

The logo features a black horizontal bar at the top, followed by a blue sky with white clouds. The word "SESAR" is written in white, bold, sans-serif capital letters across the middle of the sky. Below the sky is a solid blue horizontal bar.

SESAR

Implementation of the
Single European Sky

SESAR

Its objectives, & the Definition Phase

Aviation: an evolving landscape

Airspace Users

- Cost pressure (+fuel)
- 9/11 and economic downturn
- Low cost airlines
- VLJs, UAVs

Airports

- Capacity limitation

Society

- Noise & Climate change
- Safety
- Security
- Sustainable growth
- Mobility

ANSPs

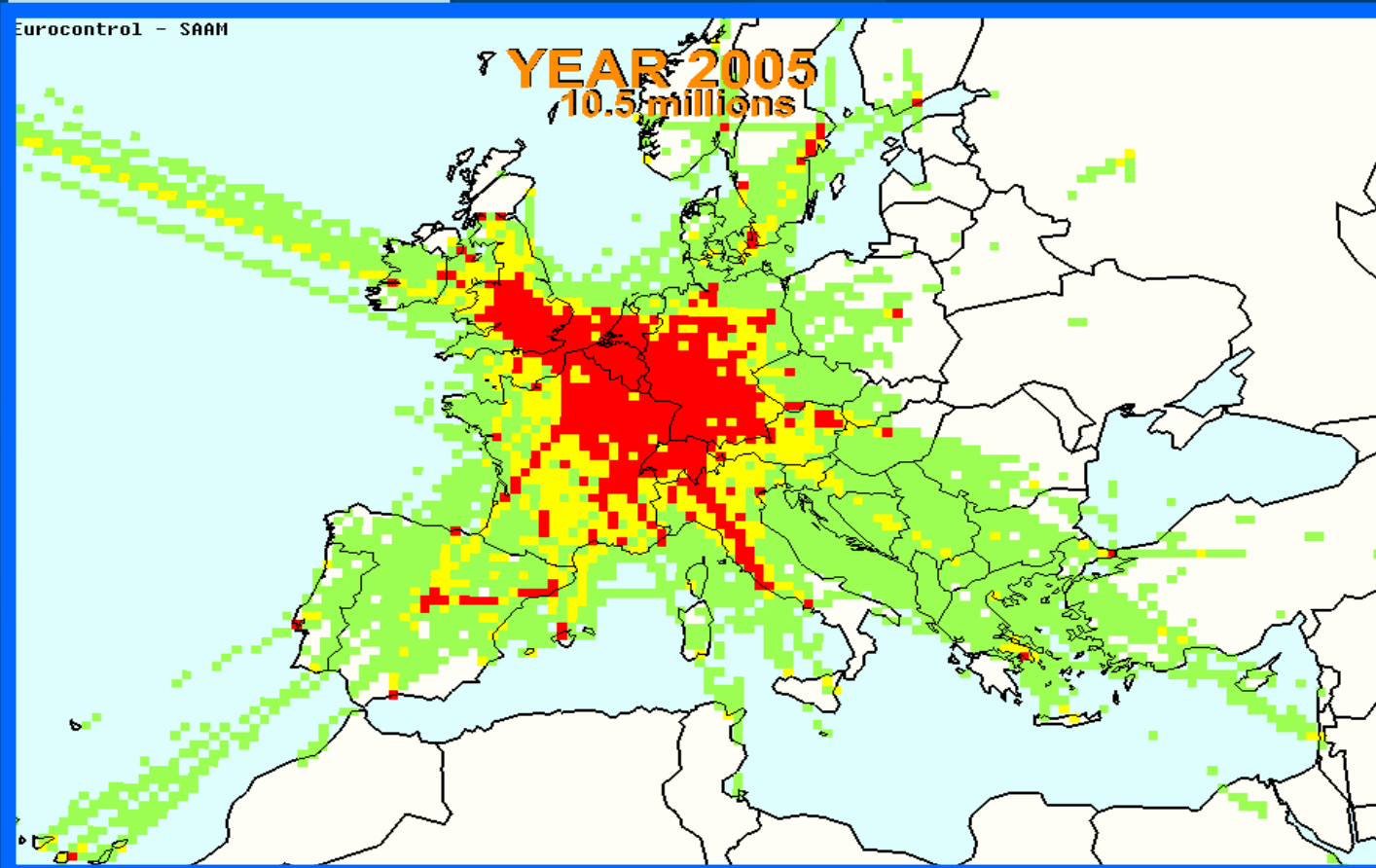
- Corporatisation / privatisation
- Under pressure of users

