www.cern.ch

The CERN Safety Policy and Organization in matters of Safety

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EDMS no: 1767013

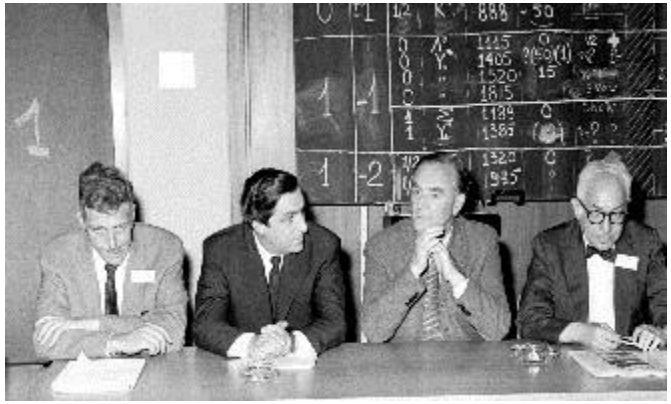
I. Introduction to CERN and its specific features

II. The CERN Safety Policy

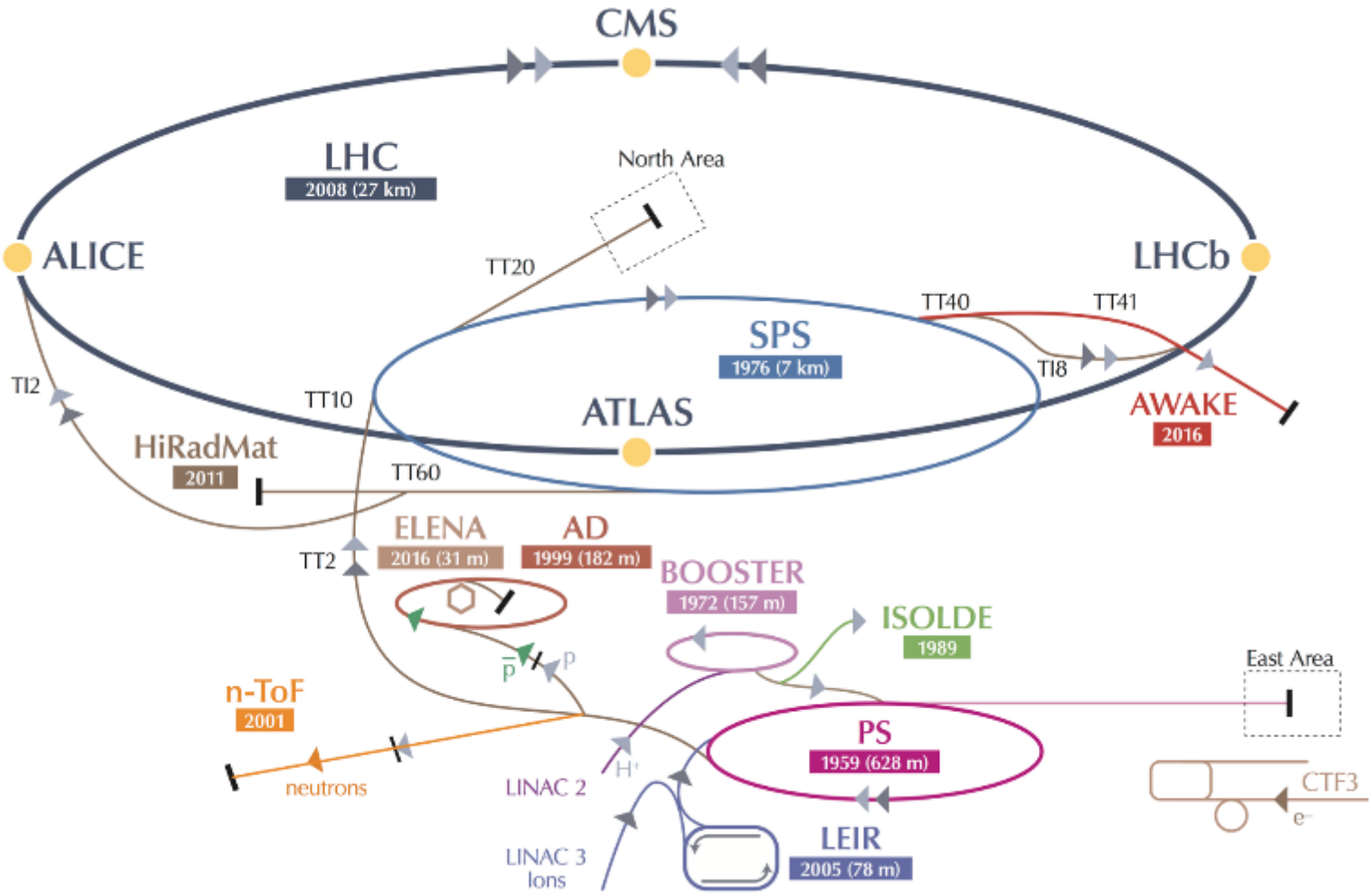
III. Responsibilities and organizational structure in matters of safety at CERN

Introduction to CERN and its specific features

- Le CERN was created in 1954 to avoid brain drain after WWII and ensure peaceful scientific collaboration between European States
- Mission du CERN: ensure collaboration in fundamental HEP research
- Main activity: put infrastructure at the disposal of the international HEP community

