

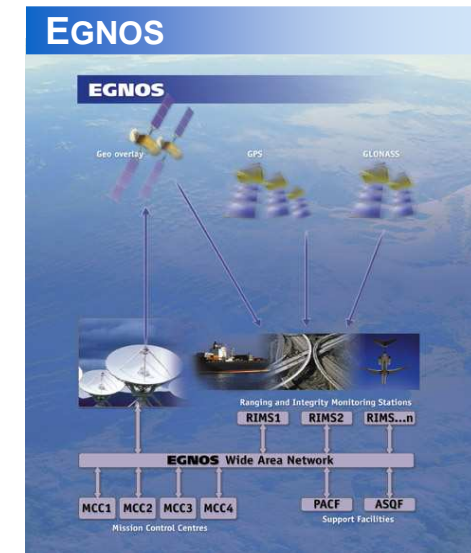
- **A study case: the challenges of regulating satellite systems and services**
- **Lessons learned from EGNOS**
- **Pan-European satellite systems under the current SES regulations**
- **Early consideration of regulatory issues in Iris**
- **Design responsibilities versus service provision**

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EASA Workshop 16 October 2008

Step 1: EGNOS to provide civil complement to military GPS and GLONASS, provider to be certified under SES regulation in 2009

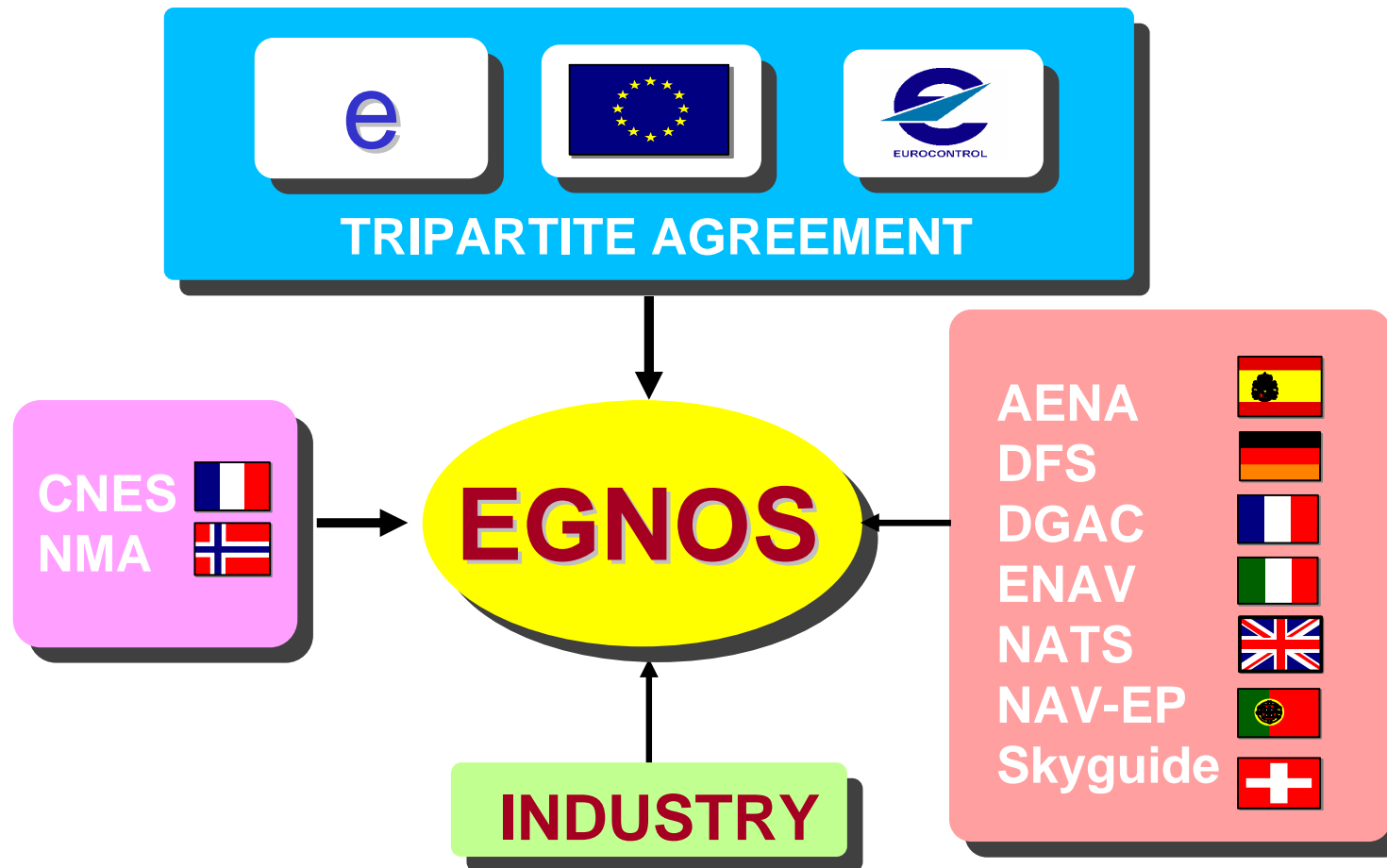
EGNOS is an initiative of the European Commission, Eurocontrol and ESA