Supply Industry

- Concentration
- Global

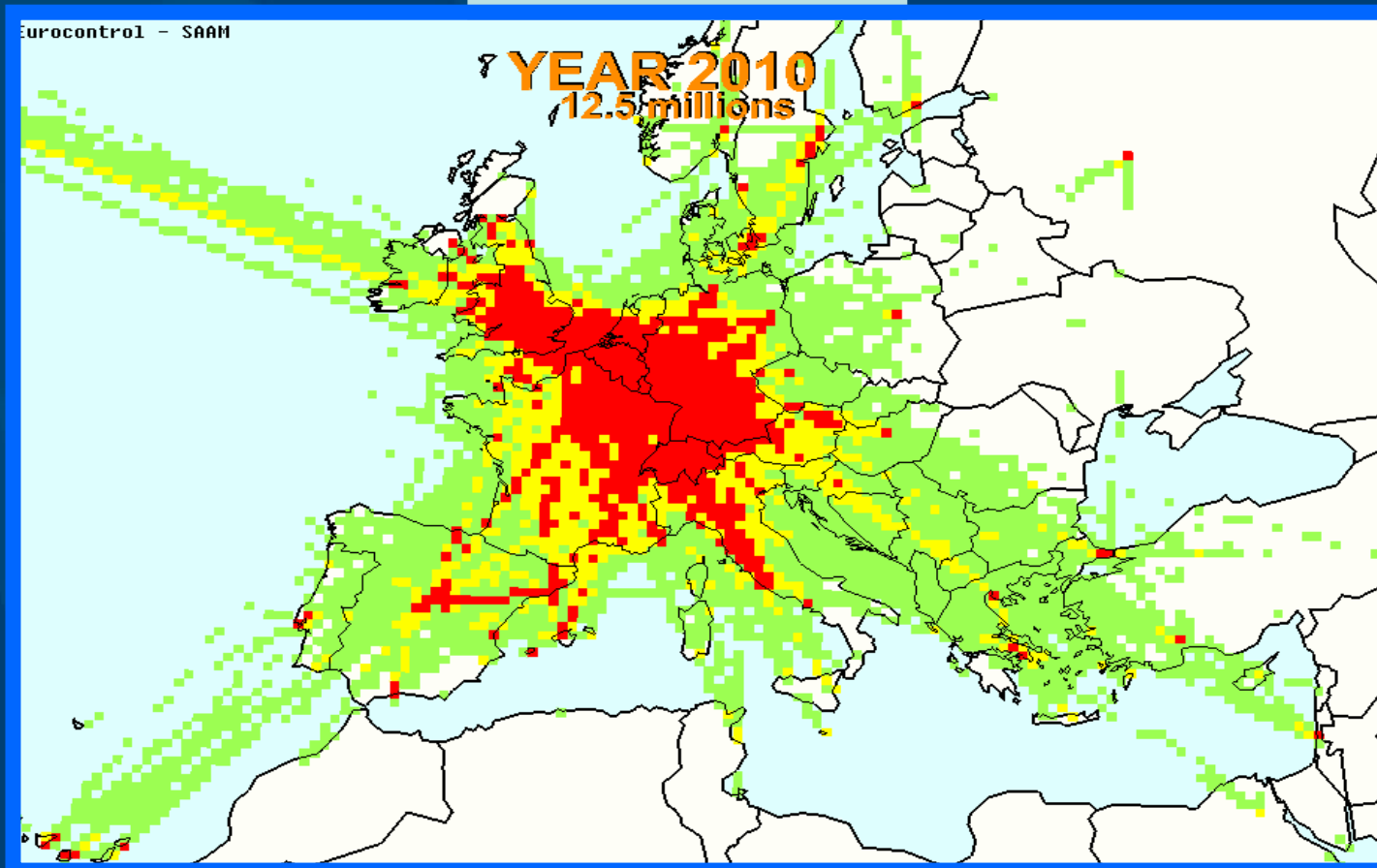
Traffic to double by 2025 (1/3)

2005: 10.5 millions



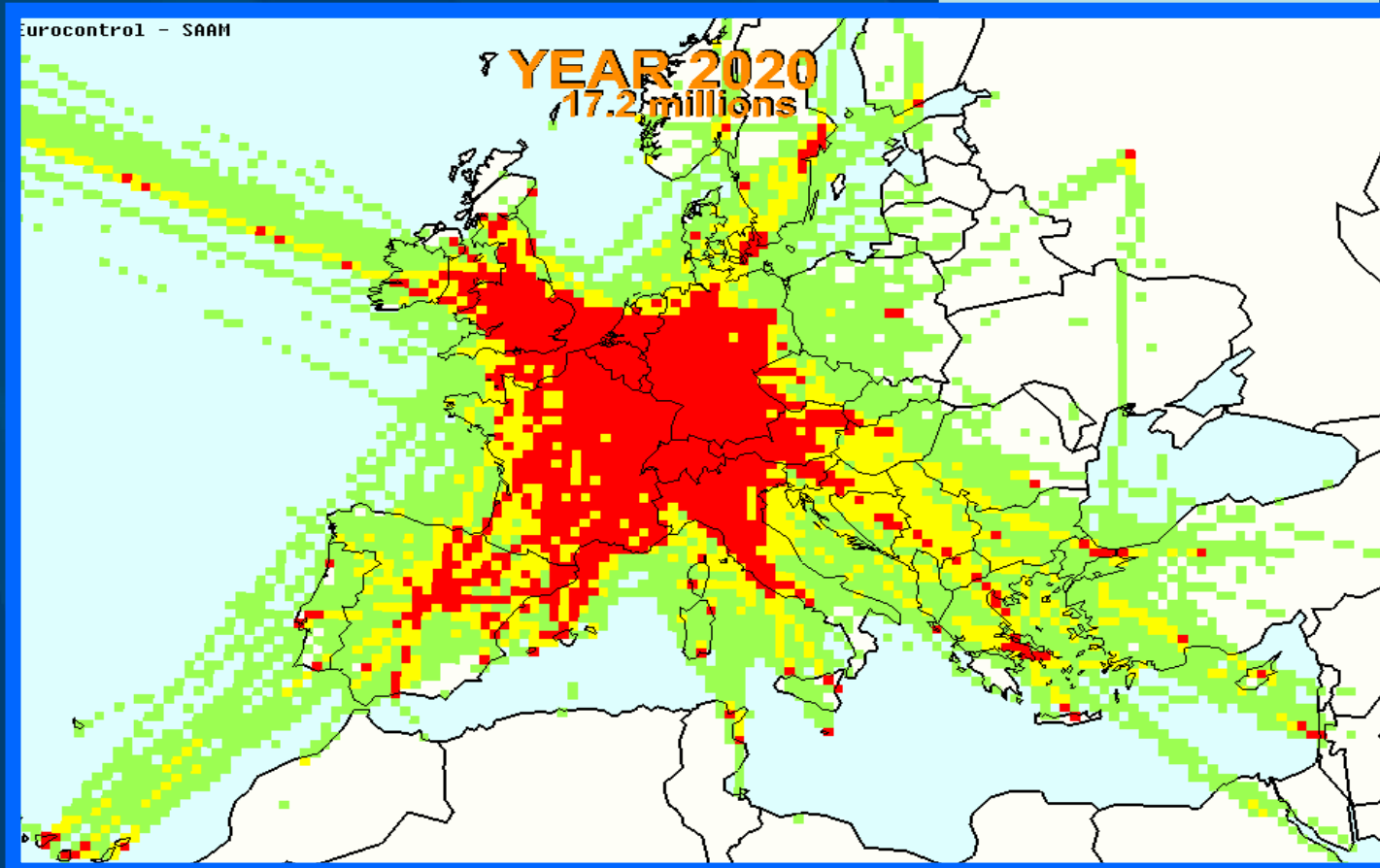
Traffic to double by 2025 (2/3)

