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RÉPUBLIQUE FRANÇAISE

MINISTÈRE DE LA DÉFENSE

SCCOA



SCCOA program(s)

Meeting with NAO, March 2 2004

(1)



Summary



- What is SPAé ?
- What is the system SCCOA ?
- How do we manage this SCCOA complexity ?
- What are our tools ?
- How do we interface with contractors ?
- How do we report ?
- More questions ?

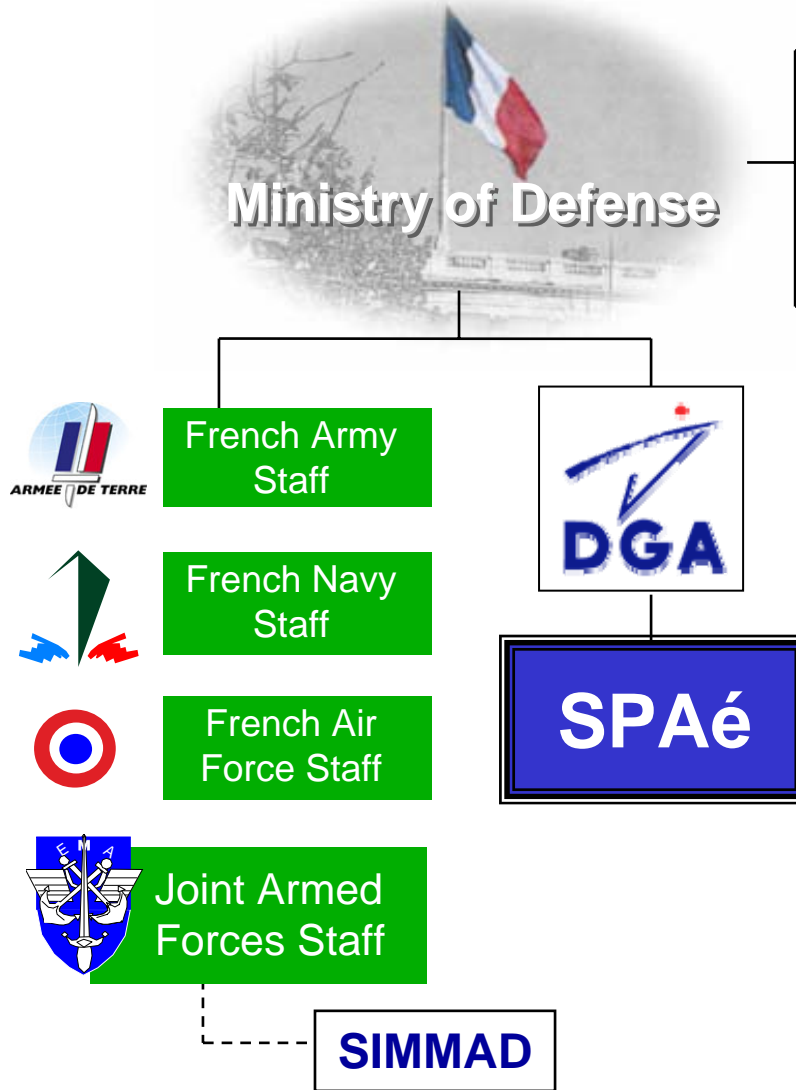
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Ministry of Defense

- Ministry of :**
 - Transport
 - Economy and Finance
 - Home office
 - Ministry of research
- General Accounting Office**
- Parliament**
- Ministries' offices For Foreign affaires-cooperation**

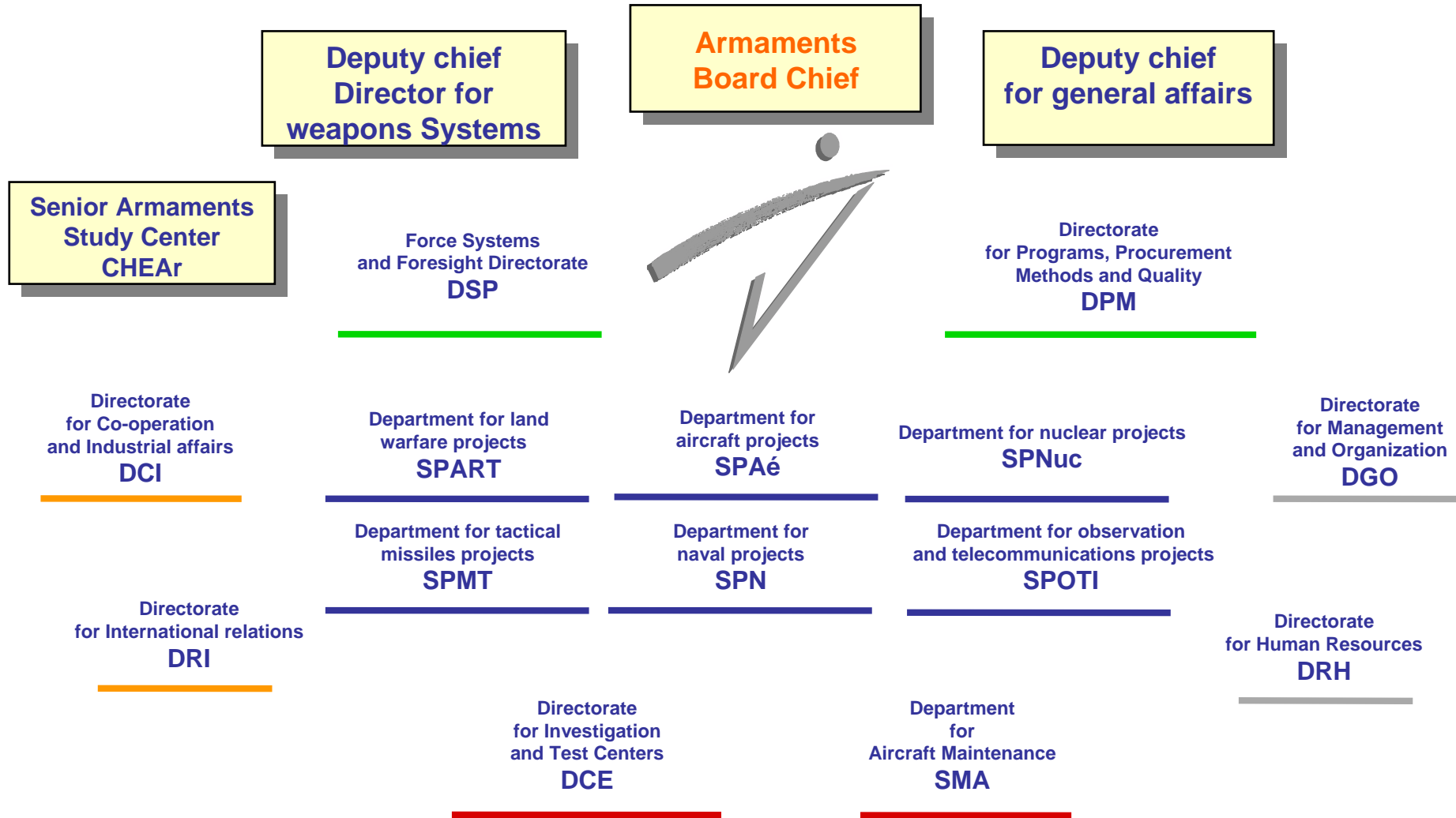


- Minister's departmental staff**
- Controllers of Defense**
- General secretary's office for administration**

