



SESAR Update

Colin Meckiff, Eurocontrol
ICNS 5th May 2008

Why SESAR?

European challenges:

- Traffic forecast to double by 2025
- Growth must come with significant performance improvement
- ATM system at its limits; obsolescent technologies; fragmentation

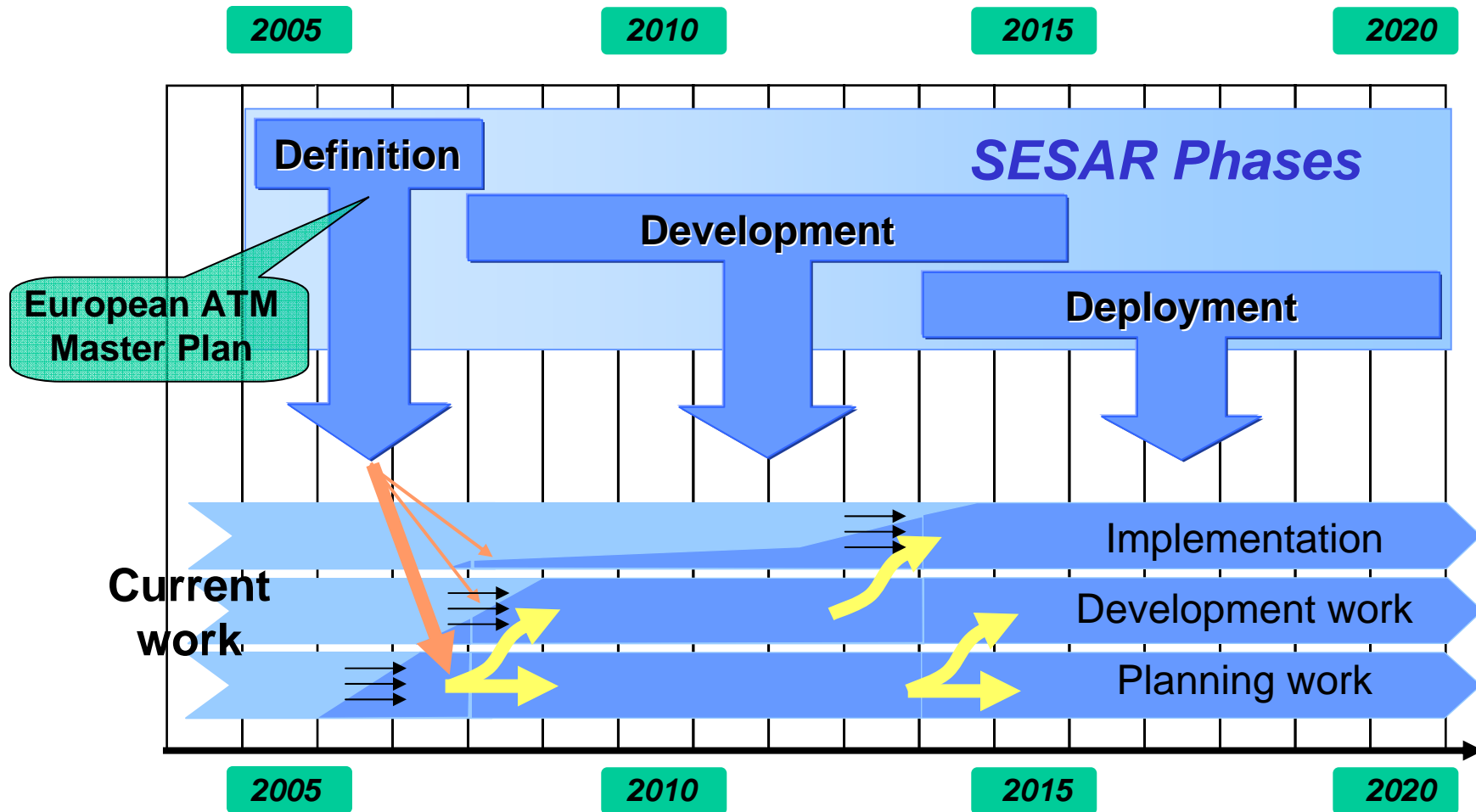
A new ATM system is required

Needs:

- Stop fragmentation
- Flexibility to respond to challenges
- Synchronised actions
 - research to operations
 - air and ground

- Supported by Single European Sky legislation
- Involving aviation industry in all phases
- European needs and Global interoperability

SESAR is a comprehensive programme



The Definition Phase

- Under EUROCONTROL's responsibility
- Co-funded by European Commission
- Executed by industry-wide consortium
 - substantial EUROCONTROL effort contribution