2010: 12.5 millions

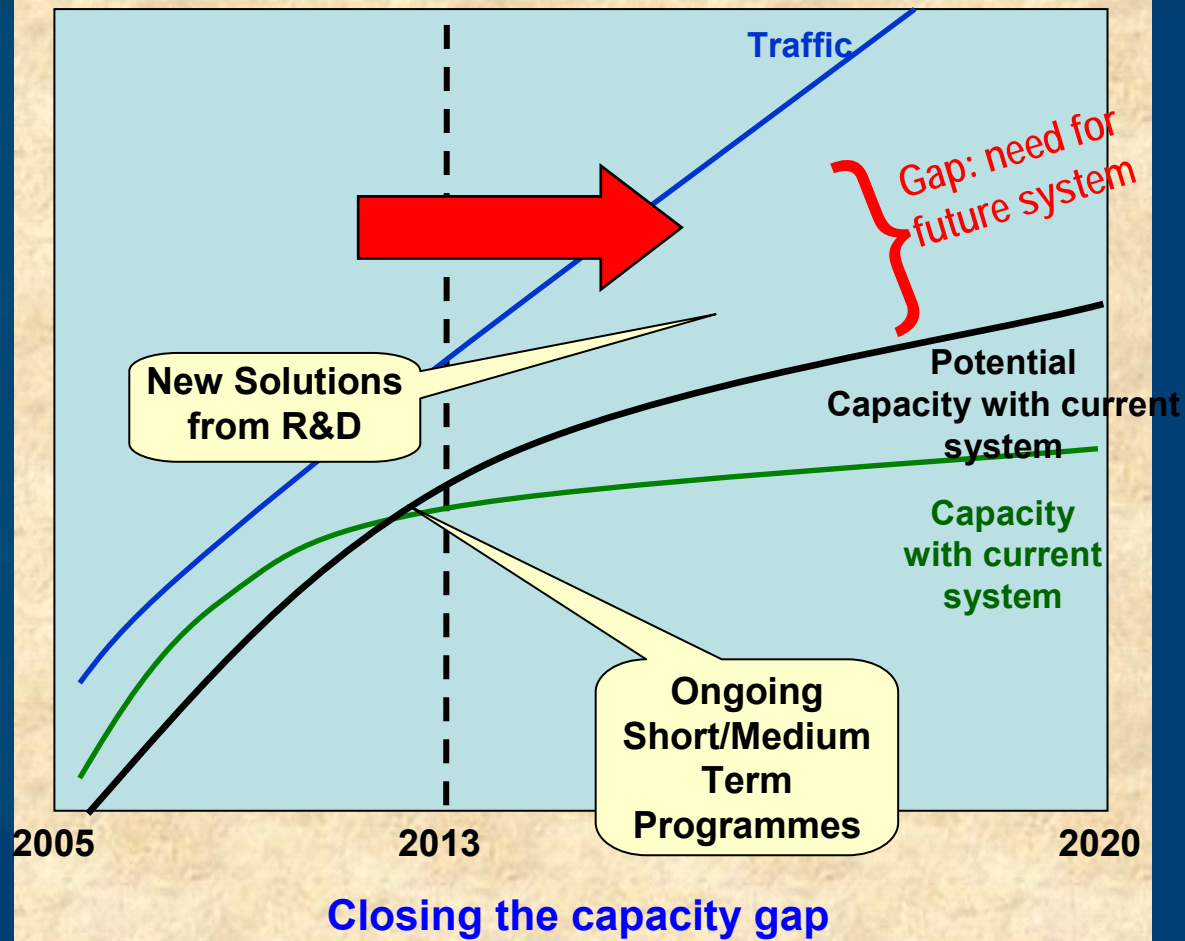


Traffic to double by 2025 (3/3)

2020: 17.2 millions



An ATM System reaching its limits



A new system is required

One programme for Europe: SESAR

SESAR complements the Single European Sky



Define, develop and implement

a more capable and sustainable European ATM system



One vision to be shared with the world



SESAR High level objectives

- A consistent, focussed and users-driven project
- Ambitious design objectives for ATM:

→ Triple capacity



→ Half cost



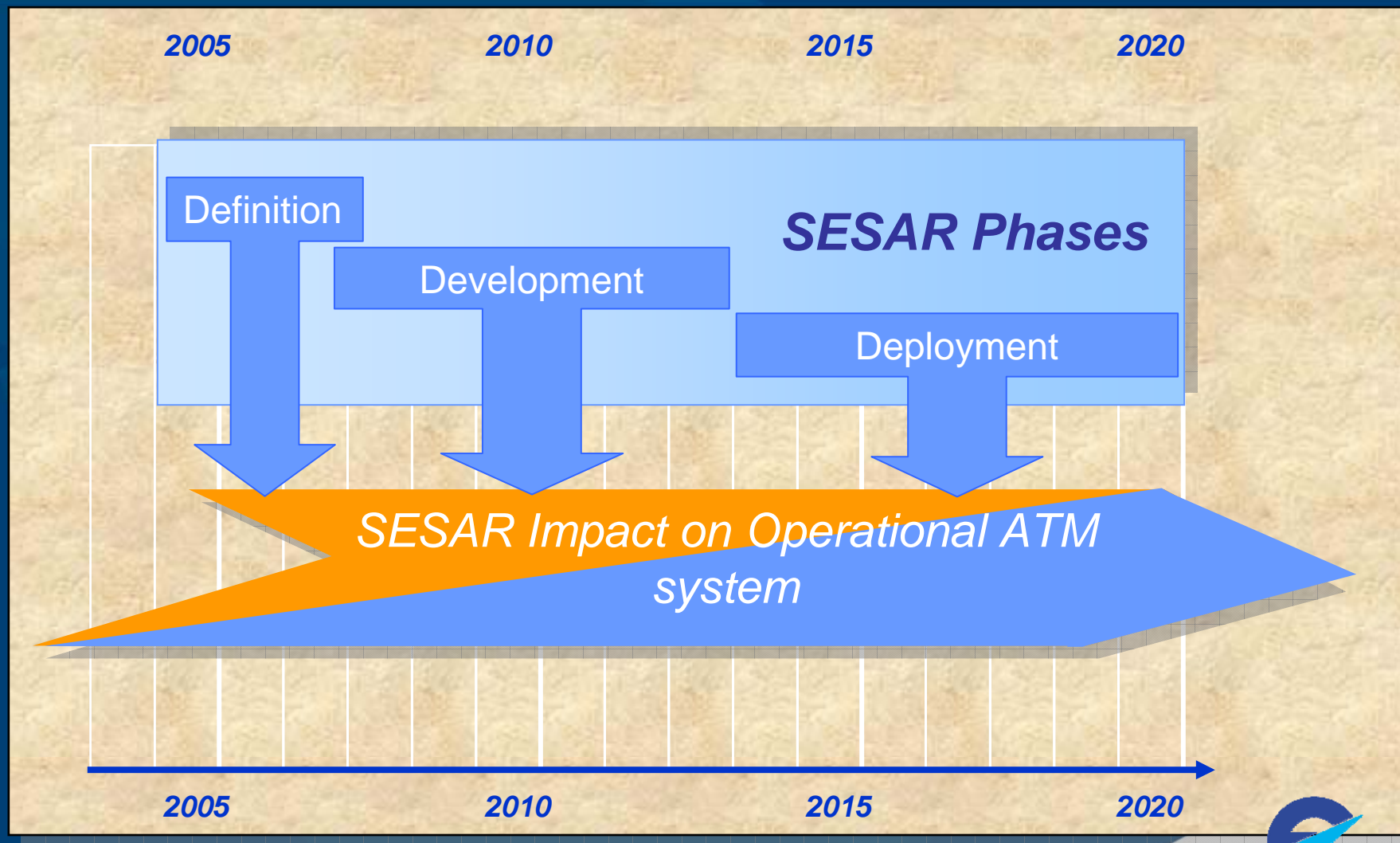
→ Environmental impact per flight: -10%



→ Factor 10 in terms of safety



SESAR is a Cohesive Programme organised in 3 phases for stepwise Implementation



SESAR Definition Phase: the first step

- **What:** a European ATM Master Plan
- **When:** by March 08
- **For:** synchronising plans and actions of the ATM stakeholders up to 2020
- **Why:** for solving European problems and be globally interoperable