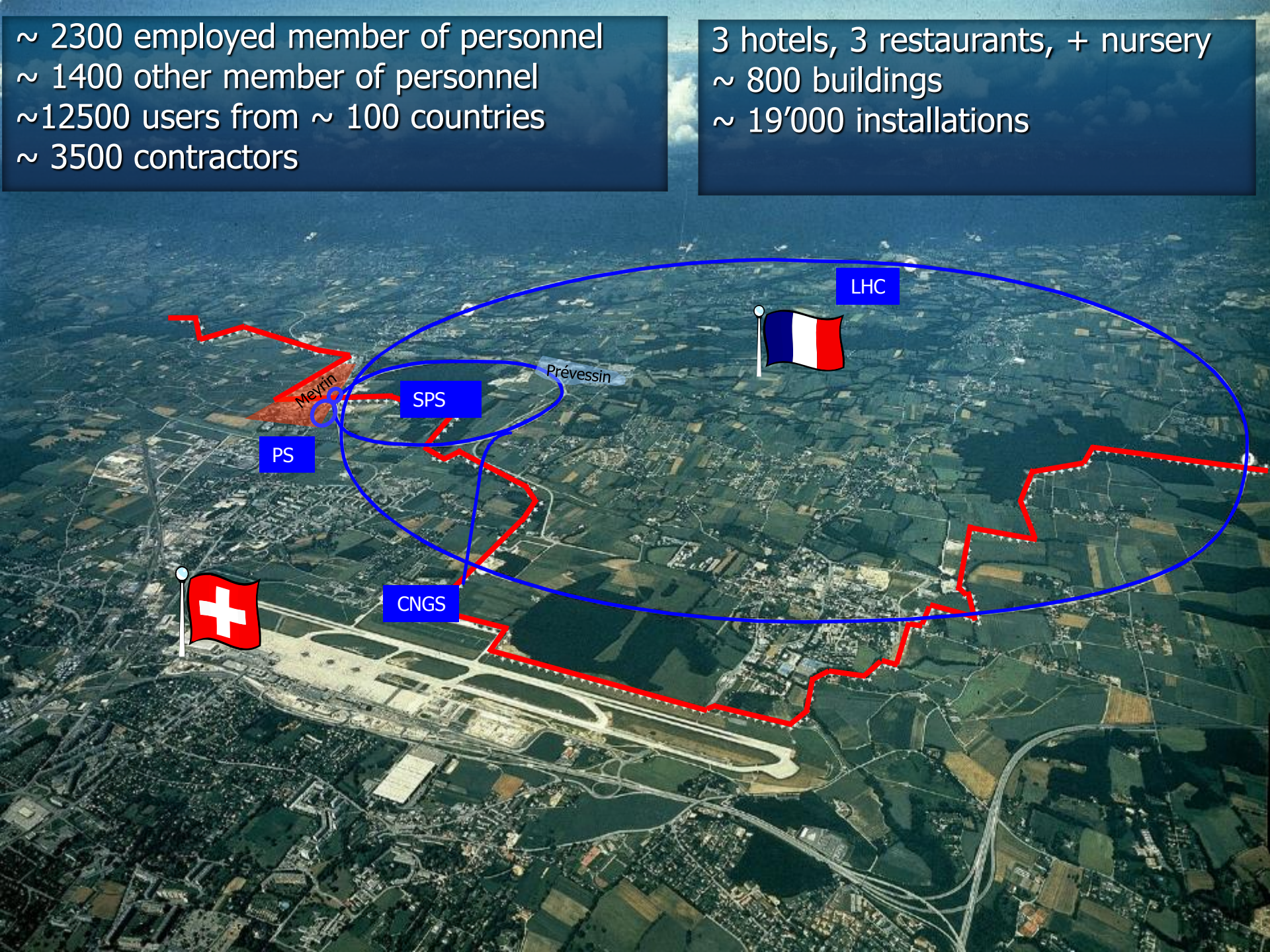


The CERN accelerator complex



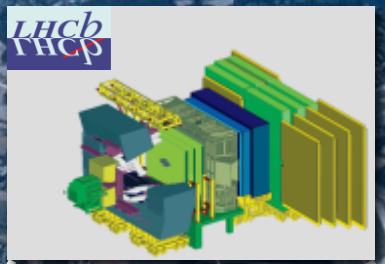
~ 2300 employed member of personnel
~ 1400 other member of personnel
~12500 users from ~ 100 countries
~ 3500 contractors

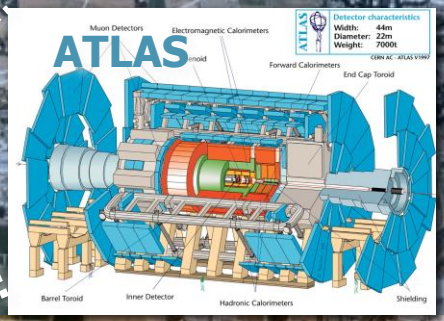
3 hotels, 3 restaurants, + nursery
~ 800 buildings
~ 19’000 installations