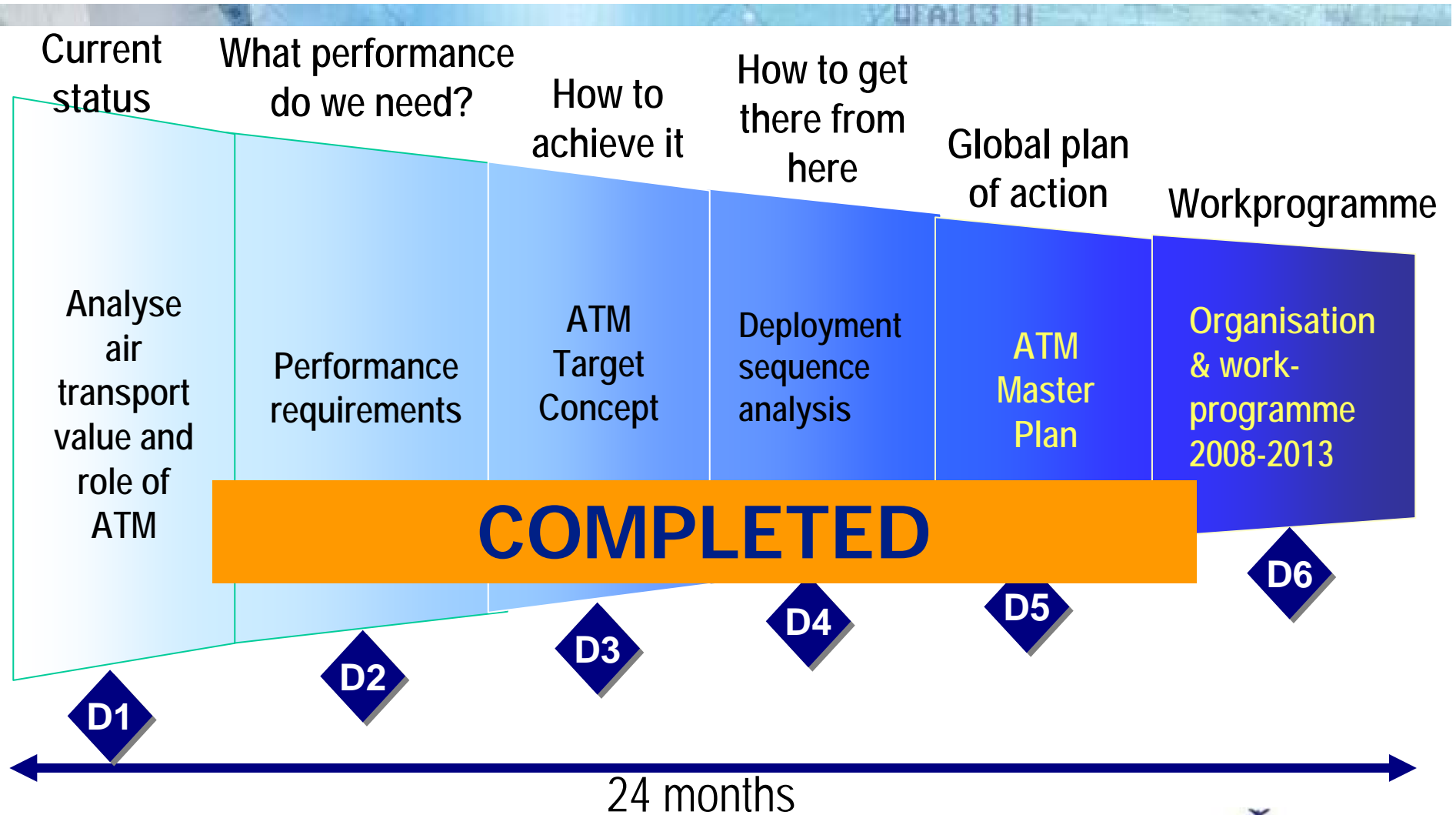
€60 Million
2 years
300 man-year



+ Project Associates:
ATM Research Centres,
Military ATM,
staff/professional org.,
US Industry (Boeing,
Honeywell, Rockwell)
+ Sub-Contractors