- INDUSTRY :**
- Major firms
 - Small/medium size firms

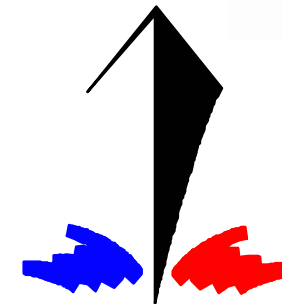
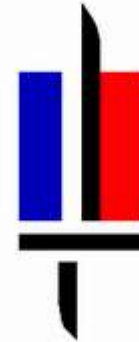
- Government-owned establishments :**
- ONERA
 - CEA/DAM
 - CNES...

DGA organisation chart



SPAé 's customers

- Joint staff
- Army
- Navy
- Air force
- Transport aviation authority
- Civil Security directorate
- Customs
- ...



Funds managed by SPAé (2001)

- Military programs:
- Civil aviation programs:
- Foresight actions and advanced studies:

Orders	Payments
5 130 M€	2 100 M€
160 M€	140 M€
110 M€	80 M€

227 new contracts



Organisational structure breakdown

SPAé

Department for Aircraft Projects
about 570 persons

IPT

Director's offices
AI, CG, BSD, RH, AQI
Military advisors

9 management segments
about 30 persons

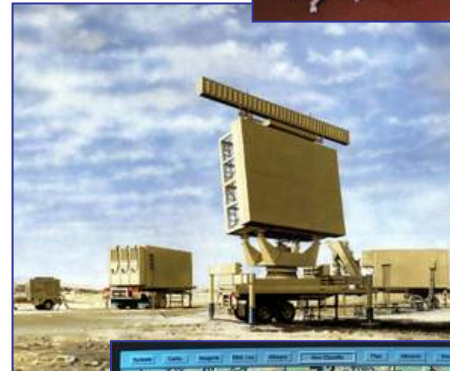
Project Management Division
about 200 persons

- Rafale
- Air Force combat aircraft's
- Air Force mobility
- Airborne systems
- Command and control systems for air operations**
- Navy combat aircraft and systems
- Tiger helicopter
- Mobility for Army, Navy and other customers
- Civil aviation