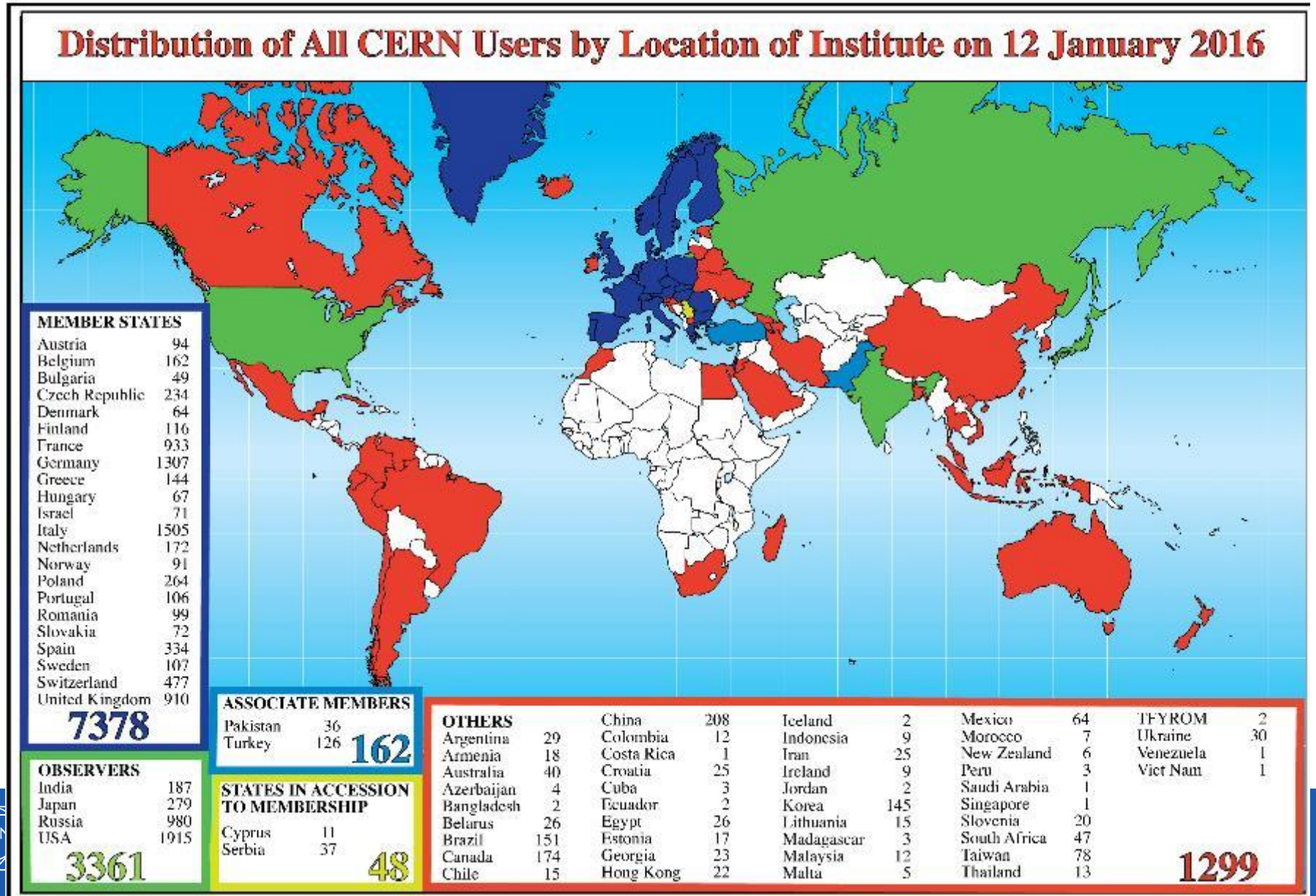
The CERN site today

The LHC Experiments





CERN an international research laboratory



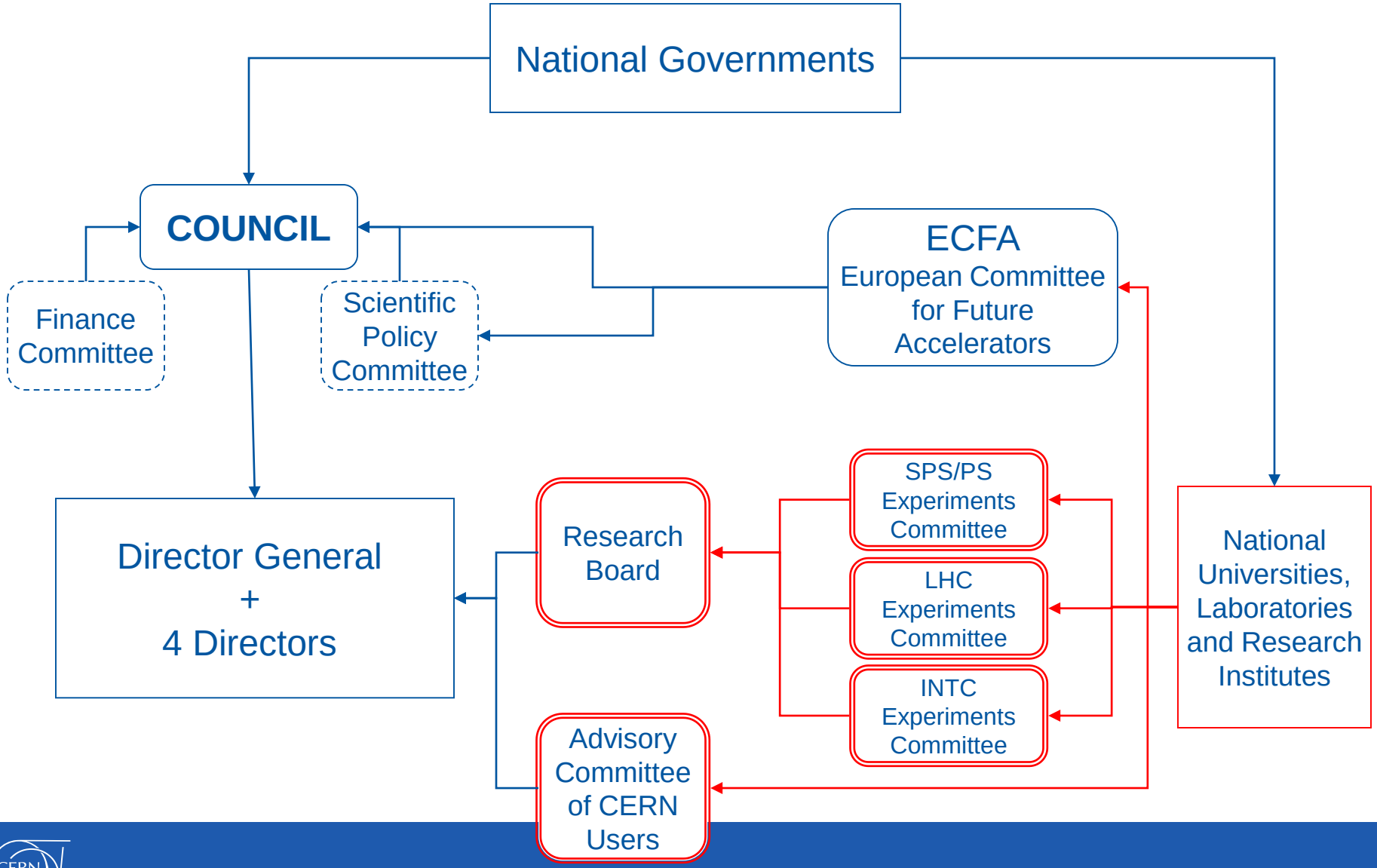
CERN an intergovernmental organisation

22 Member states: Austria, Belgium, Bulgaria, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Italy, Israel, the Netherlands, Norway, Portugal, Poland, Romania, Slovak Republic, Sweden, Switzerland, the United Kingdom, Spain.

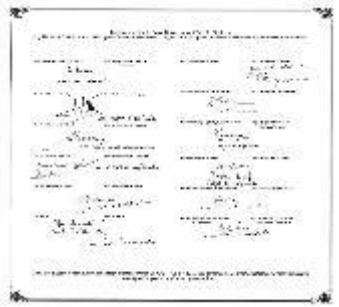
+ Associated States and Observers

- 2 host states: **France et Switzerland**

The CERN decision making structure



CERN's legal status



- Intergovernmental Organization governed by public international law
- Member States recognize international status (IS)
  - Host State Agreements concluded with Switzerland and France
  - Protocol on Privileges and Immunities with all Member States
- IS guarantees functioning of the Organization without interference by individual States
  - assures independence from national authorities