**Under EUROCONTROL responsibility
Co-funded by EUROCONTROL and EC TEN-T**

Definition Phase involves all stakeholder categories

Airports



Airspace Users



ANSPs



EU industry



Eurocontrol



US industry



Associations



Research Centres



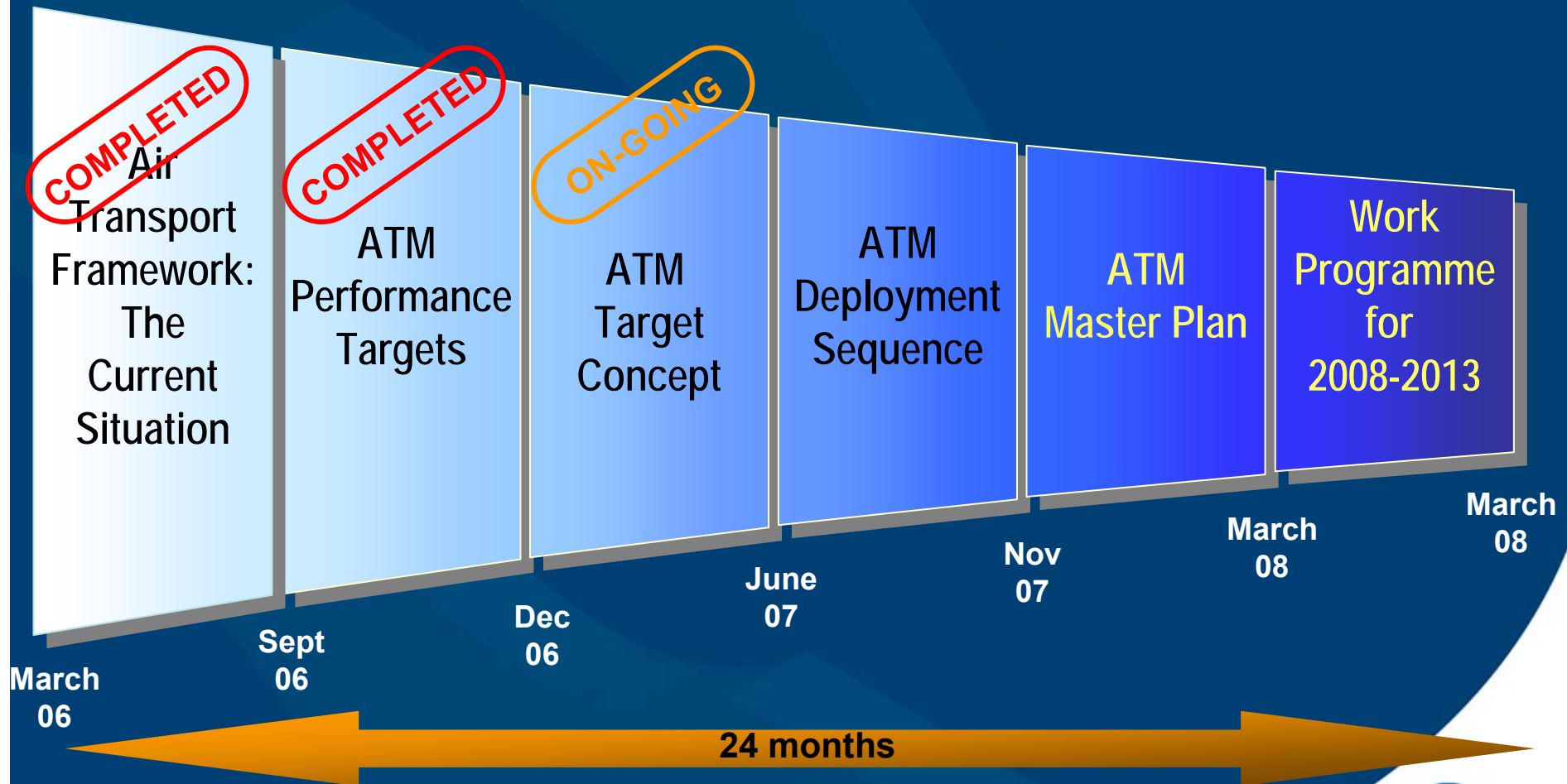
Military



Safety Regulator

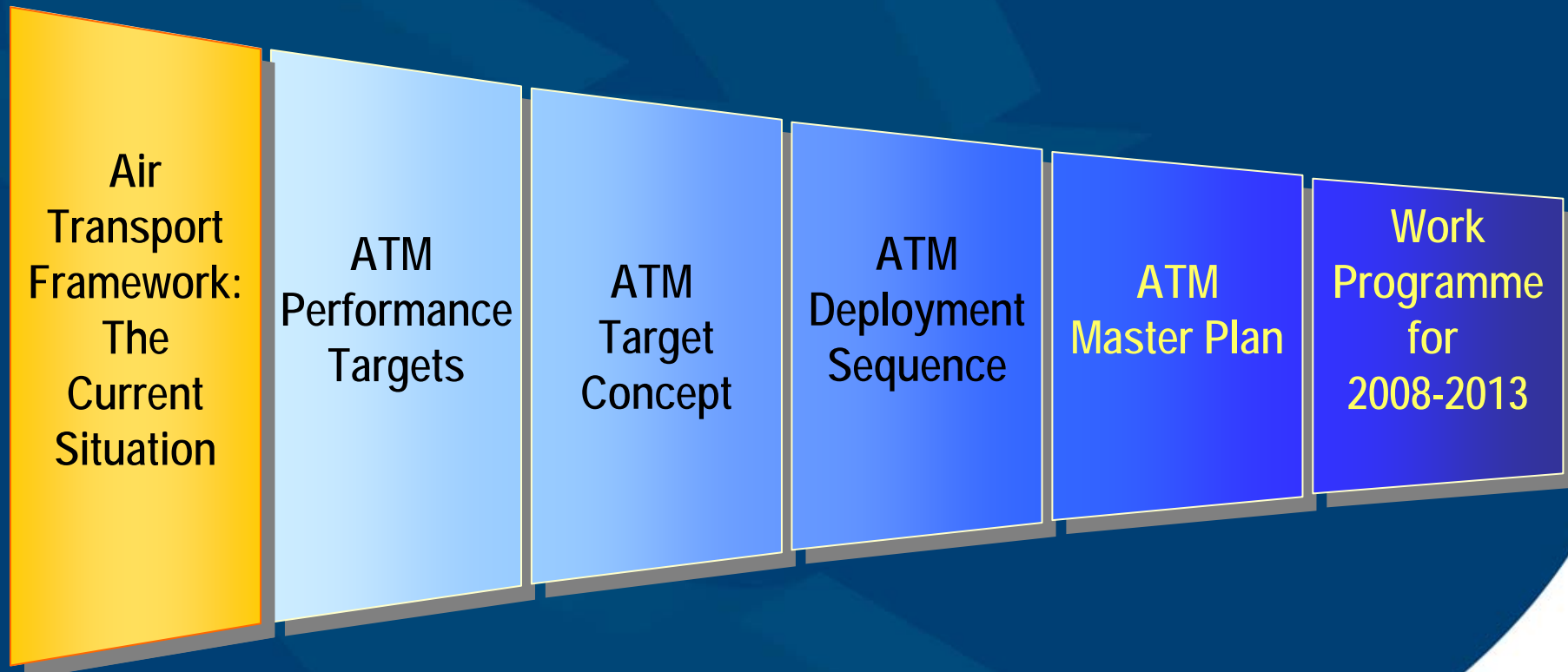


The SESAR Definition Phase “Deliverables”



Definition Phase 1st deliverable

D1: The current situation

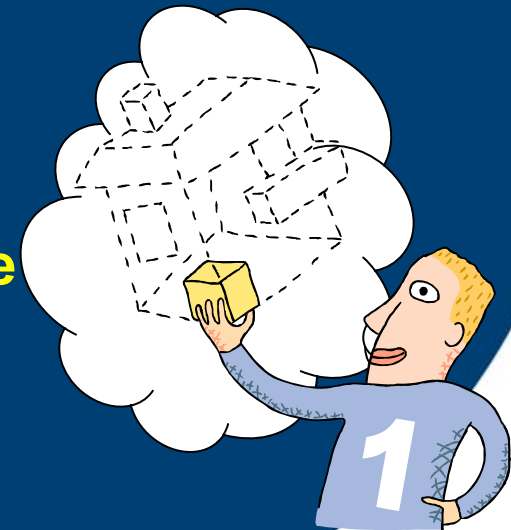


Main Conclusions

D1

Main conclusions from D1 (Current situation)

- Need for common framework where all stakeholders work in **Partnership**
- **Based on** the sharing of **performance** targets ➡
- Within **simple** & coherent **institutional framework**
- Supported by a **single functional architecture**
- Integrating airborne and ground



Increase impact on societal elements

- **Safety**

- Develop “Just culture”