Definition Phase deliverables

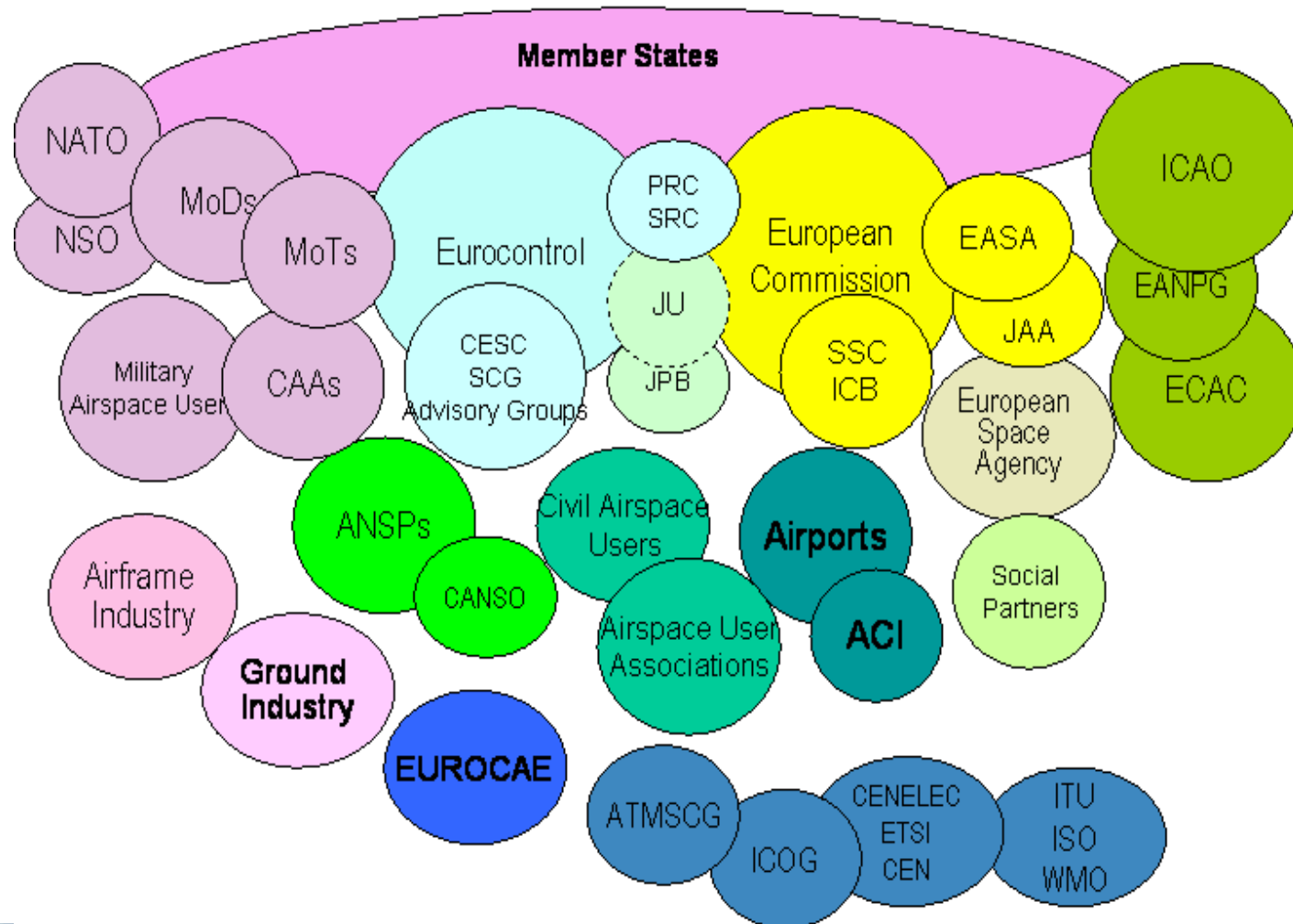


D1 - Air Transport Framework Current Situation

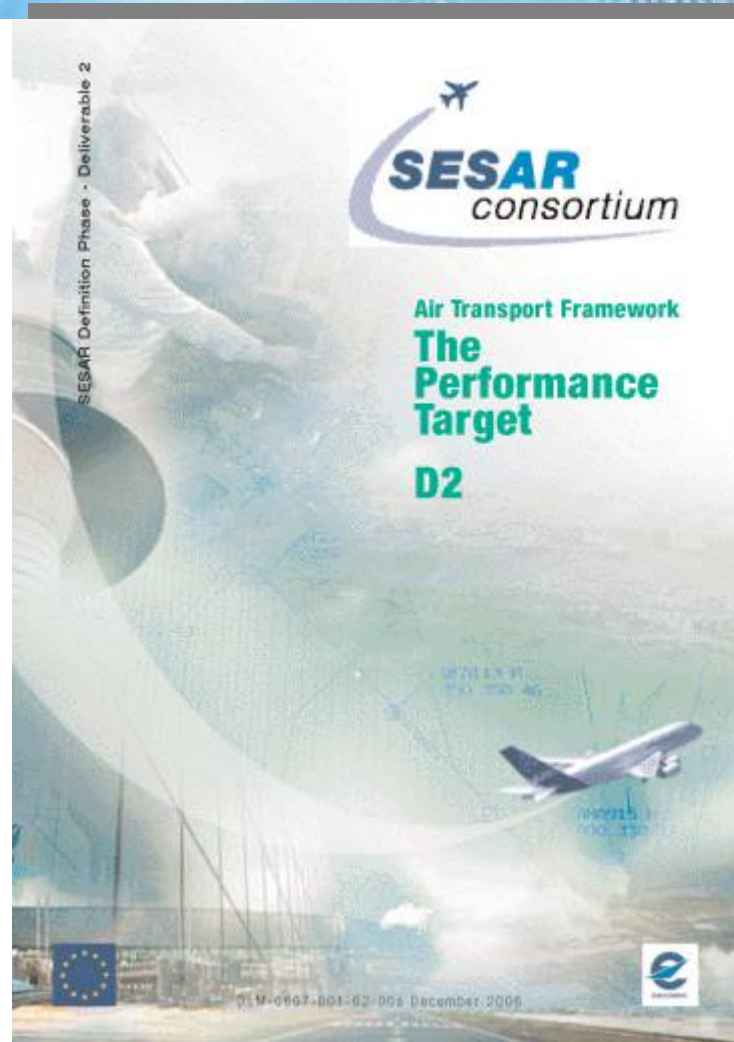


D1 - Today's institutional view of ATM

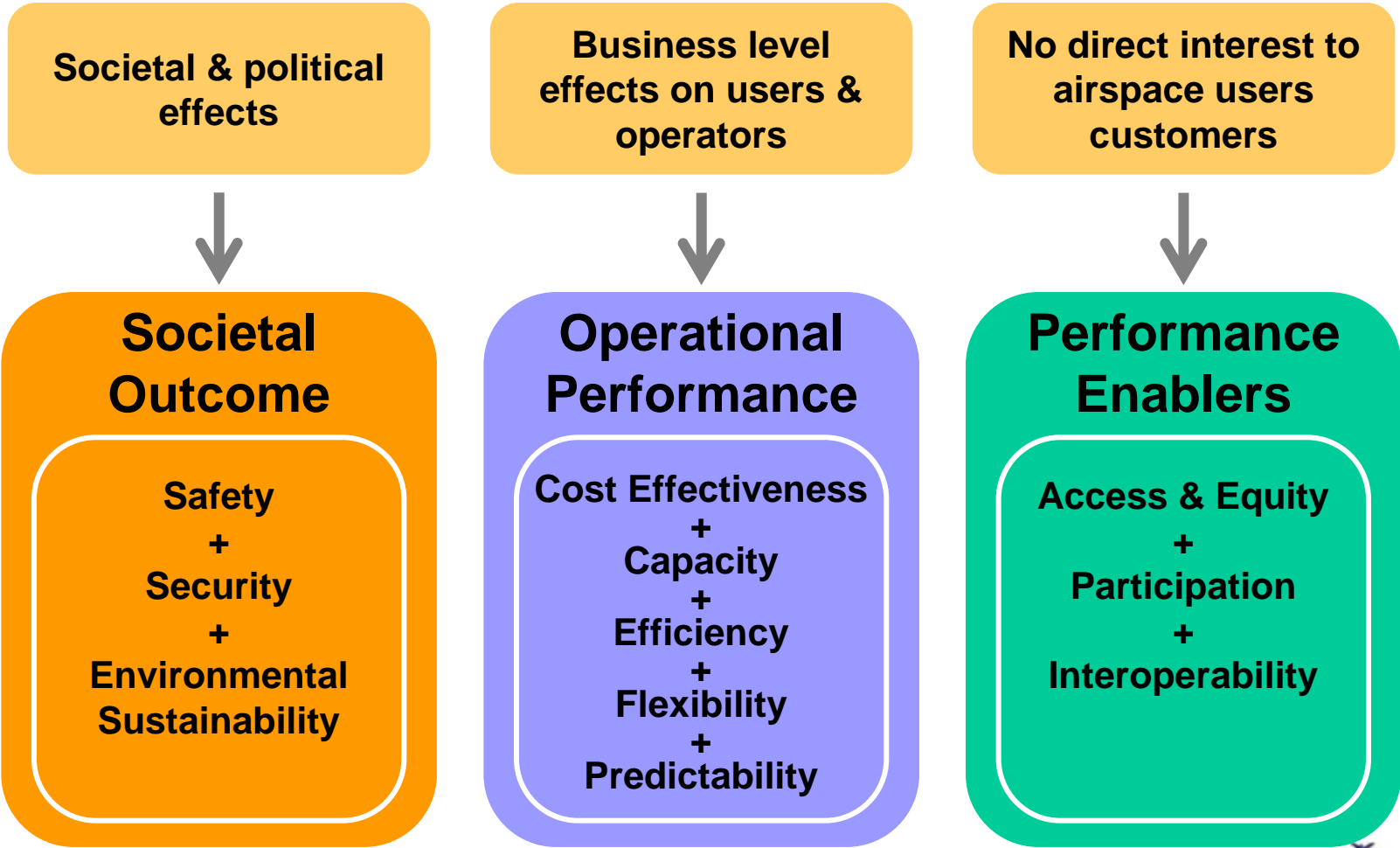
(simplified version)