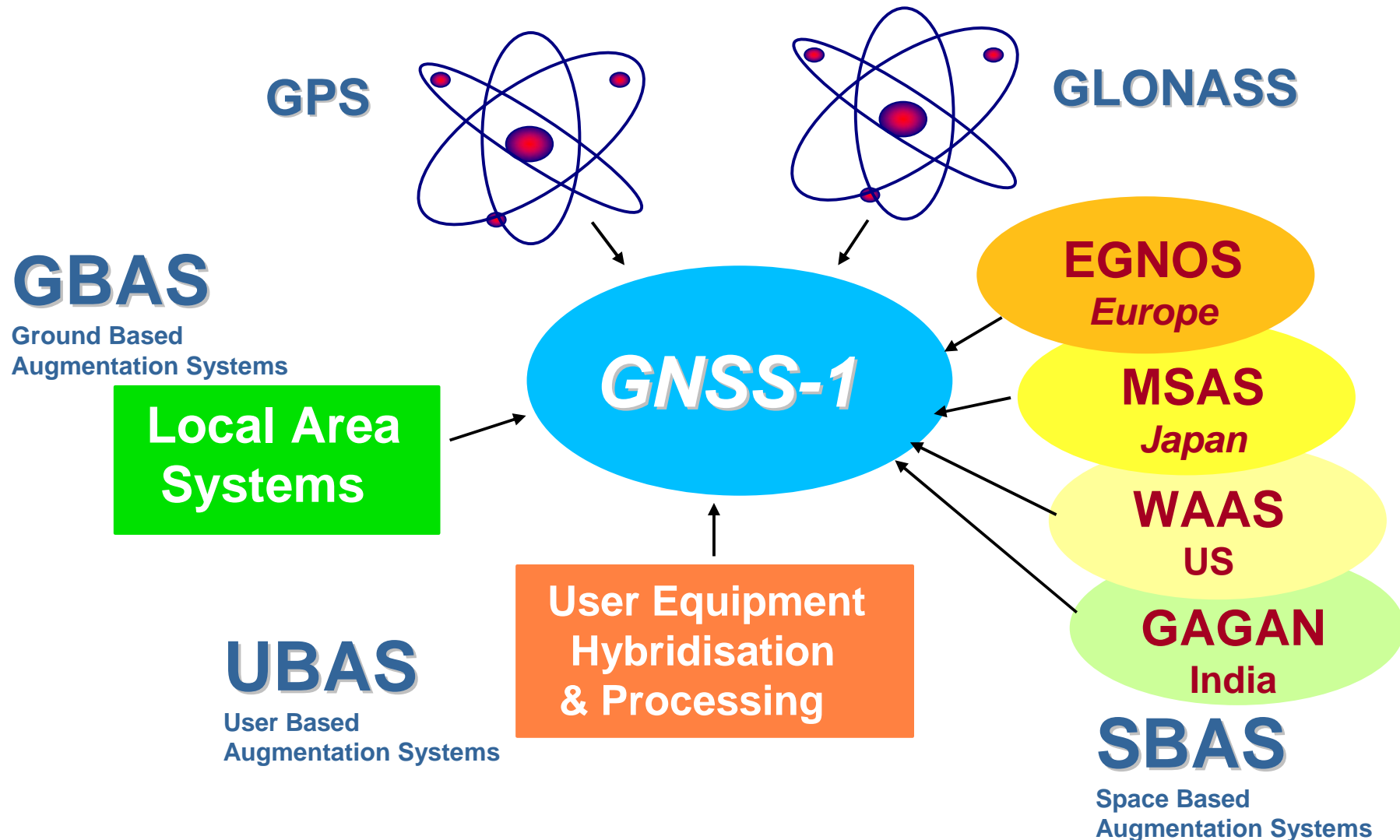


Step 2: GALILEO is to achieve European sovereignty through dedicated system under civil control