Systems and Techniques Division
about 300 persons

Management segment for air operations command and control

- SCCOA program (steps 1, 2, 3, ...)
- NATO ACCS program
- Particular operations

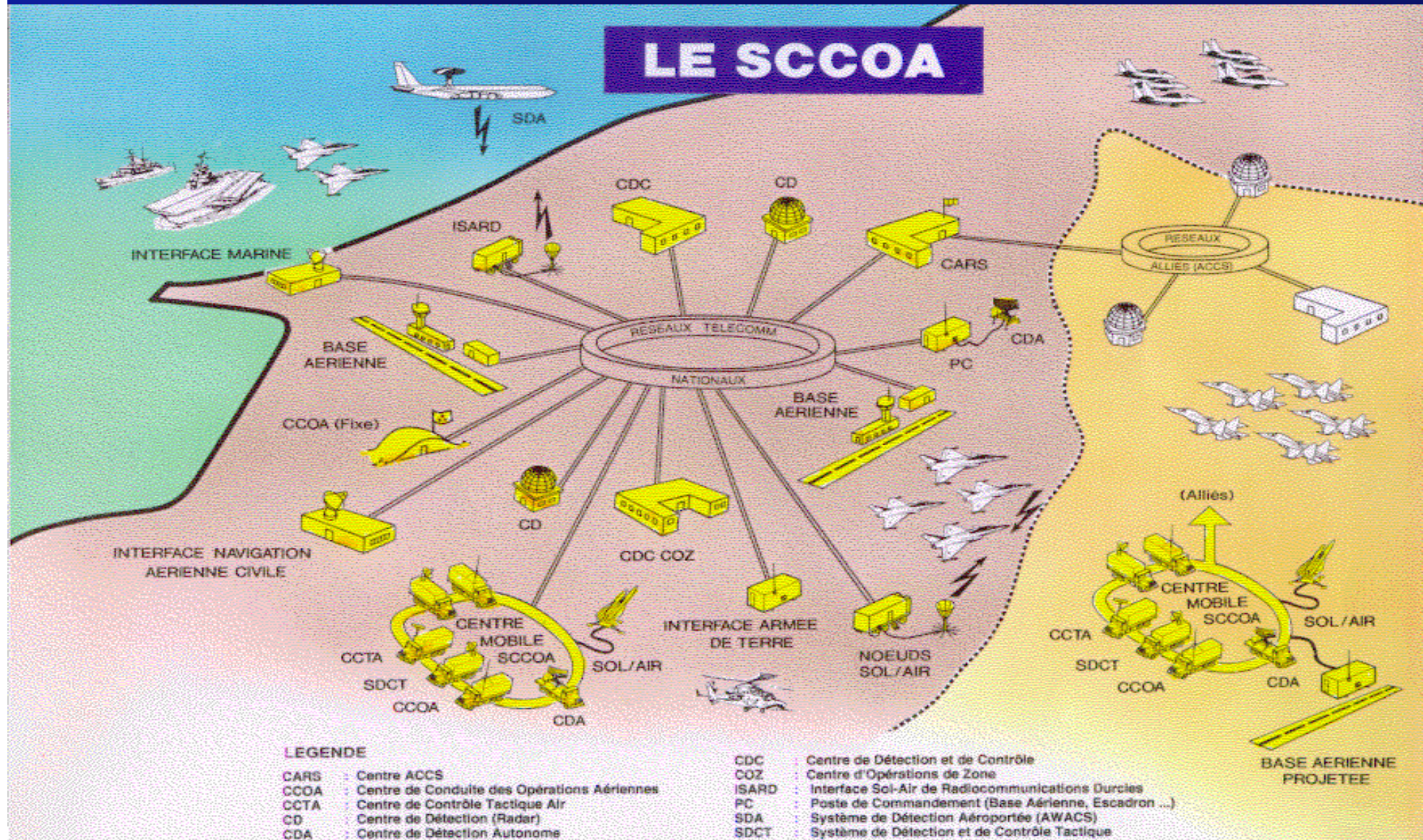


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LE SCCOA



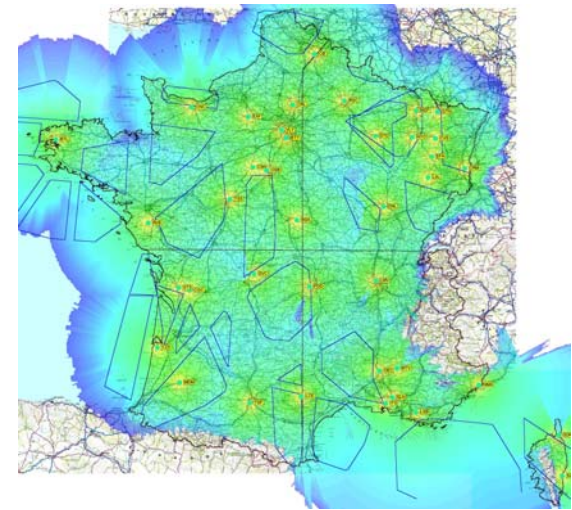
Sensors and radios

Detection

- HMA (15), LA (45) radar's
- Spatial survey radar's
- Trajectory radar's (3)
- Landing radar's (40)
- Aids to landing (ILS, TACAN, DME...)
- Contractors: TRS, ERICSON, FIAR
- Budgets: < 100 M€

Ground / Air Telecommunications

- Global contract SRSA
- Data and voice digital processing
- Automated supervising of 14 centres
- Clear or encrypted communications
- Contractor: CS SI
- Budget: 150 M€



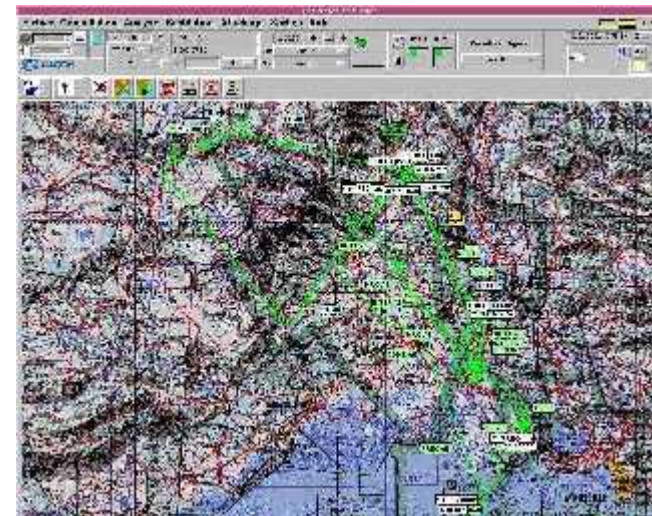
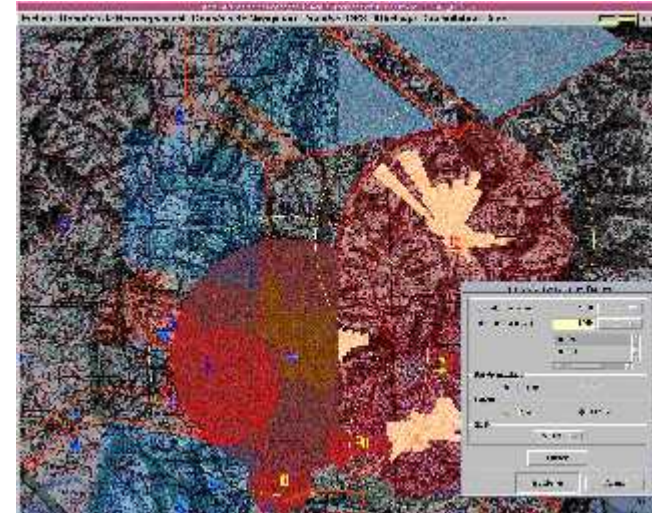
Developing software

Command & control soft systems

- Intelligence
- System supervising
- Display of tactical situation
- Planing and controlling
- Contractors: Thales, CS SI, SAGEM
- Budgets: < 100 M€

Preparation & replay of missions

- Global contract: SLPRM
- Multiple aircraft's: Rafale, M2000, M F1, SEM
- Multiple missiles: APACHE, SCALP, AASM, ASMP-A
- Contractors: SAGEM, MDBA, Dassault
- Budgets: 100 M€ (< 250 M€ in final)



The SCCOA centres

Air bases

- Global contract CLA 2000
- renovation of 30 Airfield control towers
- Contractor: CS SI
- Budget: 180 M€

Air traffic centres

- Global system STRIDA
- Air general picture, Threat assessment
- OPS traffic control, Civil traffic co-ordination
- Contractors: Thales, CS SI
- Budgets: 120 M€ for present phase

Deployable component

- C4I centre, with modular and projection capability (more than 100 shelters)
- Planing, controlling and supervising of air operations on an external theatre
- Contractor: Thales Raytheon Systems
- Budget: 110 M€