D2 – Performance Targets

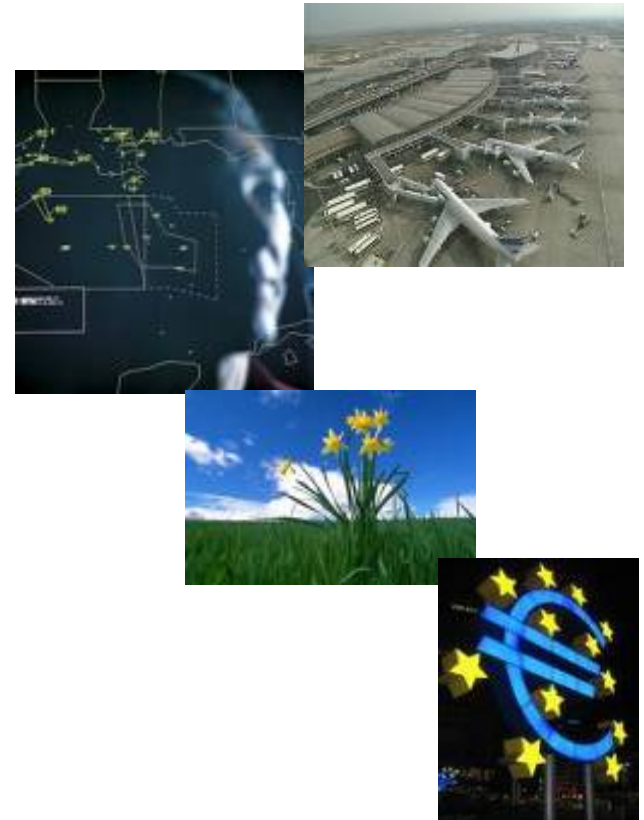


D2 - 11 Key Performance Areas (same as ICAO)



D2 - Performance targets for 2020

- Capacity +73%
- Safety x3
- Minimise environmental impact per flight
- Halve ATC costs → €400/flight



Designed for further growth

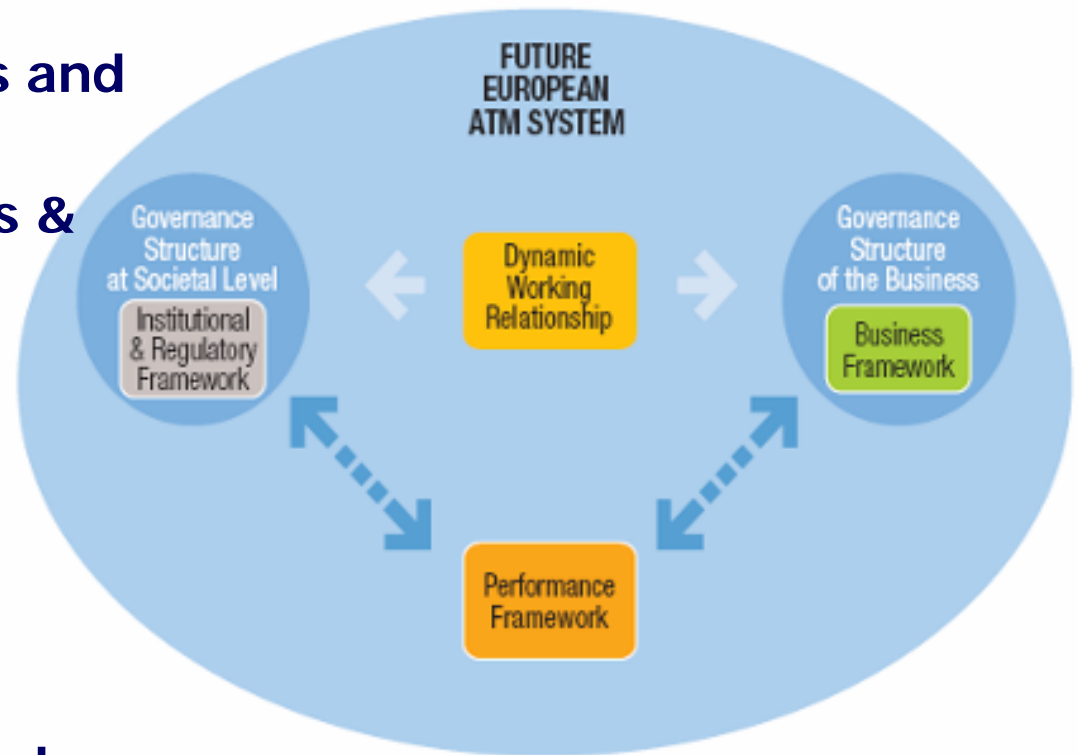
D2 - Performance Partnership is key

- **ATM Performance Partnership**

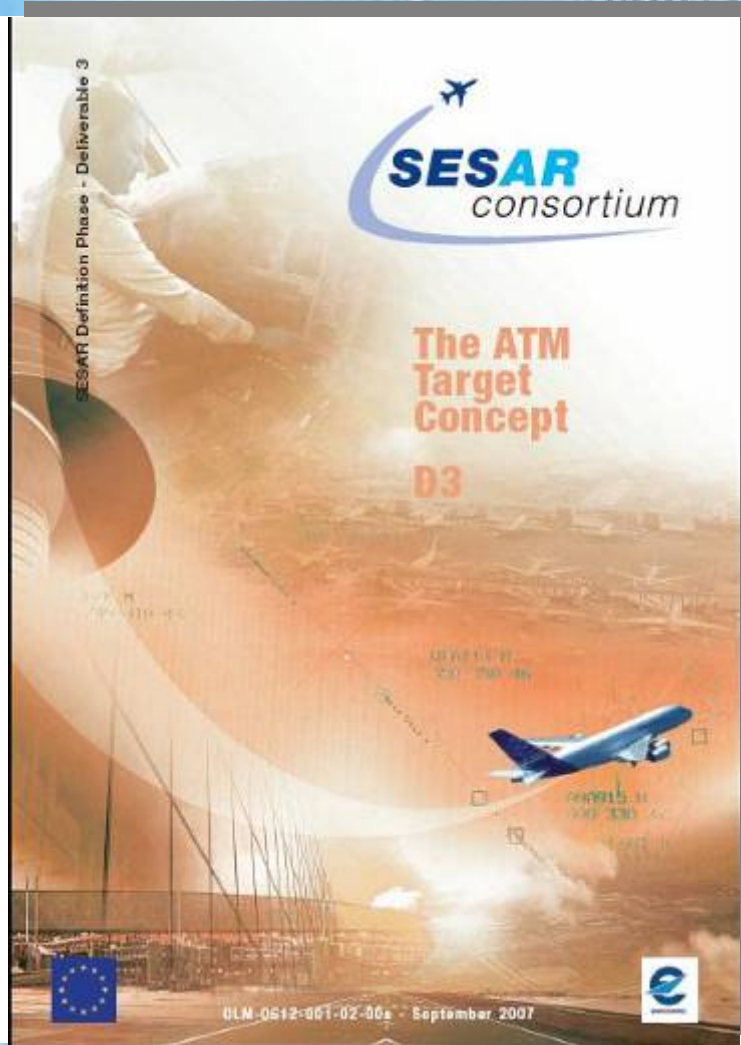
- with well-defined roles and responsibilities
- based on shared values & priorities
- recognising network interactions