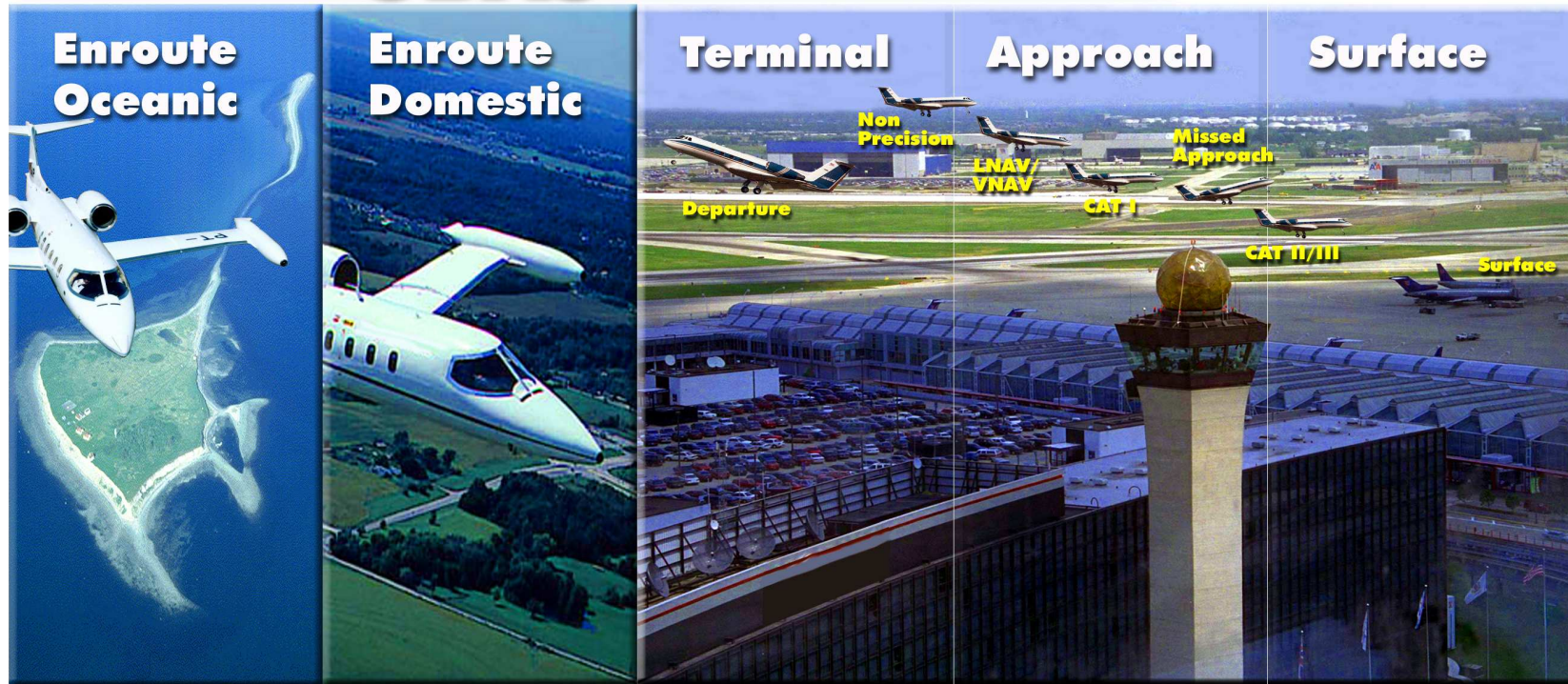
GALILEO is an initiative of the European Commission and ESA