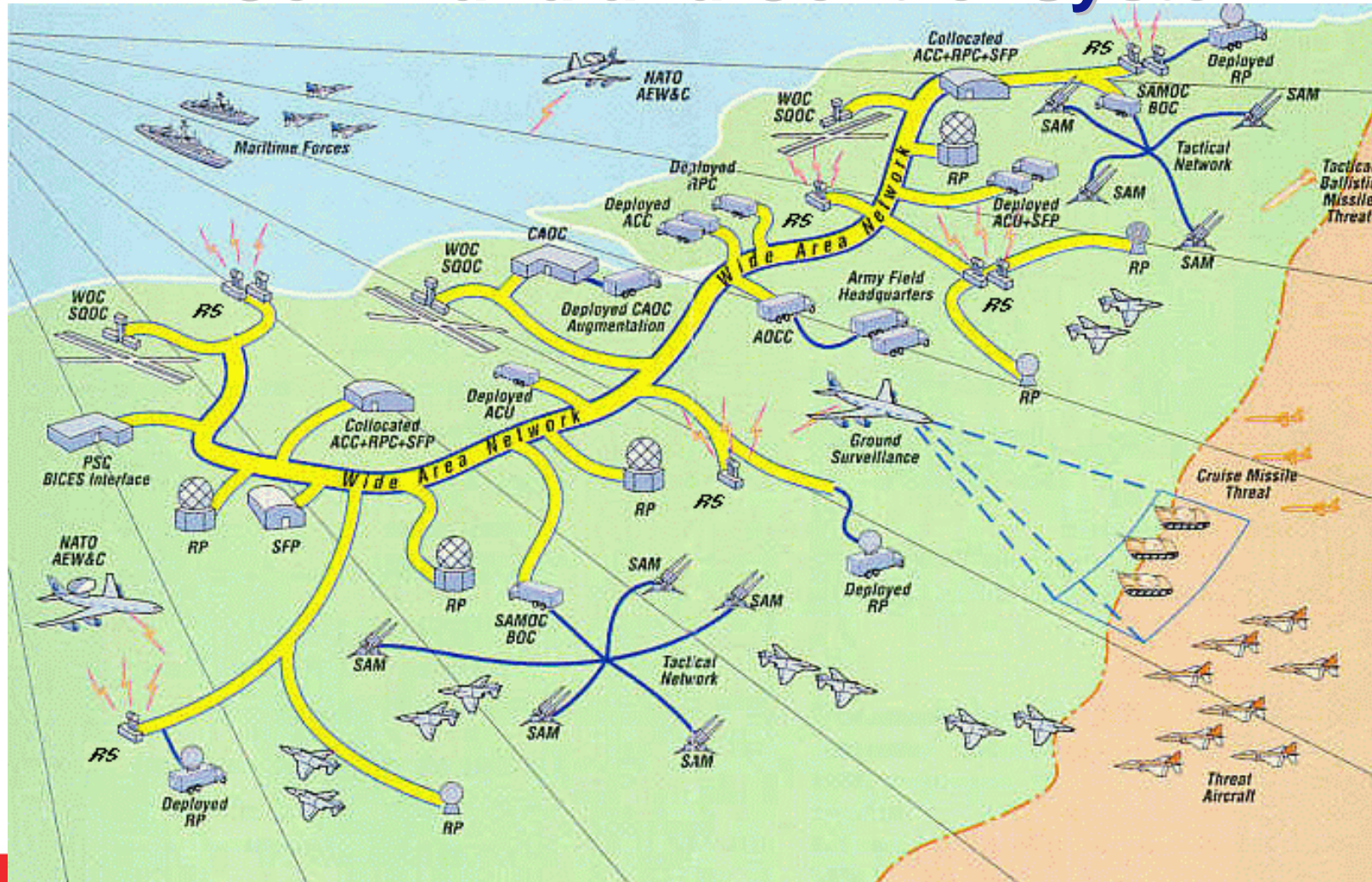
A global Communication & Information System (CIS)

- Global contract MOSS
- To manage SCCOA coherence & complexity
- To control needs collection
- Better reactivity acquisition/needs
- To acquire command centres and systems
- Preparing the future (SCCOA 4 & defence against strategic missiles)
- Contractor: MOSS SAS (Thales + EADS)
- Budget : 285 M€

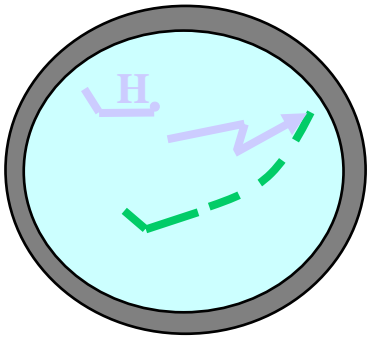
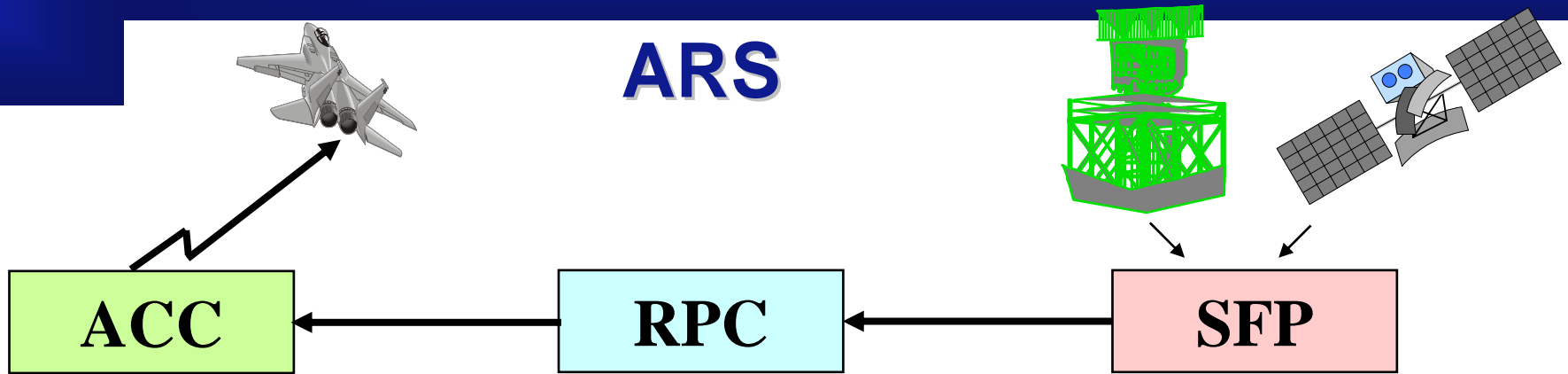


ACCS

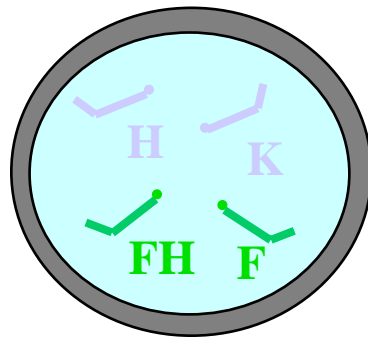
Air Command and Control System



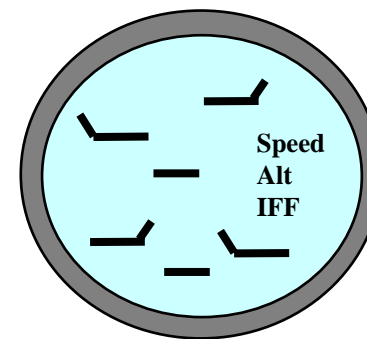
ARS



RAP

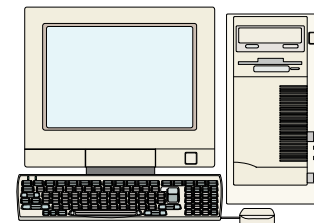
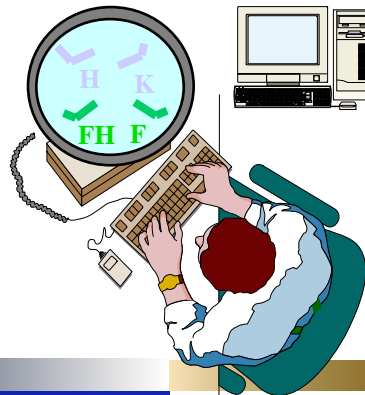
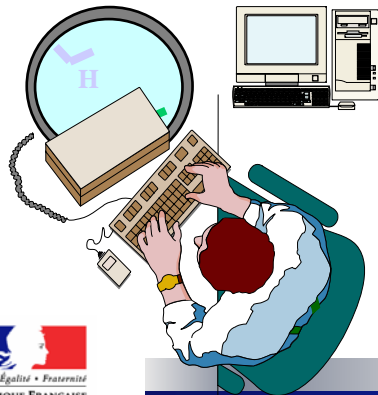