CERN's legal status

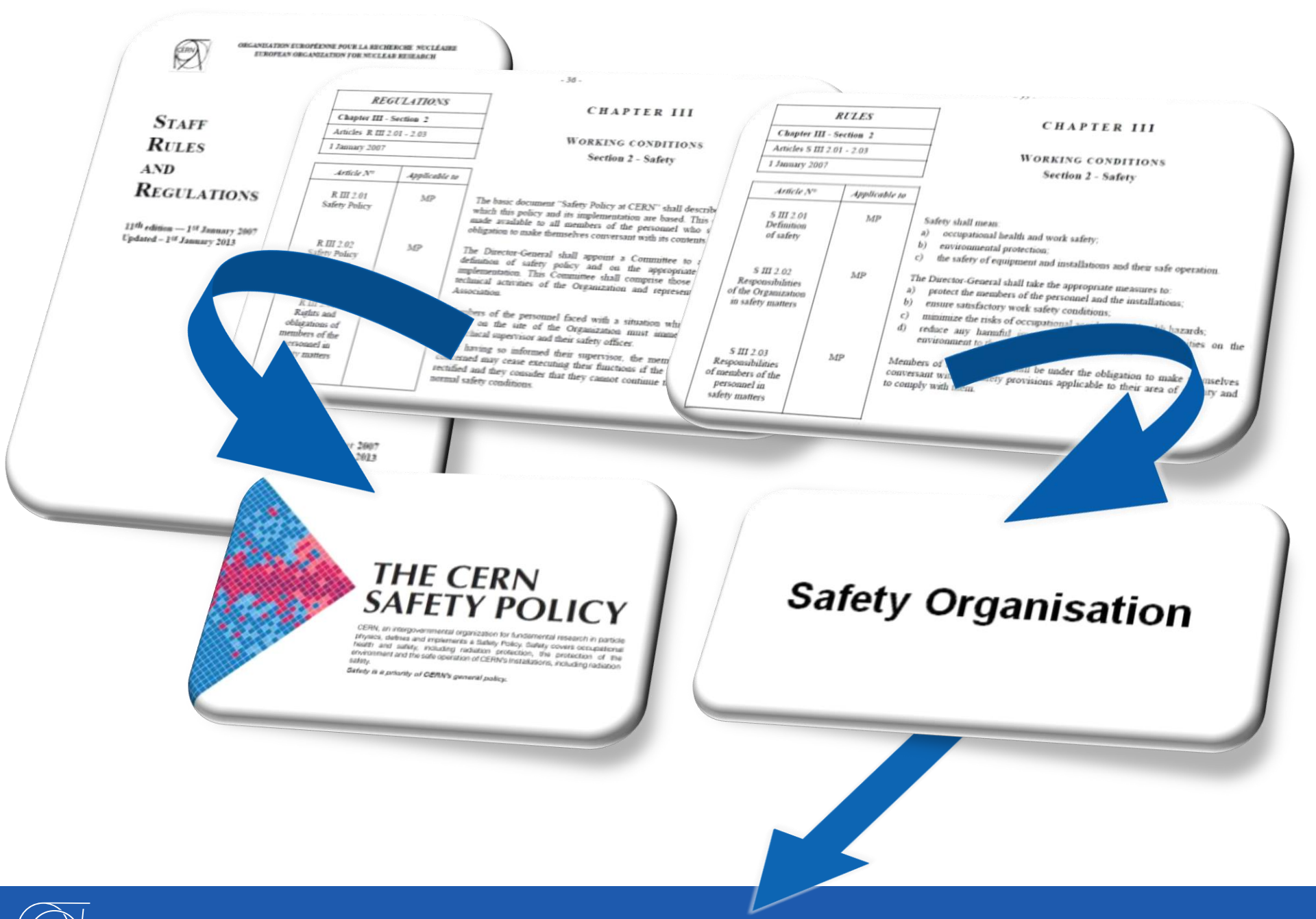
Privileges and immunities

- Immunity from national jurisdiction and execution
  - legal disputes not submitted to national courts but to international arbitration
  - no coercive measures by national authorities can be imposed on CERN
- Free circulation of personnel and material
  - CERN personnel (employed and associated) not subject to national immigration and labor permit restrictions
  - Host States give necessary papers to all participants
  - no restrictions on import of goods and services
- Inviolability of premises
  - national authorities cannot access the site without approval of the Director-General

CERN's legal status

Privileges and Immunities

- Financial privileges
  - individual Member States should not derive financial advantages from the Organization, therefore goods and services acquired are tax-free
  - CERN salaries not taxable in Member States but CERN applies internal taxation
- Right to establish internal rules necessary for CERN's proper functioning, e.g.
  - internal labor law allows the Organization to recruit personnel of the highest competence from all Member States
  - safety rules take account of CERN's technical requirements and geographical situation (N.B., no direct applicability of national procedures, but standards of Host States respected in practice)


ORGANISATION EUROPÉENNE POUR LA RECHERCHE NUCLÉAIRE
EUROPEAN ORGANIZATION FOR NUCLEAR RESEARCH
STAFF RULES AND REGULATIONS
11th edition — 1st January 2007
Updated – 1st January 2013
REGULATIONS
Chapter III - Section 2
Articles R III 2.01 - 2.03
1 January 2007
Article N°
Applicable to
R III 2.01 Safety Policy
MP
R III 2.02
MP
CHAPTER III
WORKING CONDITIONS
Section 2 - Safety
RULES
Chapter III - Section 2
Articles S III 2.01 - 2.03
1 January 2007
S III 2.01 Definition of safety
MP
S III 2.02 Responsibilities of the Organization in safety matters
MP
S III 2.03 Responsibilities of members of the personnel in safety matters
MP
Safety shall mean:
a) occupational health and work safety;
b) environmental protection;
c) the safety of equipment and installations and their safe operation.
THE CERN SAFETY POLICY
CERN, an intergovernmental organization for fundamental research in particle physics, defines and implements a Safety Policy. Safety covers occupational health and safety, including radiation protection, the protection of the environment and the safe operation of CERN's installations, including radiation safety.
Safety is a priority of CERN's general policy.
Safety Organisation


THE CERN SAFETY POLICY
Safety Regulation SR-SO
Responsibilities and organisational structure in matters of Safety at CERN
General Safety Instructions
(12 Documents)

The CERN Safety Policy

The CERN Safety Policy needs to reflect CERN's specific legal, technical & operational features, such as:

- Intergovernmental Organization establishing its own legal framework as necessary for its proper functioning
- CERN is not subject to controls by national authorities
- Site straddling the CH-F border ⇒ need to collaborate with host states (tripartite approach in radiation protection/safety, environmental protection and contractor safety
- Use of cutting-edge and unusual *("non state-of-the-art")* technologies
- major "industrial" sites, ~45 km of radiation areas radiation, …
- Dynamic installations according to research needs
- *'Open'* organization with many users/trainees from institutes all over the world with a special legal status *(associated members of personnel)*
- Extensive presence of contractors on site

The CERN Safety Policy

It covers all aspects of Safety:

- occupational health and safety of personnel
- environmental protection
- safety of equipment
- operational safety

It covers all stakeholders:

- members of the personnel *(employed & associated)*
- contractors operating on site
- neighbours and the general public *(incl. visitors)*

The CERN Safety Policy

The means are:

Continuous improvement in Safety, through:

- risk assessment
- return of experience
- regulatory watch
- safety training
- safety management system

Safety Rules, as necessary for functioning, taking into account host states, EU- and international regulations