- **Environment**

- Proactive management



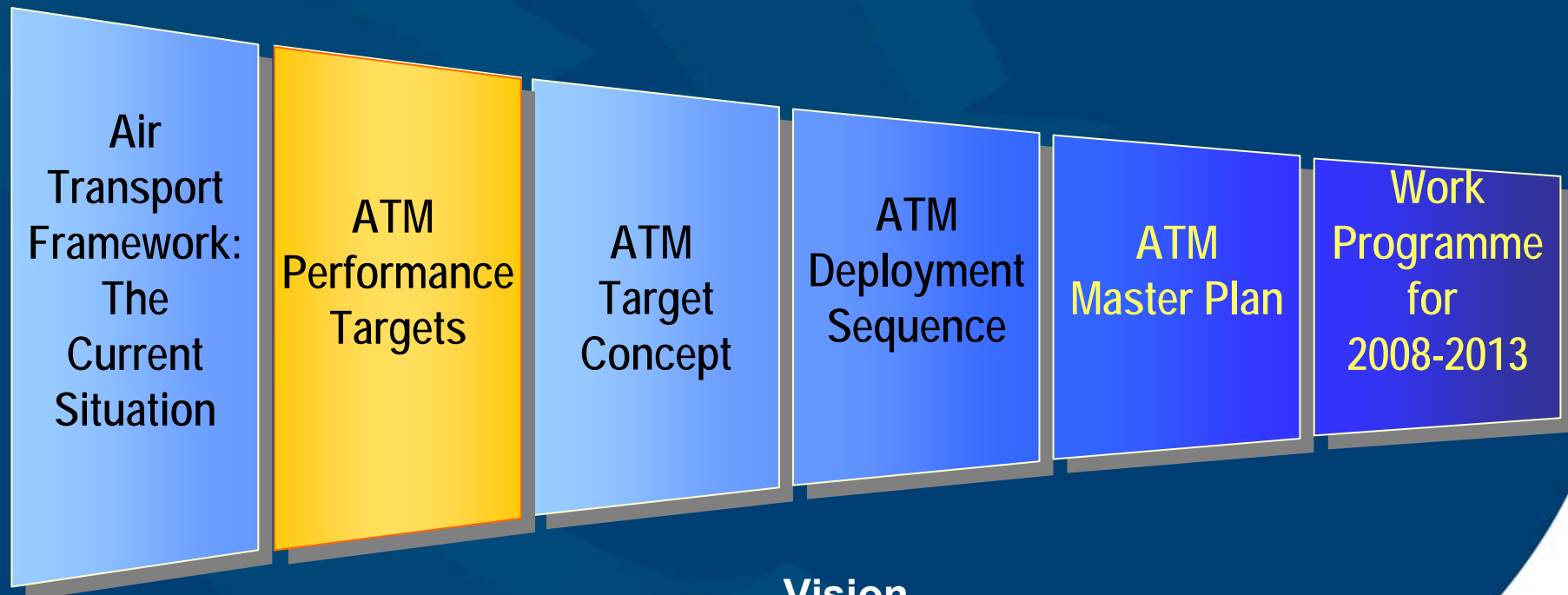
- **Security**

- Increase Security aspects of future ATM System



Definition Phase 2nd deliverable

D2: The performance targets



Vision
Performance targets
Short term improvements

- Achieve a **performance based** European ATM System

- Built in **partnership**



Cost
effective

Safe

Mobility of
citizens &
goods

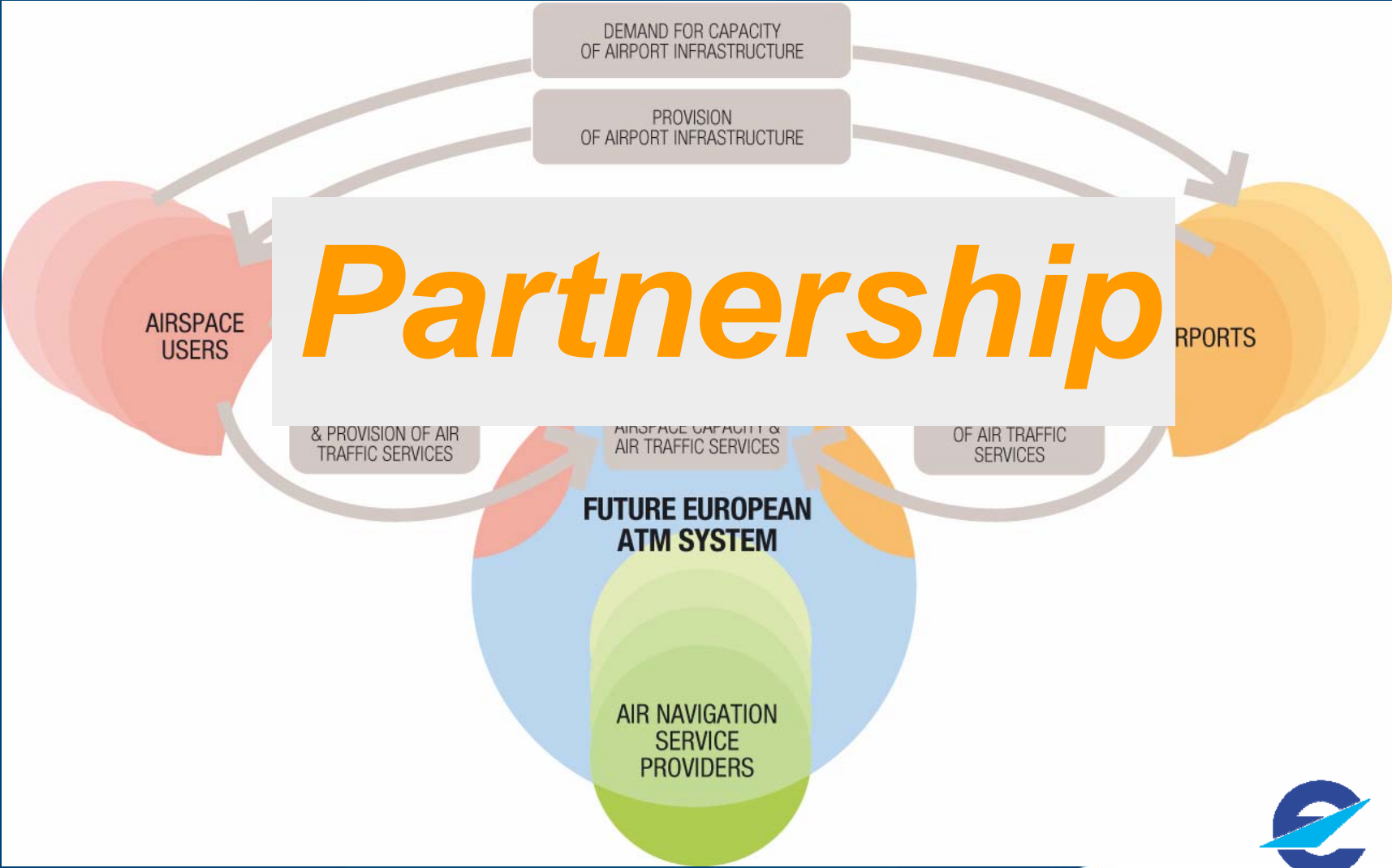
- To best support expectations from society and States
incl. military and all other aviation activities

Environmentally
sustainable

Secure

D2
Vision

A tri-partite Relationship to Achieve Performance





Central to the Future ATM System

“The Business Trajectory”

The “Business Trajectory” is the representation of an airspace user’s **intention** to get the best outcome of a flight.

Minimum
time
for the flight

or

Minimum
cost

or

Other relevant
characteristic of the
trajectory to the
user (including mil,
GA)



Business & Institutional frameworks

- **An ATM institutional framework caring about societal interests**
- **An ATM Business Framework managing all phases of European ATM System lifecycle**



Performance Partnership is Key !

