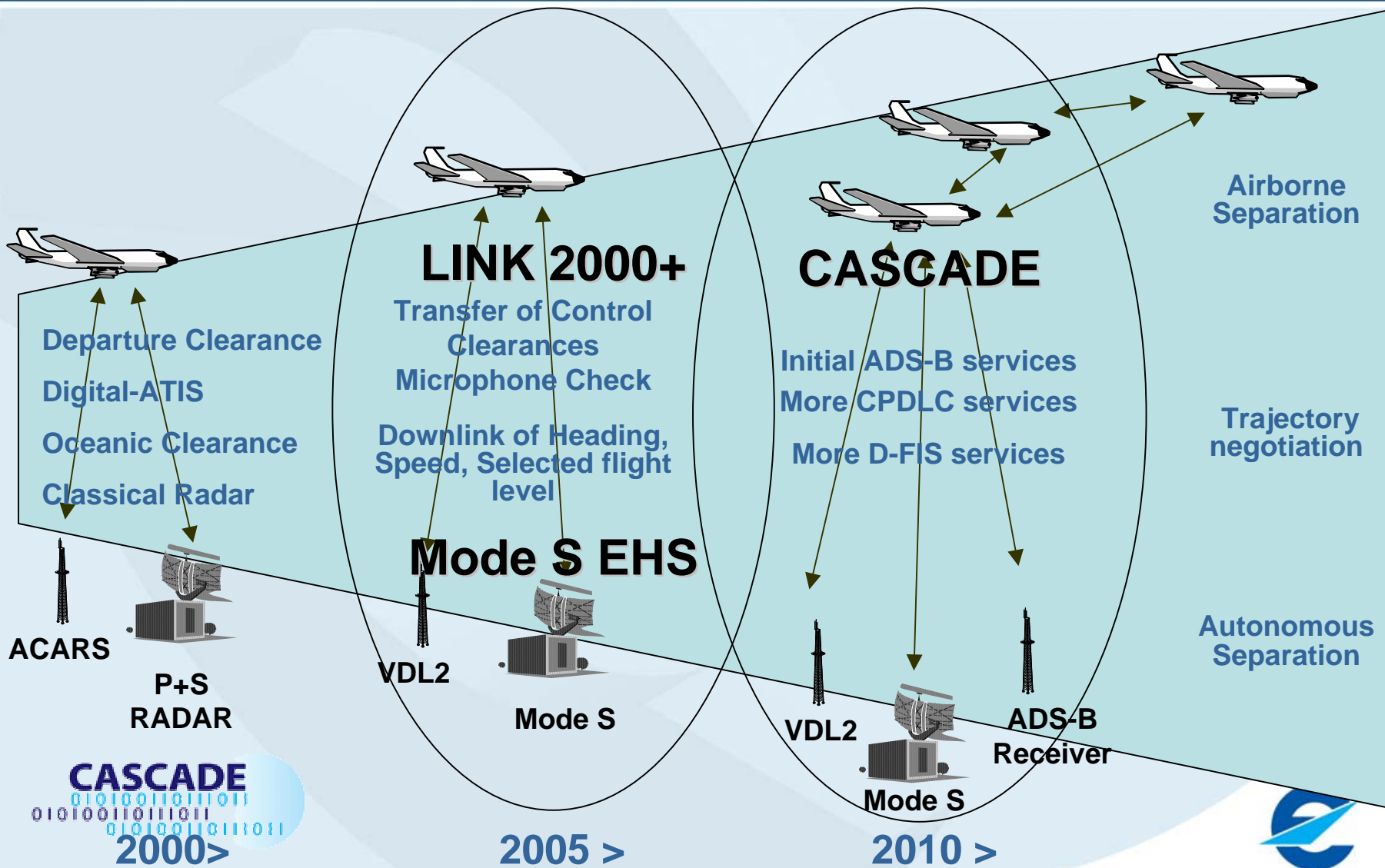
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Strategic Context



CASCADE Objective

- Co-ordinate the implementation of
 - the first ADS-B applications,
 - more CPDLC services,
 - D-FIS and other services;
- Making use of existing Mode S (1090 ES) and VDL2/ATN infrastructures where possible;
- To improve ATC sector productivity.