- **Leaning on**

- ATM institutional framework
- ATM business framework



D3 - The ATM Target Concept

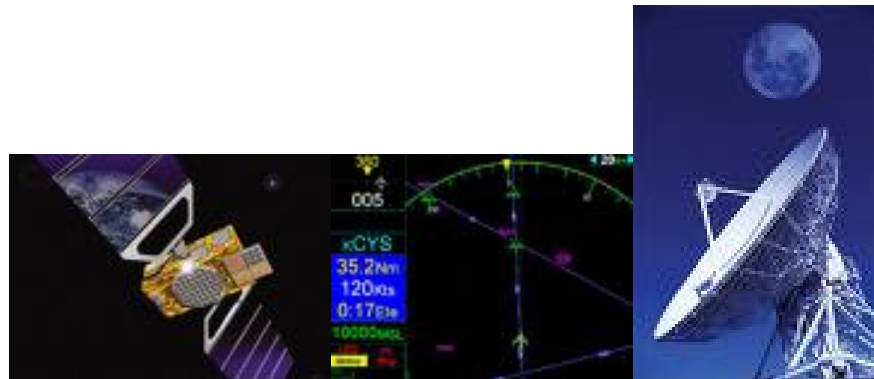


D3 - Performance and trajectory management

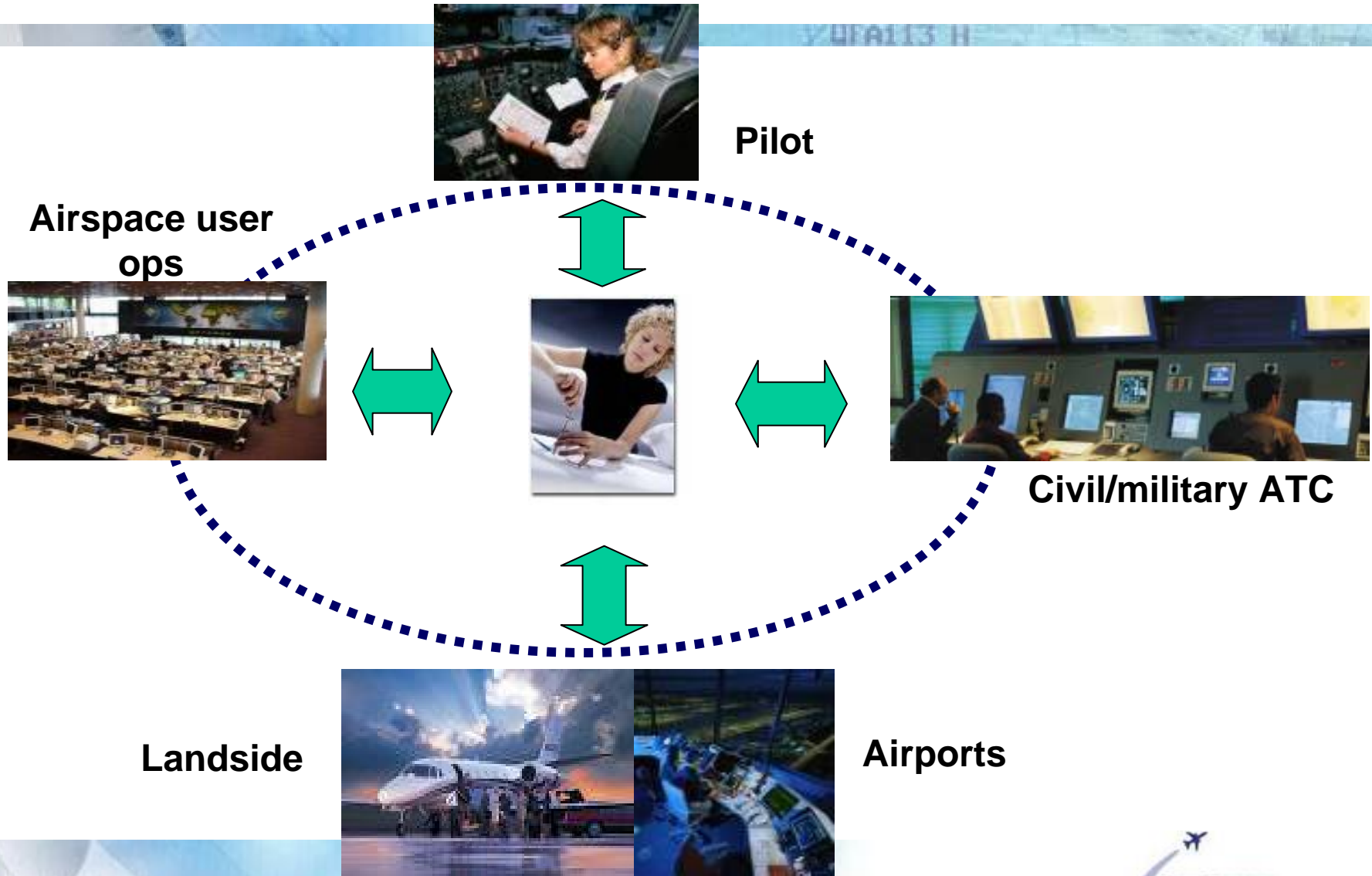
- **Performance-based development**
- **Trajectory-based operations**
 - Integrating airport operations
- **SWIM**
- **Network Operations Plan (NOP)**
- **Collaborative Decision Making**