**An ATM Performance Partnership incl. well defined
roles and responsibilities**

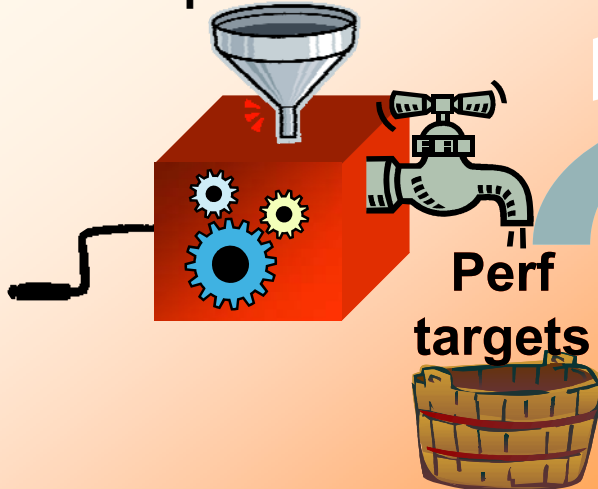
**Based on a shared set of values, priorities and network
interactions**

D2

Perf. Targets

Application of a Performance-based Approach

Expectations



1

Step 1: transform expectation in performance targets



Achievements

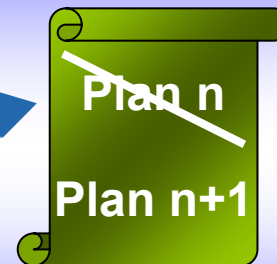
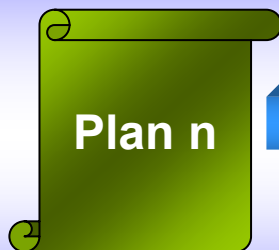


gaps

2

Step 2: compare achievement & targets to compute gaps

gaps



3

Step 3: update plans to mitigate gaps

D2
Perf. Targets

11 Key Performance Areas in SESAR (ICAO compliant)

Societal & political effects

Business level effects on users & operators

No direct interest to airspace users customers

Societal Outcome

- Safety
- + Security
- + Environmental Sustainability

Operational Performance

- Cost Effectiveness
- + Capacity
- + Efficiency
- + Flexibility
- + Predictability

Performance Enablers

- Access & Equity
- + Participation
- + Interoperability

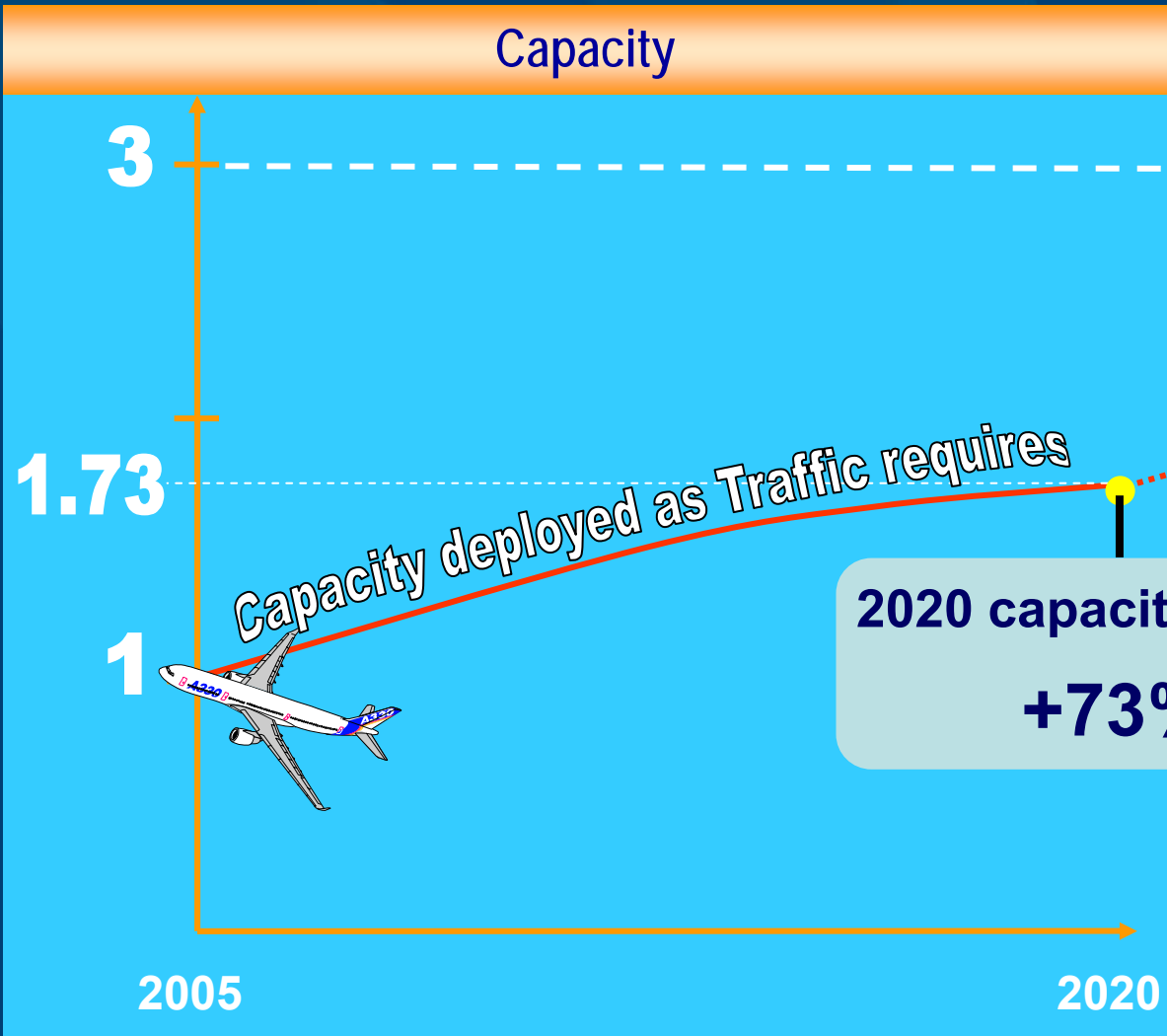
D2

Perf. Targets

Initial Strategic Design Performance Objectives & Targets

Some examples

Performance Targets



Long term design objective:

x 3



2020 capacity target:
+73%

Performance Targets

Cost Effectiveness

2020 Target: Direct ATM total costs / 2



Safety

Safety level: improved by 3 (2020)

(capability X 10 to meet a 3 X traffic increase)



Efficiency

- **≥ 98% flight departing on-time (+/- 3 min / plan)**
- **Fuel efficiency: < 5% of flights with additional fuel consumption of more than 2.5%**