LAP

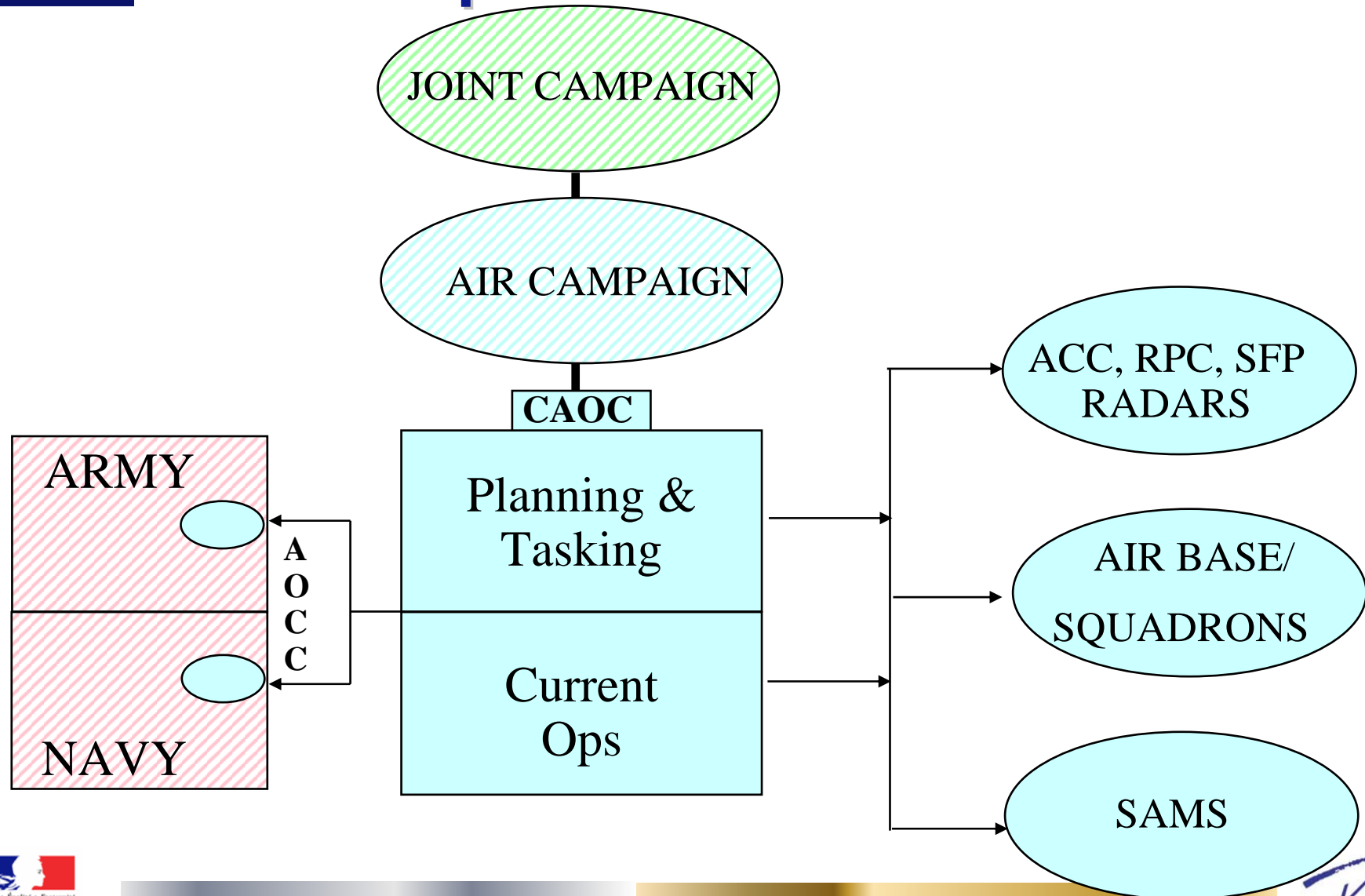


CONTROLE

IDENTIFICATION DETECTIONS

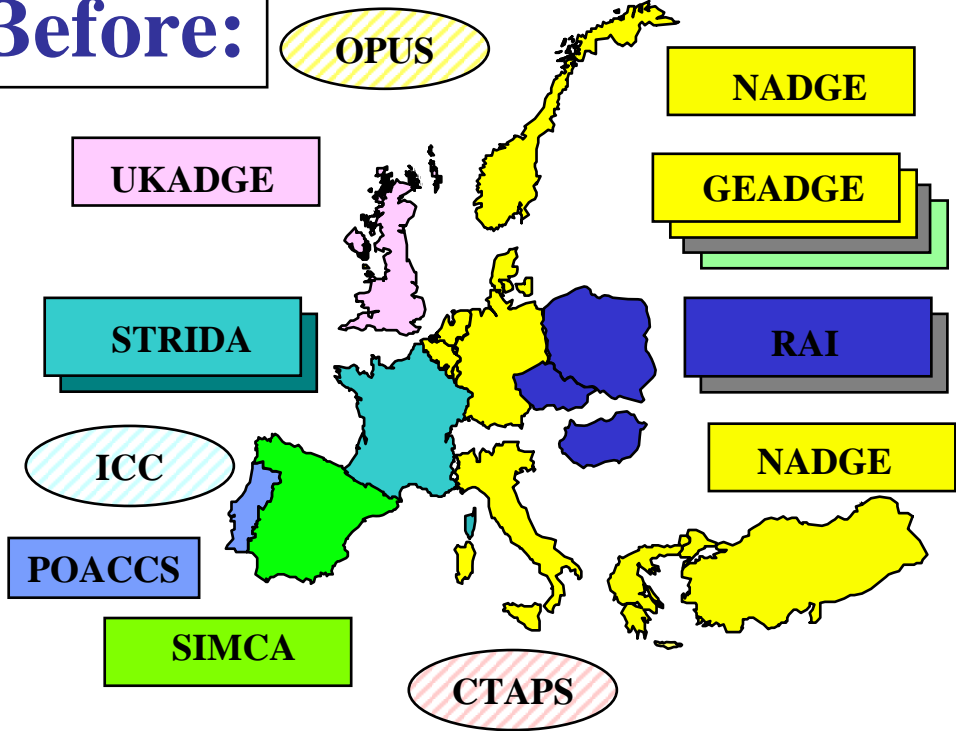


ACCS capacities



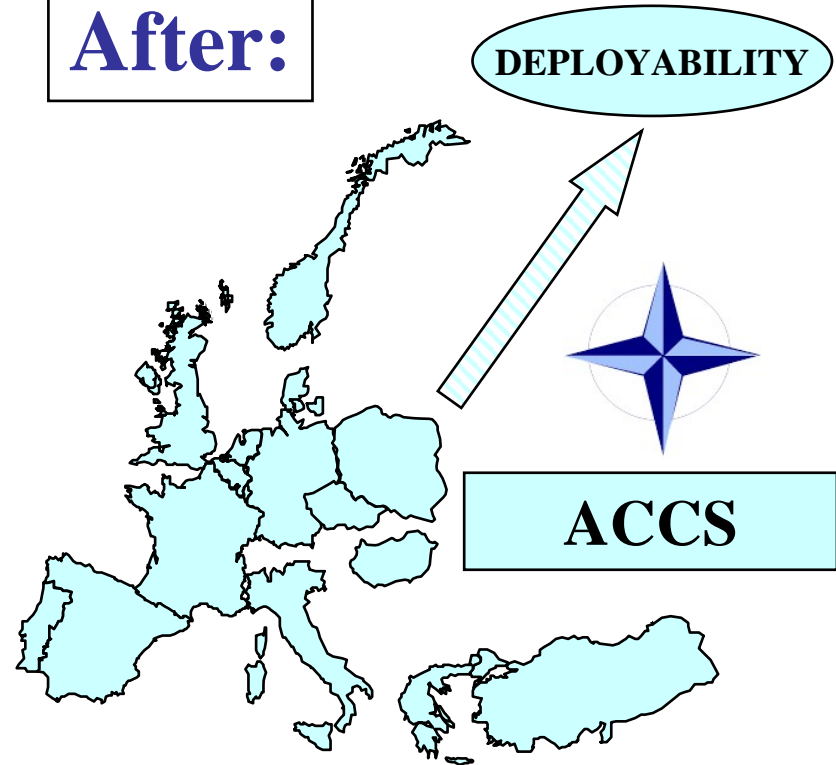
Why ACCS ?

Before:

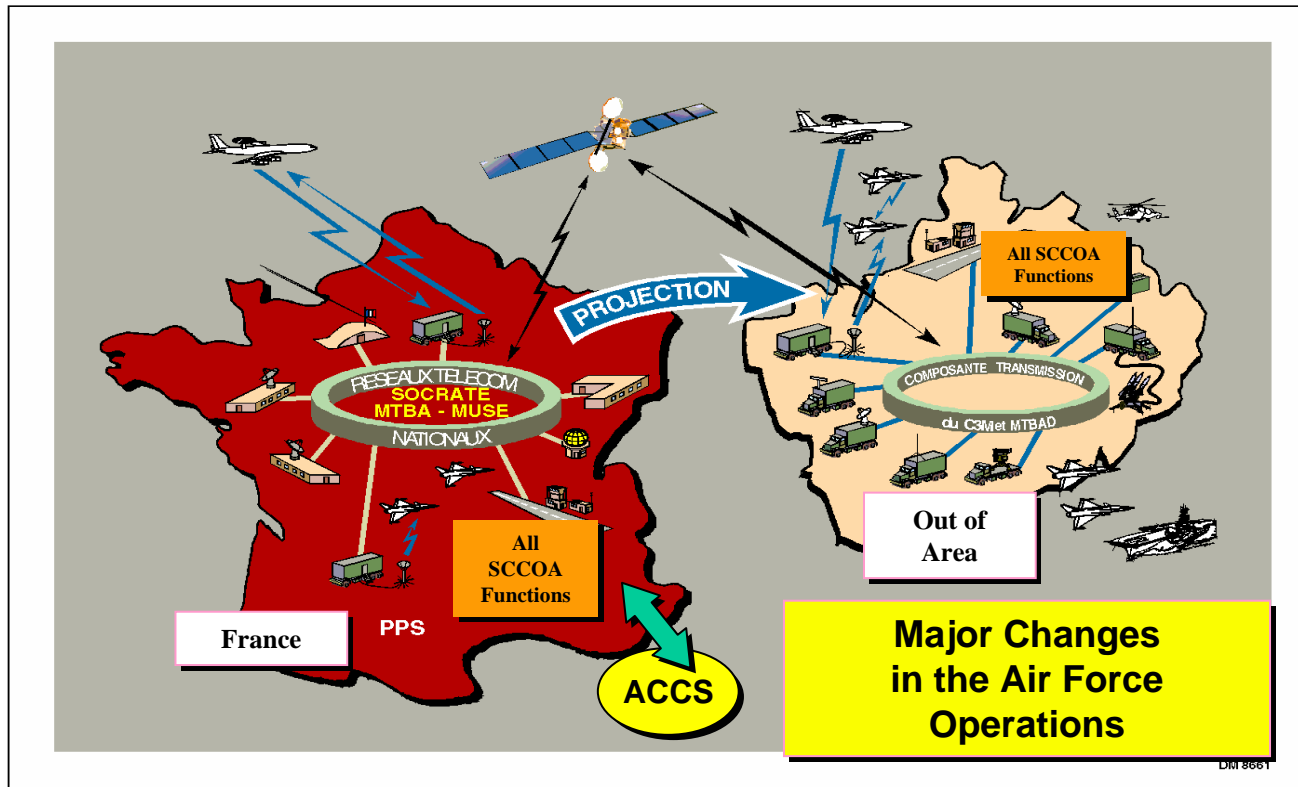


Cost ↘
Capacities ↗

After:



The operational challenge (90 's)



The 90 's : the SCCOA System as the main one involved in the evolution toward the capability of meeting the new concept of operations : joint and multinational operations in all kinds of [Out Of Area] Theatres



The Air Force Command & Control System as the cornerstone of the French Air Force Operations [R]Evolution

Partners of the SCO management segment

- Air Force: CIS bureau, Arms Sys bureau, OPS HQs, CIS resources div.,...
- DGA: SPOTI, SPNuM, SPART, SASF...
- Other gov. bodies: Civil Aviation Author., Navy, NATO...
- Contractors: MOSS SA, EADS, THALES, CS SI, SAGEM, MBDA, ERICSON, TEKELEC,...