Emergency Procedures

Proactive communication

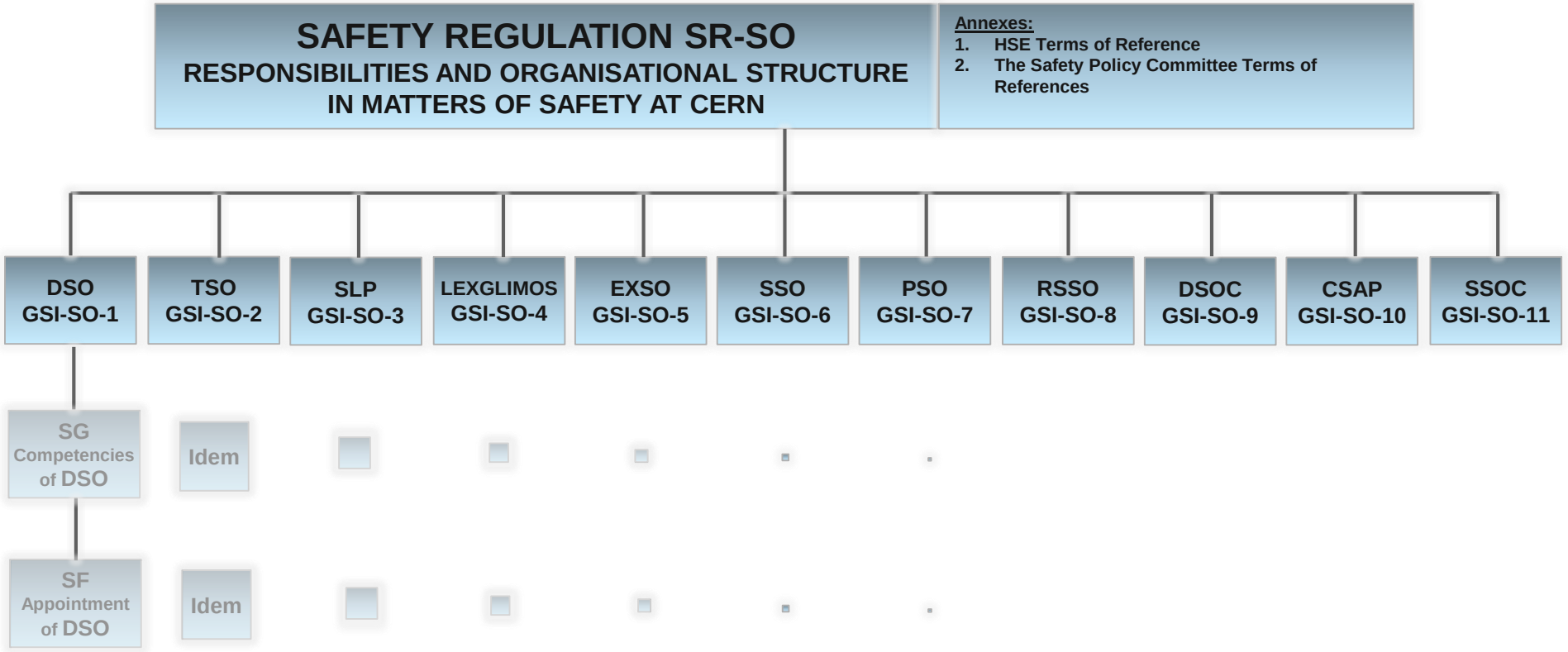
Collaboration with host states

The CERN Safety Policy

Implementation principles

- Implementation at all levels of the Organization
- HSE Unit provides assistance and monitoring
- Specific tasks are assigned to specialized units, as necessary
- Safety management to ensure follow-up and updating of prevention objectives and Safety actions

Responsibilities in matters of Safety at CERN: the SO Cluster



SR = Safety Regulation
GSI = General Safety Instruction
SG = Safety Guideline
SF = Safety Form

SO Principles

Principle: Safety responsibilities follow the hierarchical line

but

- Radiation protection falls under the exclusive responsibility of the radiation protection group
- Occupational medicine falls under the exclusive responsibility of the medical service
- need to take into account CERNs matrix structure and the specific situation of large collaborations like the LHC Experiments

SO Challenges

Facilities (*Complexes*) and projects conducted in « matrix » structure i.e. need for safety coordination in facilities/projects

Safety structure with regard to the Organization's machine and experiment facilities :

- Facilities 'grouped' within Complexes (e.g. LHC, SPS, PS Complex)
- *'Complex Manager'* nominated by and reporting to DG responsible for safe operation of CERN Complexes
- Complex Safety Advisory Panels CSAPs (1/Complex) advising and reporting to Complex Manager

At all levels need to ensure safety of ones own activities but also safe interaction with those of others.

SO Challenges

Safety management of Experiments: CERN Experiments are (independent) collaborations with financial and organizational autonomy linked to CERN by a MoU

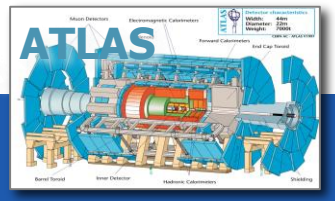
Many experiments of varying size, running time and complexity

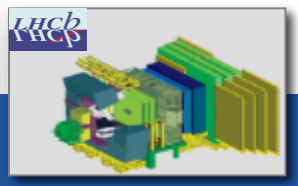
The Large (LHC) Experiments are complex very costly installations and have hundreds of collaborators

Safety Management of Large Experiments:

Technical Coordinator *(TC is CERN staff)* represents Experiment towards CERN in matters of Safety

- TC's duties in matter of Safety similar to those of a Department Head
- TC reports to Director responsible for the Large Experiment and is supported by a Large Experiment GLIMOS *(LEXGLIMOS)*





SO Challenges

Safety Management of CERN Experiments *other than Large Experiments*

- Under the oversight of the head of hosting Department collaborating institutions are responsible for Safety in accordance with the CERN Safety Policy, the CERN Safety rules and best practices

- The head of the hosting Department is supported by:
  - The DSO, and
  - an Experiment Safety Officer (EXSO) nominated by her/him in consultation with the Experiment.

SO Challenges

Collaborating institutions

- Responsibility of collaborating institutions for Safety reaffirmed
- Collaborating institutions shall ensure that their personnel, activities and material they bring on site comply with the CERN Safety Policy and Rules.
- Each collaborating institution nominates for each activity and Experiment in which it participates a *'Safety Correspondent'* who represents it towards CERN in matters of Safety.

SO Challenges

Safety responsibilities of contractors

- Responsibility of contractors for Safety reaffirmed
- Contractors shall ensure that their personnel, activities and material they bring on site comply with the CERN Safety Policy and Rules.
- Each contractor nominates a safety correspondent who represents him towards CERN in matters of Safety.