D3 - New separation modes for more capacity

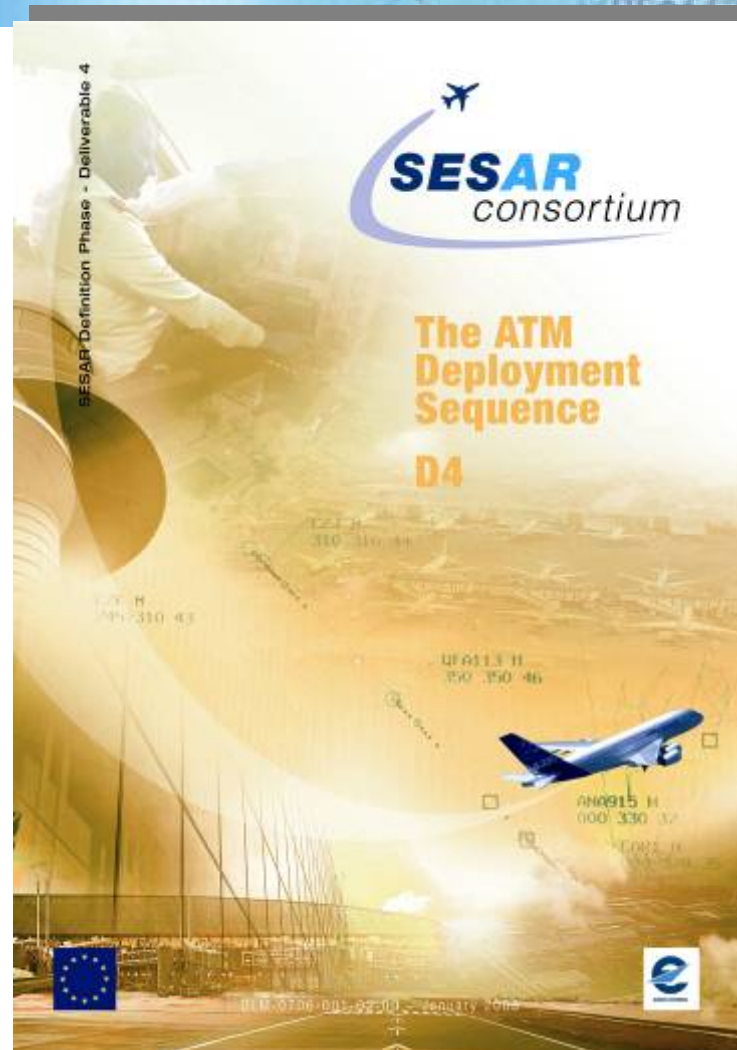
- New separation modes progressively implemented
- Supported by controller and airborne tools
- Will reduce controller workload per flight for increased capacity and efficiency



D3 - The human: the ultimate decision-maker

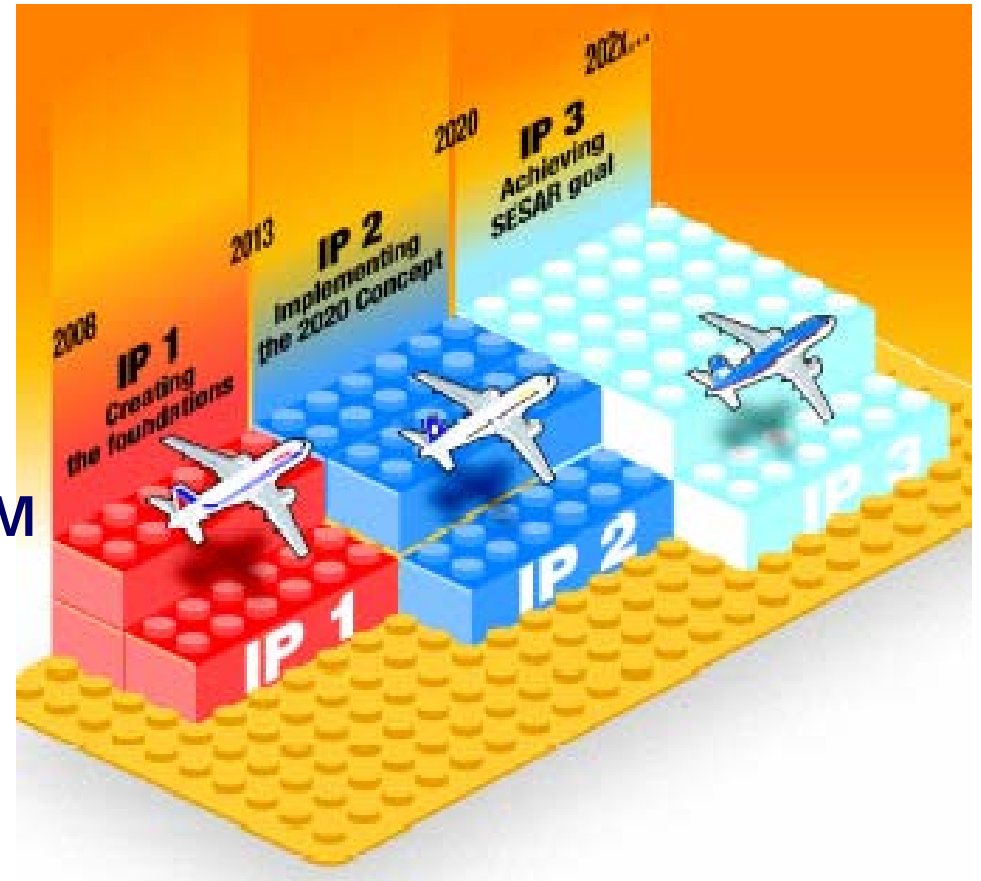


D4 - The Deployment Sequence



D4 - Three top-level implementation packages

- IP1 will build on ongoing initiatives creating the foundation for the target concept
- IP2 will deliver a wide information-sharing environment, driver for improved efficiency of the ATM network
- IP3 will introduce the most advanced features of the concept to achieve the long-term performance goals



D4 - IP1 and IP2 benefit potential

IP1 (2013)

- 33-38% increase in en-route capacity
- 20% greater runway capacity
- 120-150 Ktons per year reduction in CO₂
- €0.7 - €1.1 billion/year overall cost savings