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S.C.C.O.A.

(Air Operations Command and Control System)

- The SCCOA Program: an original approach chosen at the beginning of the 90 's.
- Intended to federate multiple particular sets of acquisitions.
- Giving better reporting and managing tools to deciders.
- Parallel to and interoperable with the ACCS NATO Program.

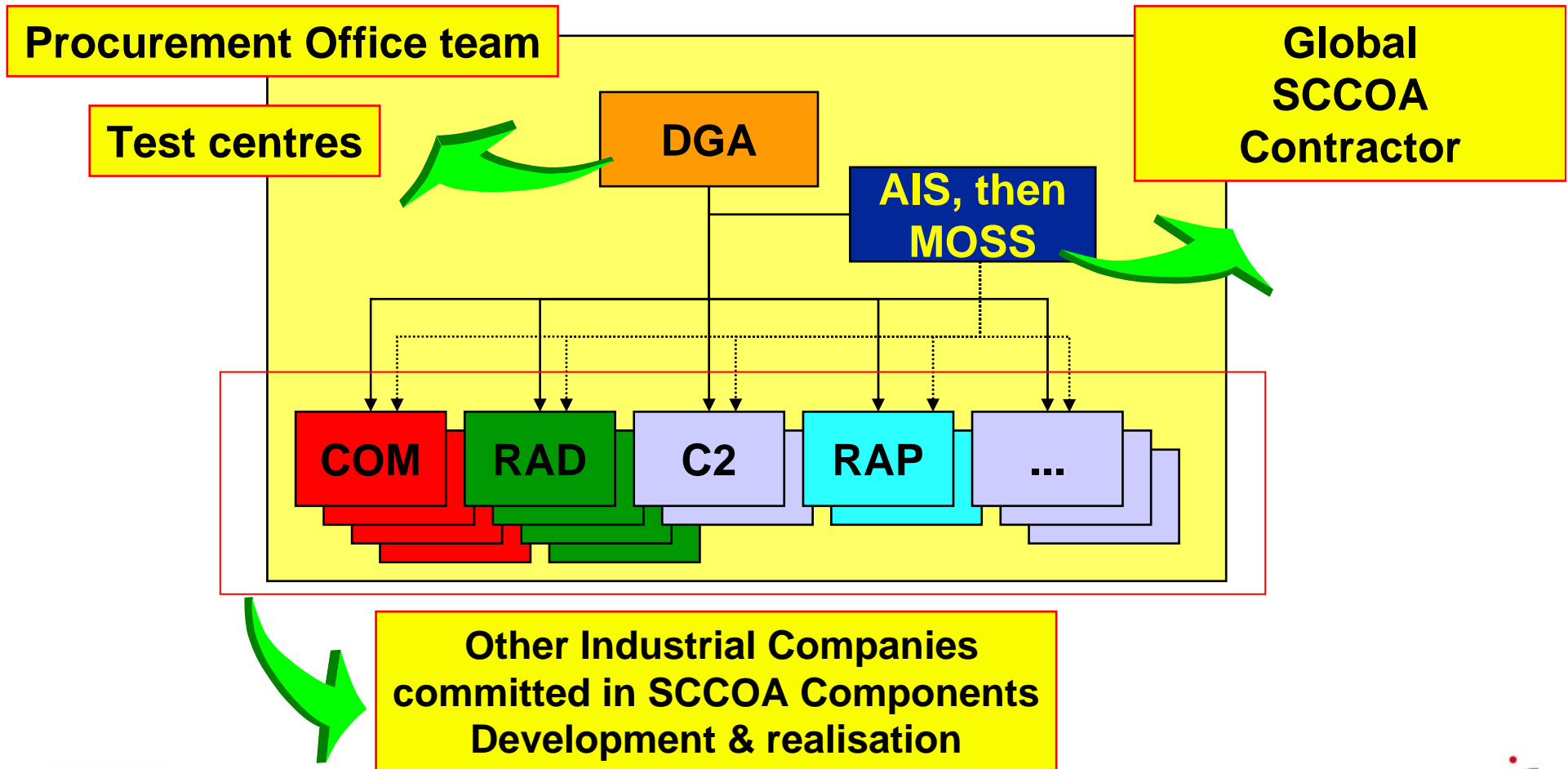
SCCOA

Managing the complexity

- Around 200 M€ per year.
- A SPAé team of 50 people (+ Air Force).
- A dedicated test platform in Mont-de-Marsan (SW).



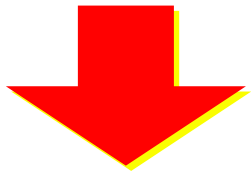
The organisation defined in the 90 's for SCCOA Programme