SO main features

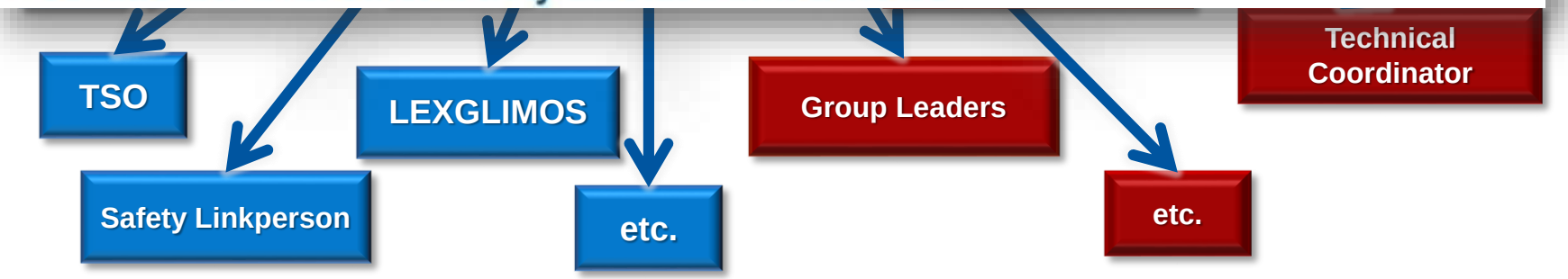
- **SR-SO covers all Safety functions**
  Functions defined in terms of responsibilities rather than detailed task descriptions
- **Specifying minimal competency/experience for Safety functions** *(still to be completed)*
- **Explicit mention of Safety objectives to be defined regularly by the DG**

SR-SO

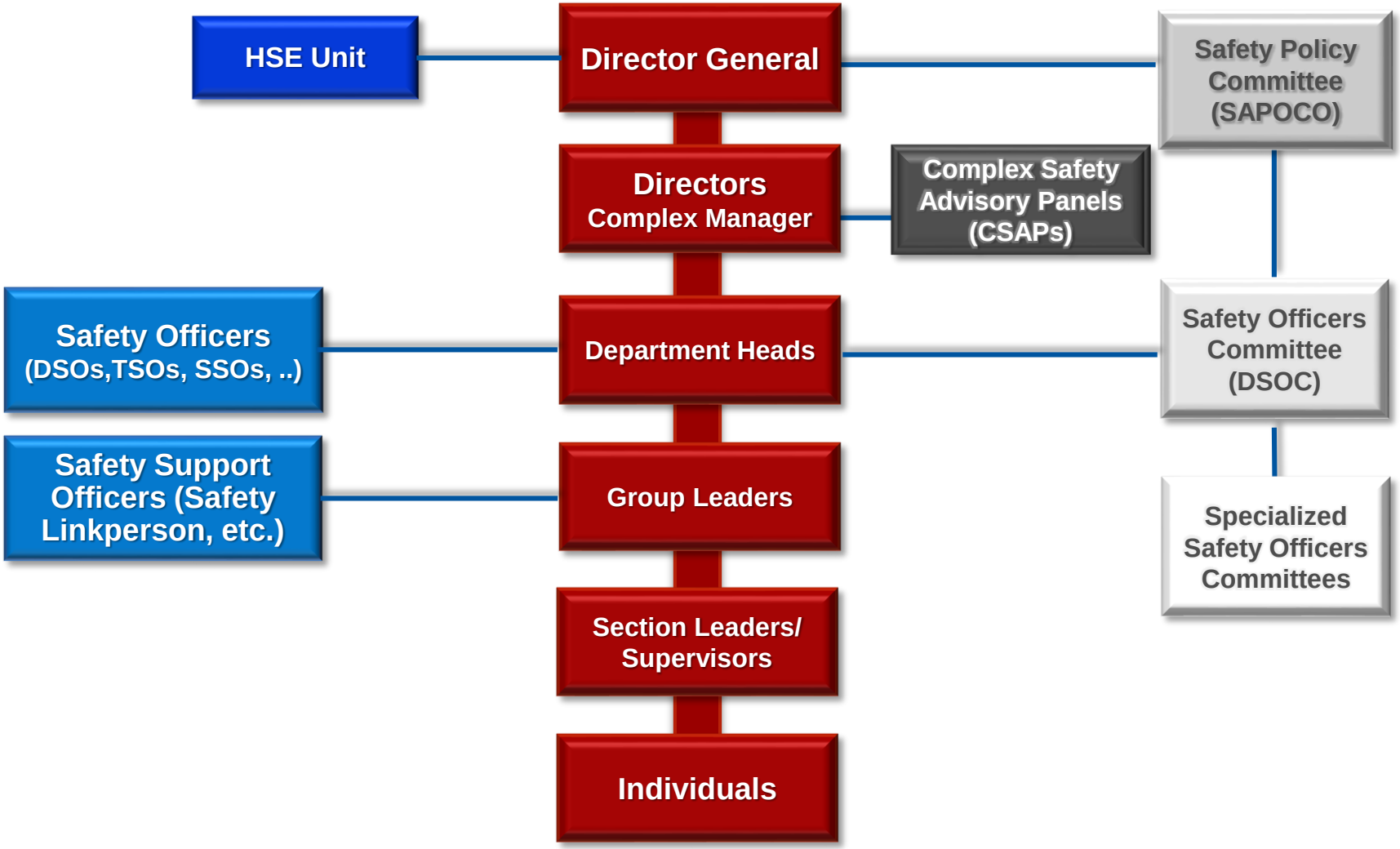
Typical list of responsibilities:

- keep himse…ed in matters of Safety
- ensure th… his responsibility receive the adequate means, including … to fulfill their obligations in matters of Safety
- ensure compli… and projects with CERN Safety Rules
- implementation of Safety …
- establishment and updating of Saf…
- improvement of Safety, in particular review …
- follow up of safety audits
- assistance in the obtaining of safety clearance for Experiment… …jects
- appoint Safety Officers as necessary
- collaborate with other Safety services and Officers