REGIONAL SBAS



LOCAL

Lessons learnt from EGNOS:

- Need for clear and full allocation of public sector responsibilities
much beyond the system development phase, according to
 - Core organisational competences
 - Programme management capabilities
 - Assumption of financial liabilities
- Need of commitments covering both development and operational phases, compatible with the long term perspective required by the user community
- Need of early appointment of operator
- Need of unbundling design and operation responsibilities at all levels

Lessons learnt from EGNOS:

- Need to adequately structure the interface between programme authorities, system developers and user community
- Long transition time before full service introduction, needing appropriate planning/financing at public sector level

Lessons learnt from EGNOS:

- Certification authority to be identified and interfaced from the very beginning in order to specify the certification requirements



Pan-European satellite systems under the current SES regulations

Past situation:

- ANS used to be provided at national level, by a national provider using ground based facilities and infrastructures established on national territory
- Cross-border service provision was limited, Maastricht Upper Area Control Centre being a notable exception



Pan-European satellite systems under the current SES regulations

SES regulations:

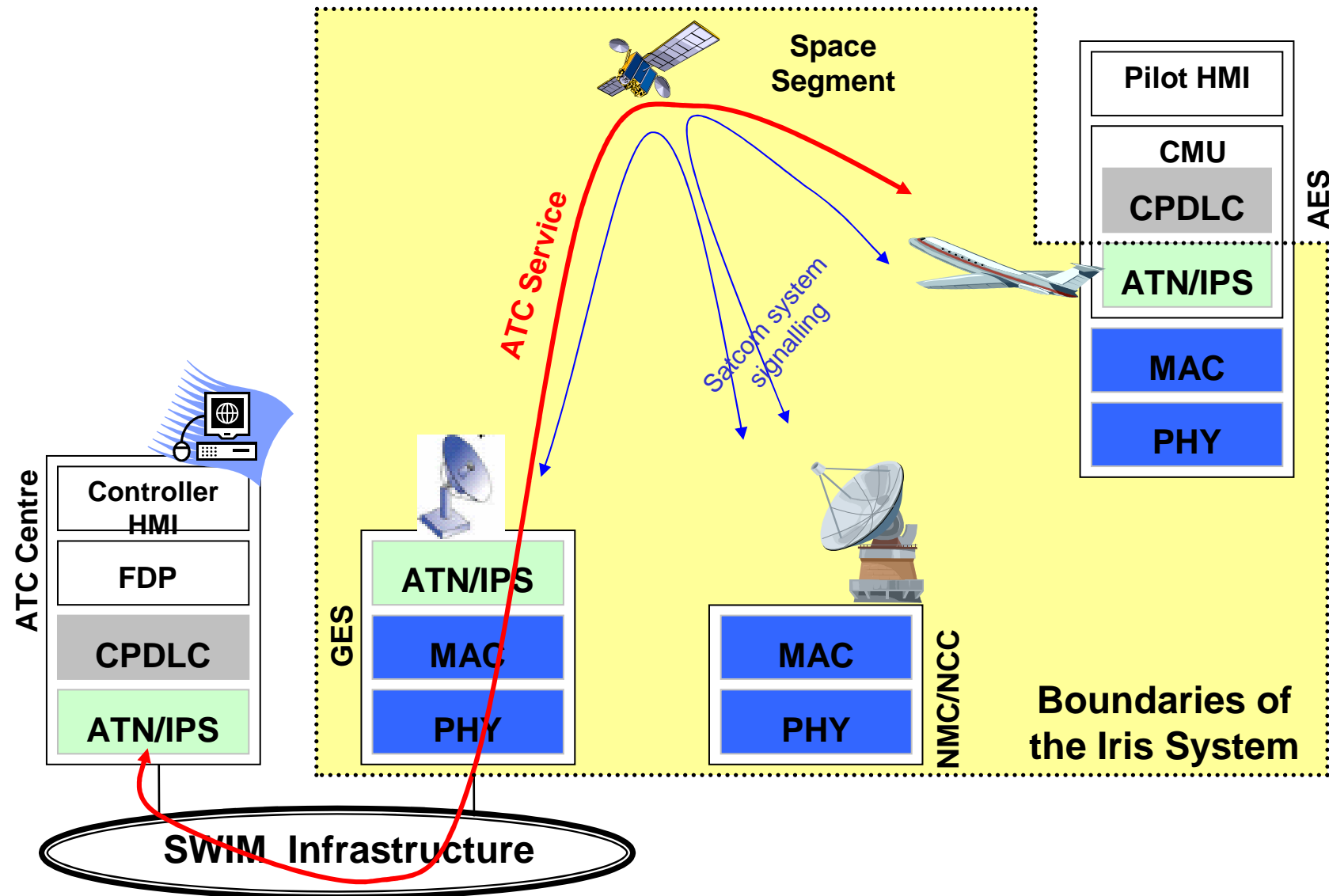
- Facilitation of cross-border service provision through:
 - the EC-wide mutual recognition by Member States of the certificates granted to ANSPs by National Supervisory Authorities of other Member States
 - the authorisation for ANSPs to avail themselves of the services of other certified ANSPs established elsewhere in the EC
- Individual Member States play a central role in the implementation of the SES (certification, oversight, applicable liability regime etc...)
- SES regulations geared towards ANSPs and NSAs



Pan-European satellite systems under the current SES regulations

Pan-European satellite systems:

- Systems such as EGNOS and Iris are pan-European by nature. They are designed, developed and funded by pan-European organisations; and cover the entire ECAC area
- Anchoring these satellite systems in a national regime – e.g. with regard to certification and oversight – appears somewhat artificial. These tasks should be carried out by a pan-European institution
- The scope of the regulations should not be limited to service provision: It should also cover design and development of the systems
- The EC legislative proposal on EASA extension on the subject captures the above needs and is fully supported.