SCCOA Programme

summary of the challenges

- An operational + technical + organisational Challenge

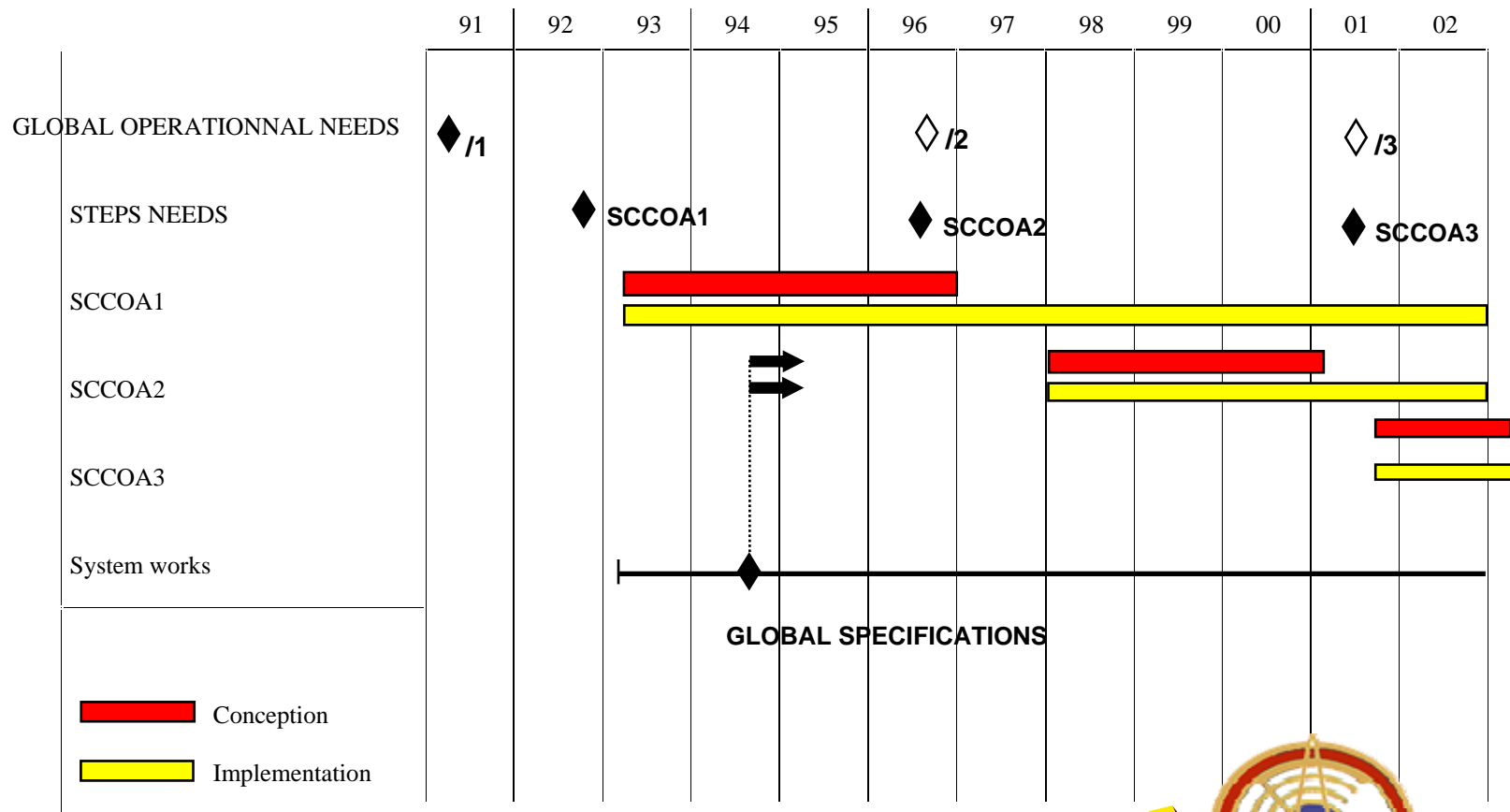


- A Programme Management Challenge
- A System Engineering Challenge

A « Programme of Programmes »

A « System of systems »

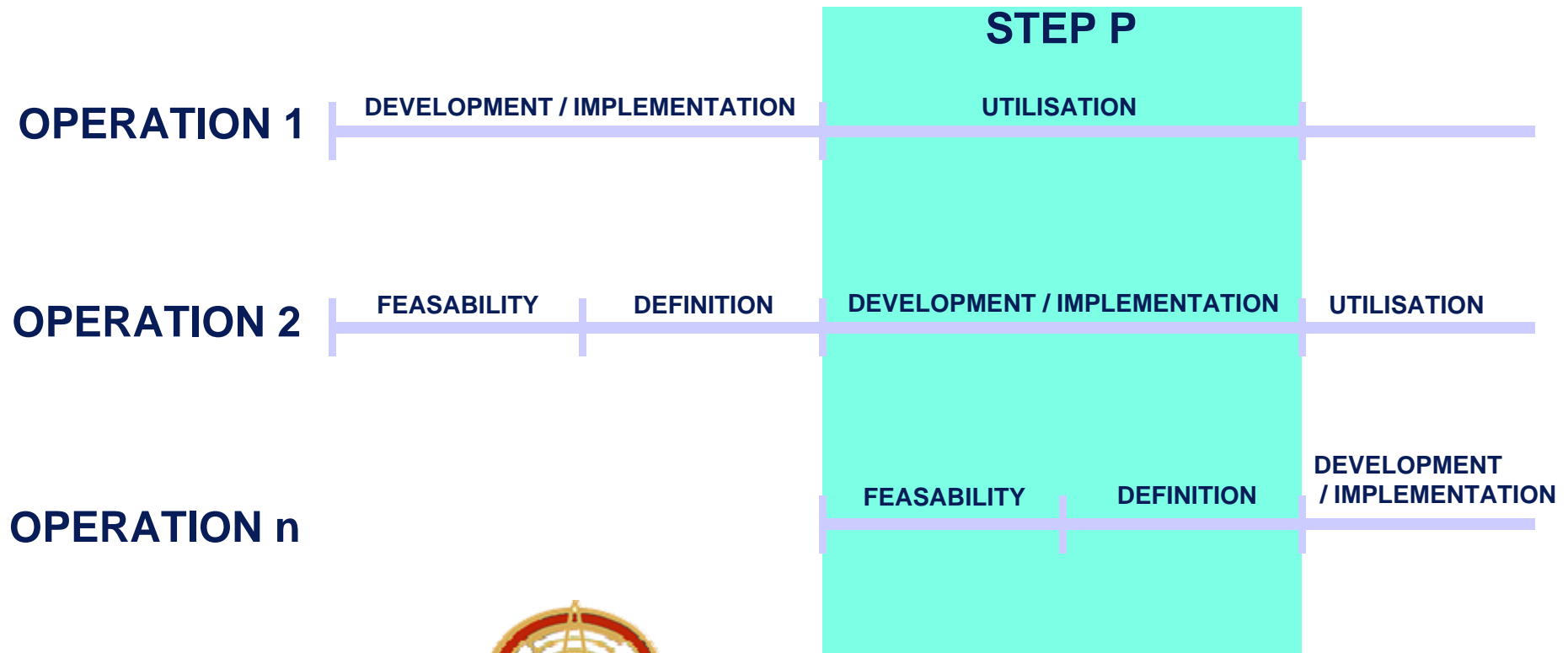
SCCOA Steps: Major Armament Programs



SCCOA



What is a SCCOA step comprised of



Step 3 of SCCOA

Category 1 TO

- CCO centre
- CASPOA exercises ctr
- CICDA training centre
- Airfields
- CETAC ground/air def
- CDEVS test platform
- BIVC air plan centre
- SAS intranet
- PPC system
- FMM system
- Intelligence system
- Spatial information
- Interoperability with UAV

Studies

- CDEVS test platform
- Co-ordination with civilian
- Sensors evolution
- LA Protection
- SGDH (time distrib.)
- SIS
- Information warfare
- Interoperability with UAV

SCCOA 3

Category 2 TO

- CCOA/CAOC HQs
- CDC air control centr
- SGDH (time distrib.)

TO : Technical
Operation

Category 3 TO

- ARS ACCS component
- COSCA airfield system
- C3M deployable component
- SLPRM prep & replay mission
- Sensors evolution
- Nice sensor
- NOSTRADAMUS radar
- Spatial Surveillance (GRAVES)
- PAR NG approach radar's
- ISARD L11 & L16 coms
- SRSA radio system

Splitting into coherence fields for contract