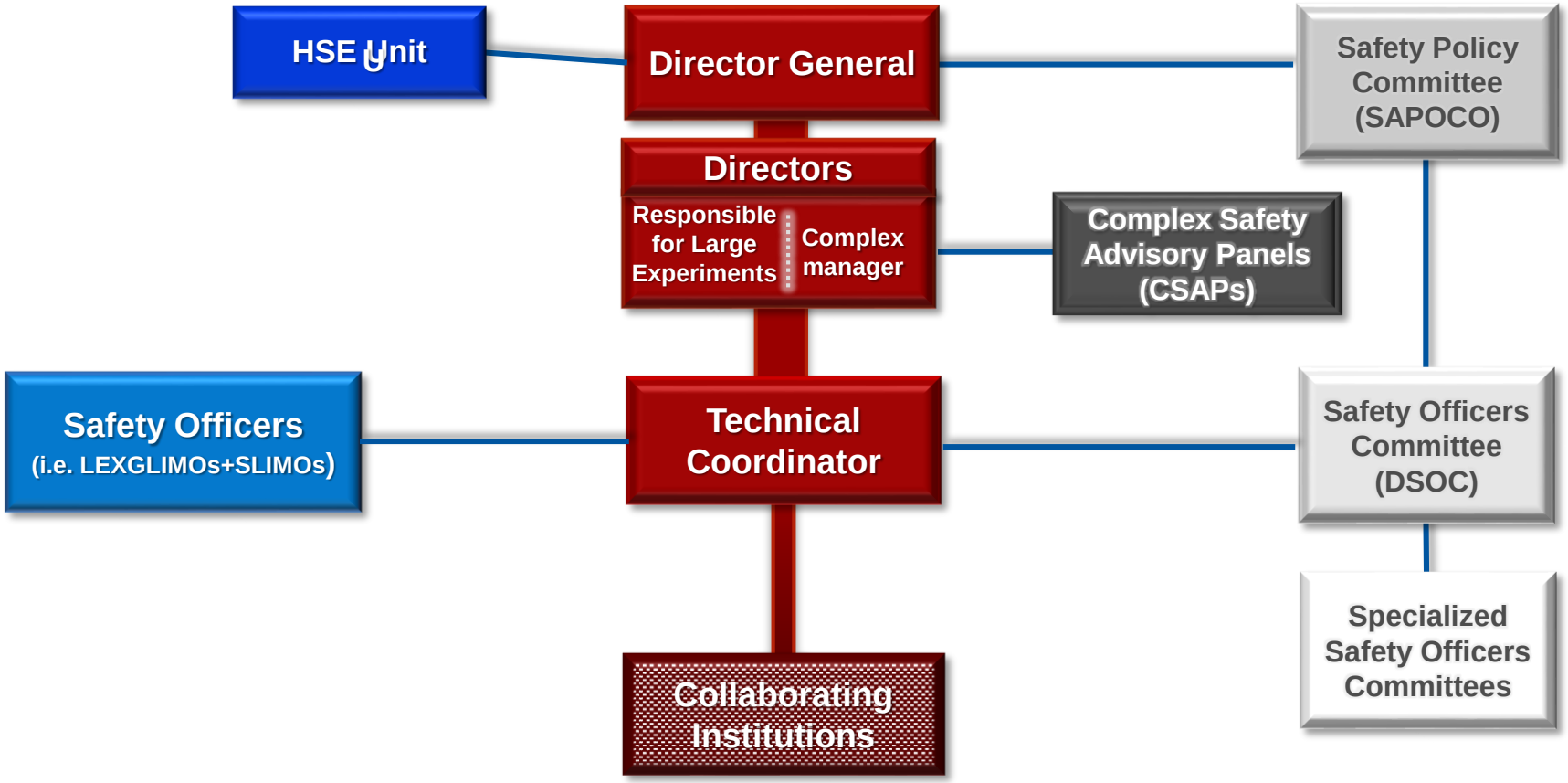
These responsibilities are repeated at all levels & functions as they apply