**Iris programme Phase 1 funding has been secured by 10 Participating States
(among ESA 17 Member States)**

Austria



France



Germany



Ireland



Italy



Norway



Portugal



Spain



Switzerland



UK

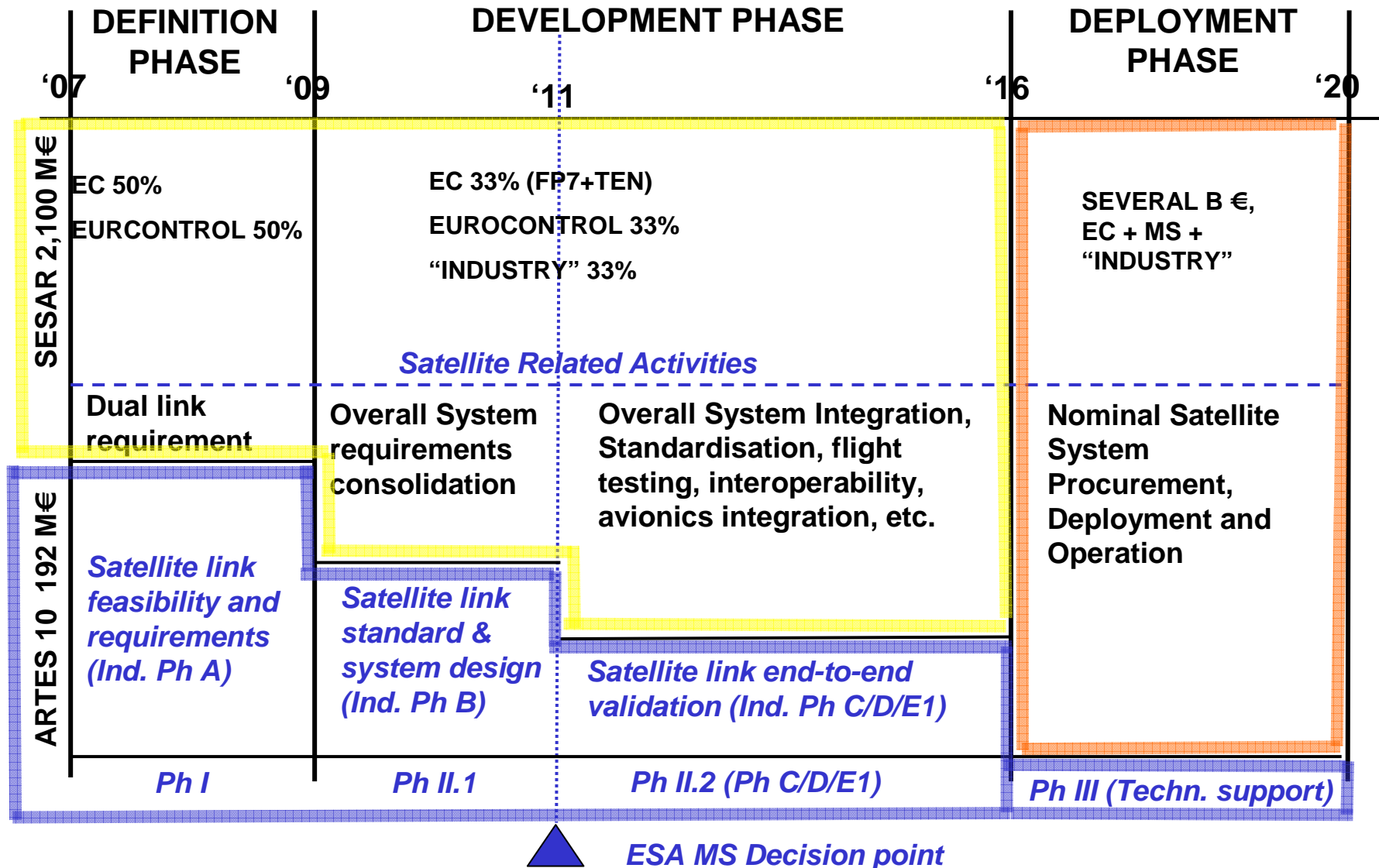


Iris Expert Group: users' voice in the Programme

Core members: DSNA, DFS, NATS, LFV, Nav Portugal, Avinor, HCAA, Iberia, IATA, Eurocontrol, EASA



+ **invitees** on specific topics (e.g. SITA, ARINC, Business Airlines, Low Fare Airlines, Helicopter Association, Inmarsat...)



EGNOS, PENS, Link 2000+, CASCADE		Mitigation x Iris		
N.	Description	Existing EU law	SES II	Residual
1	ESA approval process synchronized with aviation regulatory processes (from beginning)			X
2	Regulatory framework for « pan-European » systems		X	
3	Clarity on regulatory requirements	X		
4	Early identification of service provider			X
5	Clear requirements for service provisions			X

EGNOS, PENS, Link 2000+, CASCADE		Mitigation x Iris		
N.	Description	Existing EU law	SES II	Residual
6	Planning budget for certification			X
7	Scope of certification	X		
8	Inter-governmental method = long process for consensus	X		
9	Un-coordinated safety oversight			X
10	Safety regulation constraining business model	X		
11	Separation of safety regulation from other forms of regulation		X	