Environment

- **Local environmental rules affecting ATM 100% respected.**
- **Minimise noise emissions.**
- **Gas emission reduction** (through reduction of excess fuel consumption - see KPA Efficiency).
- **Minimise adverse atmospheric effects.**



More performance Targets in D2

D2

Short-Term Improvements

D2

Short term

Short timeframe (2008-2013) solutions

Assessment of on-going activities based on:

- Their maturity, and
- Ability to deliver operational savings

Selected solution	Outcome			Performance					Enablers			Maturity
	Safety	Environmental Sustainability	Sustainability Security	Efficiency	Predictability	Flexibility	Capacity	Cost-Effectiveness	Access & equity	Participation	Interoperability	
ATFCM	+	+	+	++	++	+	++	+	+	++	+	Mature
DMEAN	+	+	+	++	++	++	++	+	++	++	+	Mature
New FDPS	+	+		+	+	+	+	+			++	Mature/Promising
AIM Activities	+			+				+	++	++	++	Mature
CASCADE	++	+		+	+	+	+	+		+	++	Promising
CHAIN	++		+					+		++	++	Mature
FASTI	+	+		+	+	+	+	+		++	++	Promising
LINK 2000+	++	+		+	+	+	+	+		+	++	Mature
P-RNAV	++	++		++	+	+	+	+		+	++	Mature
European Safety Programme	++							+		++		Mature
A-SMGCS level I and II	++	+		+	+		+	+				Mature
EAPPRI	++											Mature
AMAN/DMAN	+	+		+	+		++	+				Mature
ACE	+	+		+	+	+	++	++				Mature
Collaborative environmental management systems		++										
CDA		++		+	+	+						Mature
RNAV / RNP	+	++		++		+		++				Mature/Promising
SMAN		+		+	+	+	+					Promising
8.33	+			+	+	+	+	+		+	+	Mature
CDM	+	+		+	++	+	+	++		++		Mature

D2
Short term

Short-term improvements conclusions

**A number of short term initiatives (on-going and
planned)**

Potential for significant savings (€0.5-1Bn/year)



**Need for political commitment at European and at
national level to support necessary changes for the
short time frame**



D2

D2 Conclusions

A **performance-based approach** with clear targets

Customer oriented approach based on
business trajectory

New ATM System built in **partnership**

Industry
**Beyond the Definition
Phase:
Implementing SESAR to
support the SES**
Third Countries

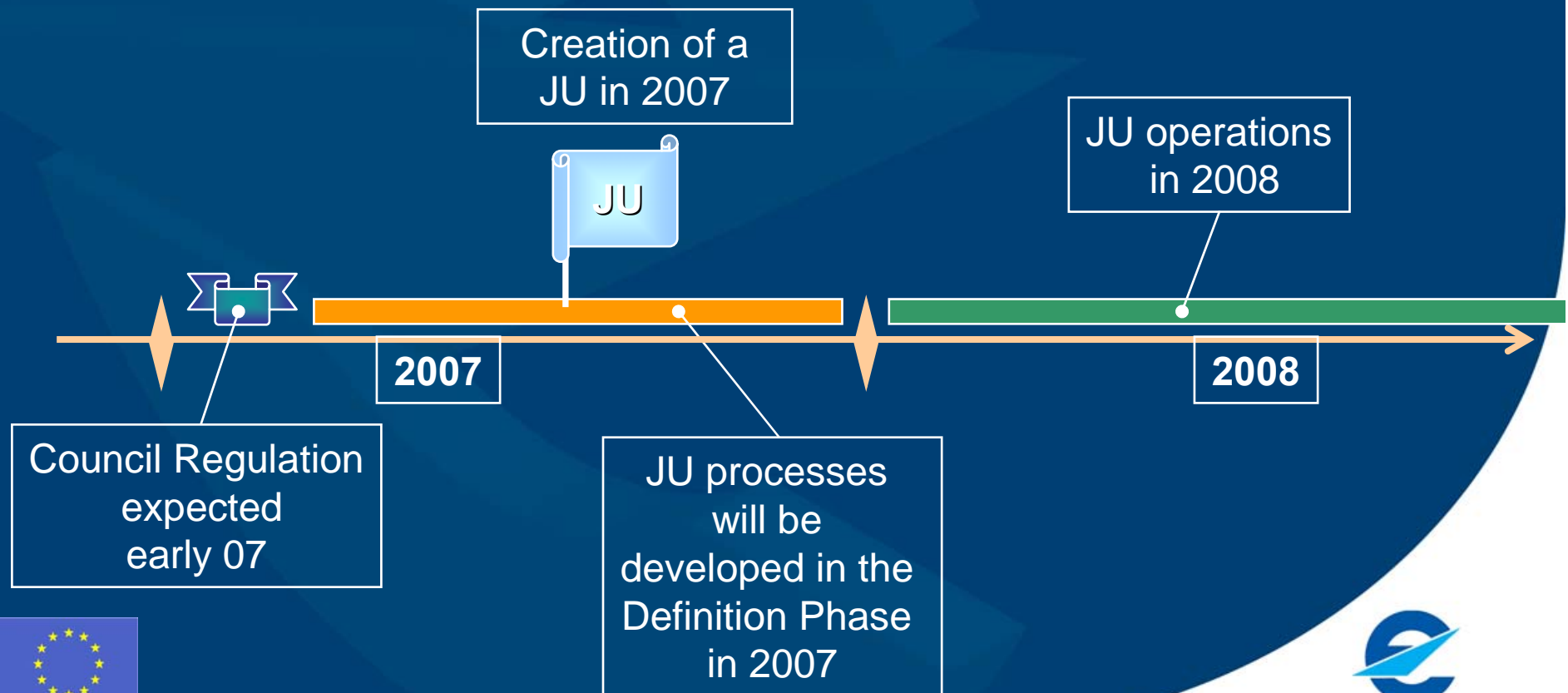
The SESAR Development Phase

- Based on the ATM Master Plan
- Organised in a **Public-Private-Partnership** **PPP**
- Managed by a single, programme-oriented entity
- Done in **cooperation** with international partners:
 - Within the SESAR programme
 - Under cooperation agreements (e.g. with FAA)
 - Under ICAO auspices



The SESAR Joint Undertaking

Where are we in the creation process?



END