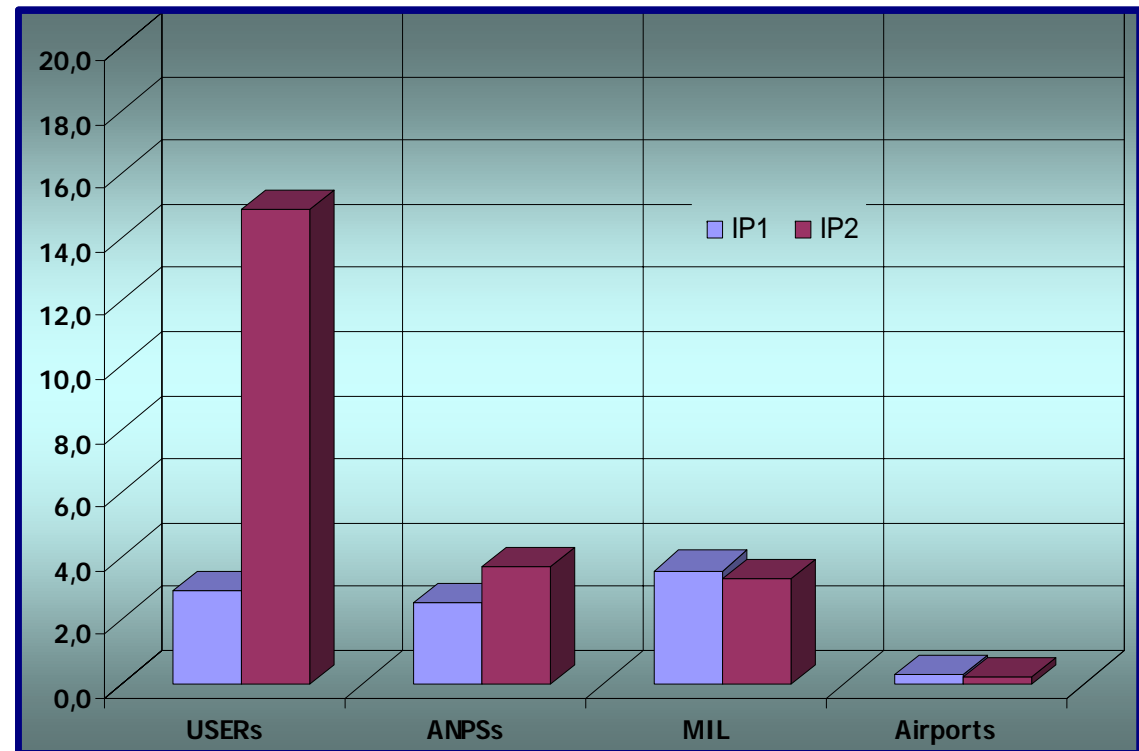
IP2 (2020)

- will accommodate 15.8m flights/year
- 40% average improvement in delays
- 14m tons CO₂ ATM-related fuel savings
- ATM costs averaging €630/flight

D4 - IP1 and IP2 cost estimates

SESAR has been shown to be affordable

Break-even point at 2019



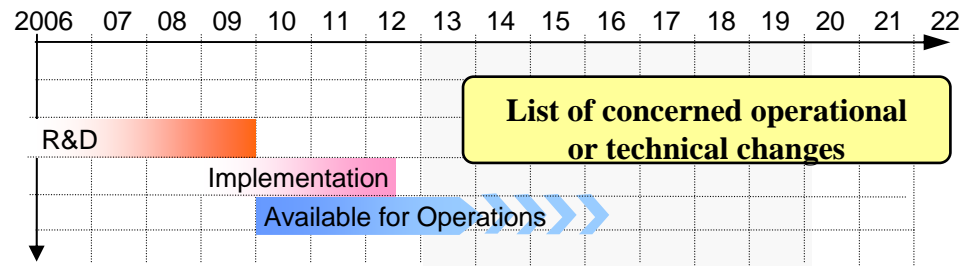
... but needs synchronised and committed development and implementation by all partners

D5 – Master Plan



D5 - The Master Plan

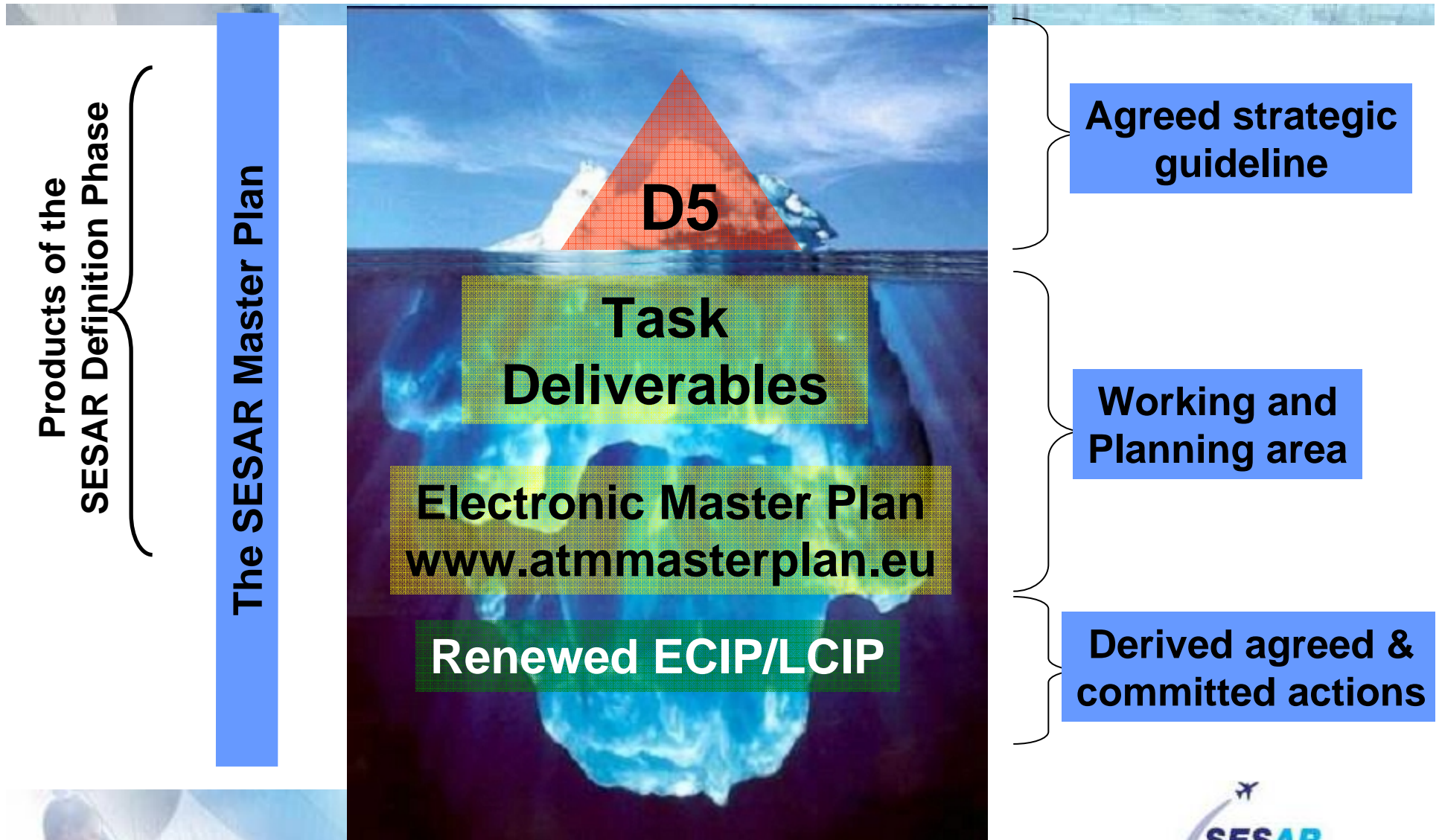
- **One overall plan for all**
 - with individual roadmaps