CASCADE Objective



Scope - Stream 1 - 2008

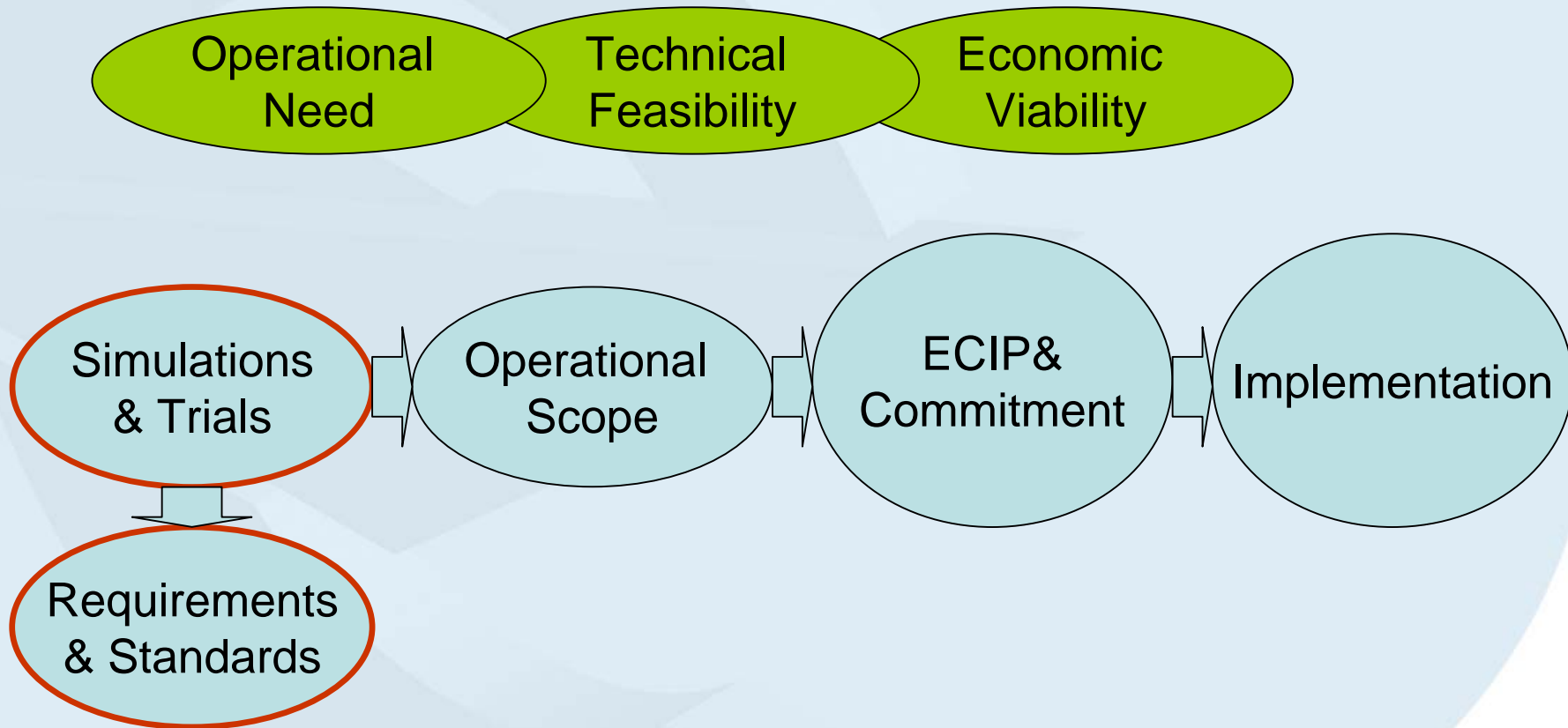
- Ground Surveillance Applications (ADS-B-out)
 - In a radar environment
 - In a non-radar environment
 - On the airport surface
 - Airborne derived data ?
- CPDLC, D-FIS and other Services
 - Automatic-CPDLC
 - Data link taxi
 - Data link operational terminal information
 - Pilot preferences downlink ?

Scope - Stream 2 – 2011

- Airborne Surveillance Applications (ADS-B-in)
 - Situational awareness on the surface
 - Airborne situational awareness
 - Visual separation on approach
 - Sequencing & Merging
- CPDLC, D-FIS and other Services
 - Graphical Trajectory Co-ordination ?
 - Down stream clearance
 - Flight Plan Consistency

- ADS-B
 - provides quality surveillance in a cost effective way;
 - provides improved situational awareness in the cockpit;
 - creates opportunities to delegate some ATC tasks to pilots;
 - *can provide situational awareness to airline operations centres.*
- CPDLC
 - reduces voice communication workload;
 - limits the probability of misunderstandings;
 - provides clear readable messages in a timely and unintrusive manner to pilots and controller;
 - *provides infrastructure of airline operations communications.*

Initial Approach



Validation Approach

"For the things we have to learn before we can do them, we learn by doing them."

Aristoteles (384-322 B.C.)

Trials Characteristics:

- In an environment where the need exists
- Integrated in operational systems (air and ground)
- Using any technology available

Conclusion

CASCADE

- Continues to exploit the potential of air ground data links;
- Re-uses the infrastructures put in place by other programmes;
- Keeps global implementation in mind.

www.eurocontrol.int/cascade