- **Contains planning for R&D thru deployment**
- **Not a one-off**
- **Passed to SJU* for execution and maintenance**

***SESAR Joint Undertaking**

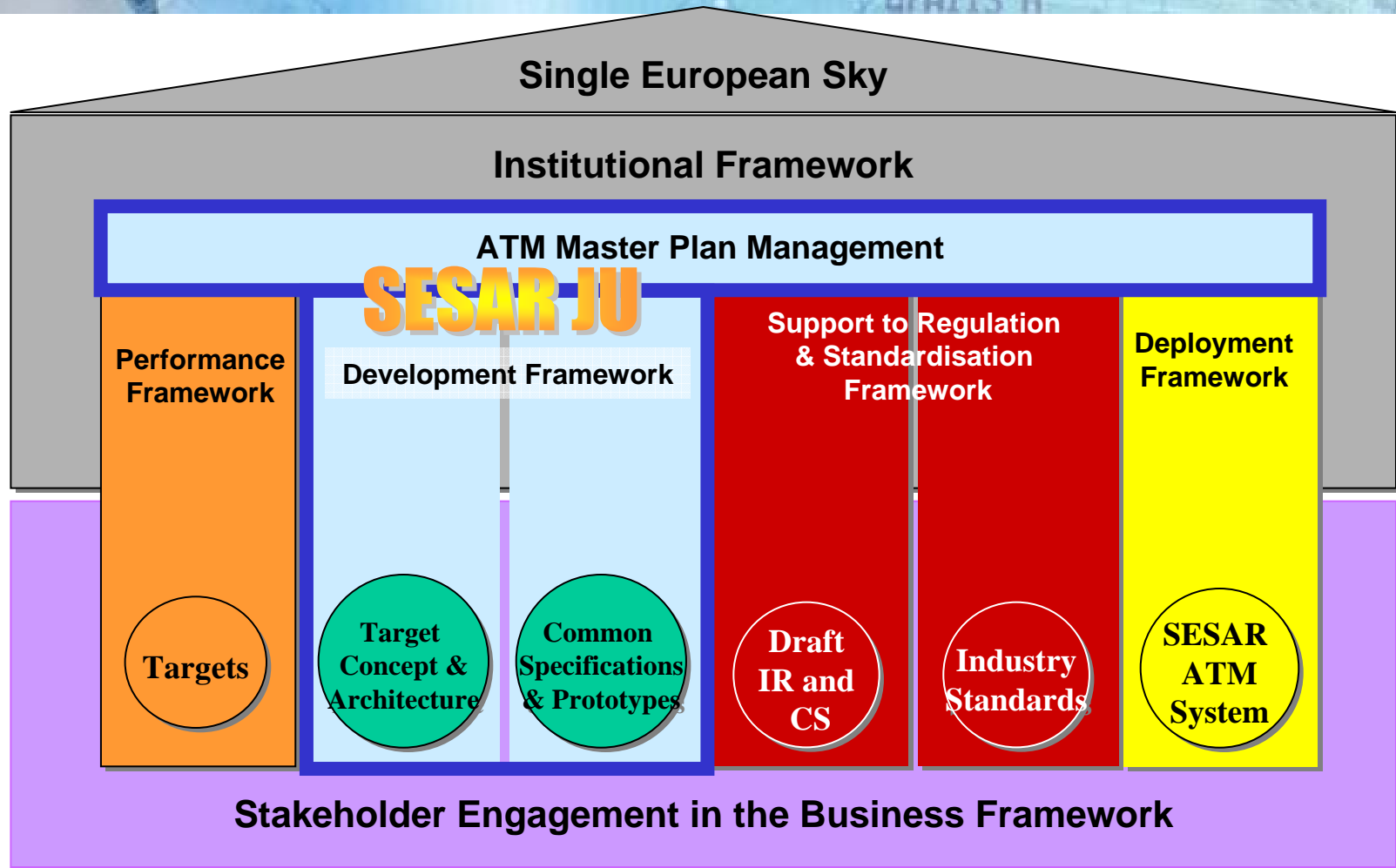
D5 is only the tip of the iceberg



D6 – Work Programme 2008 - 2013



The Master Plan frameworks



As from tomorrow ... SESAR Joint Undertaking

Definition Phase

- Delivering Master Plan, D5, and Workplan, D6, to SESAR Joint Undertaking (SJU) tomorrow!

Development Phase: 2008 - 2014

- SJU public-private partnership created
- Founder members European Commission and Eurocontrol
- Other members to join from industry (in negotiation)
- Open to non-EU members
- Budget ~2bn
- Fully up and running Q4 '08

Deployment Phase: 2014 – 2020

- Will be done by industry

Finally ...

D5 & D6 Stakeholder Workshop 6th May (!) in Rome

All documents available at www.eurocontrol.int/sesar or
www.sesar-consortium.aero

The Master Plan will be online at www.atmmasterplan.eu

Information about the SESAR JU is at www.sesarju.eu

... and now it's time for lunch !