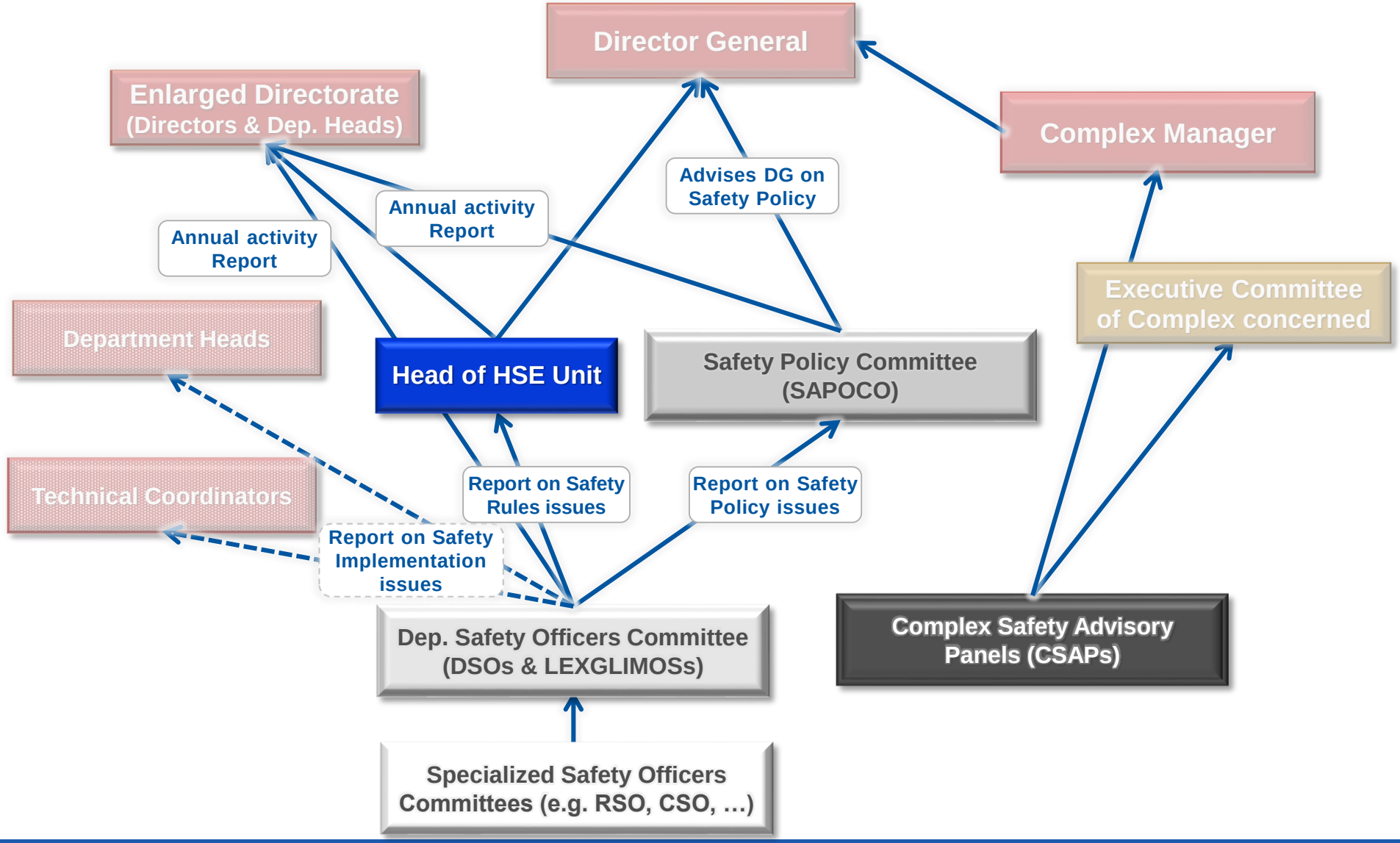
Line Management Safety responsibilities



Safety responsibilities for Large Experiments



Safety Advisory Committees reporting lines



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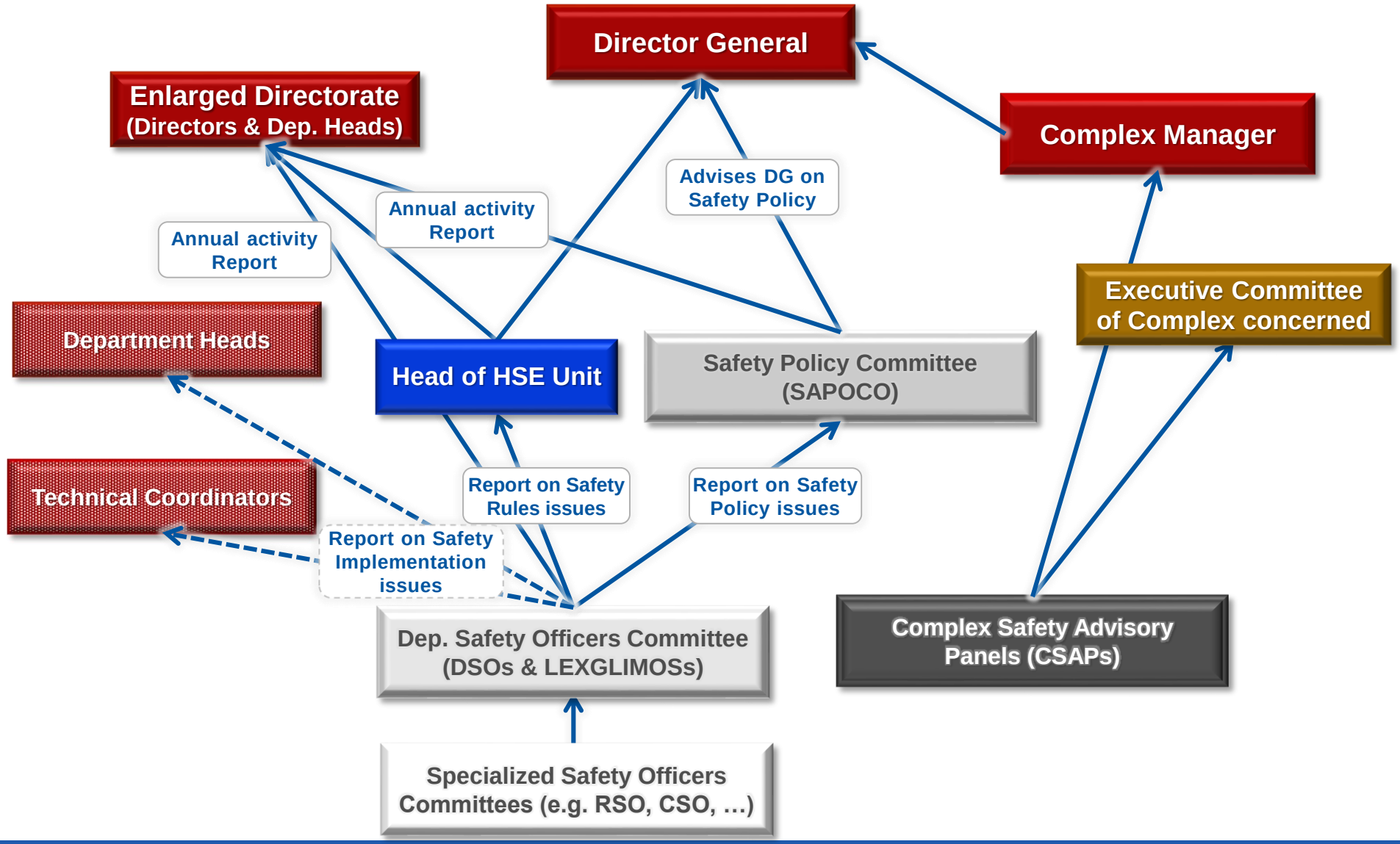
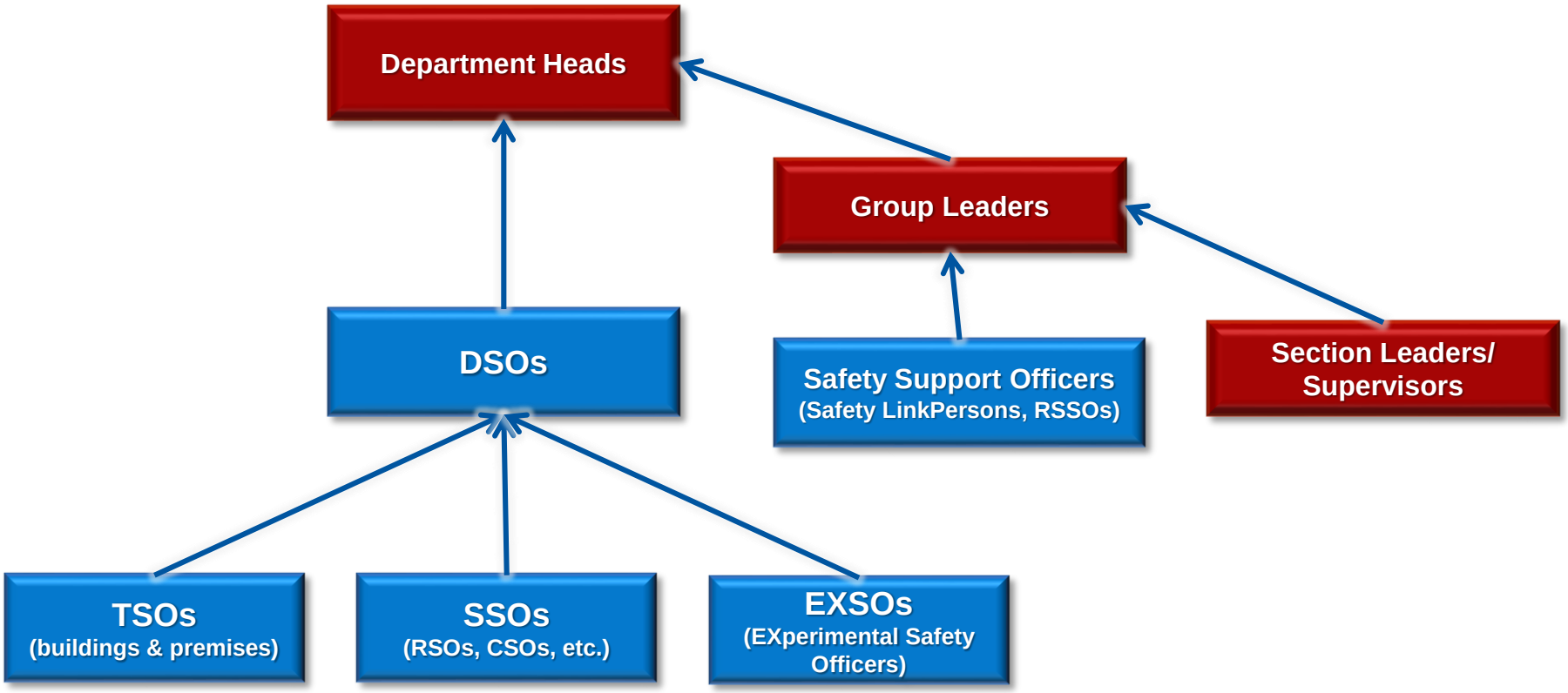
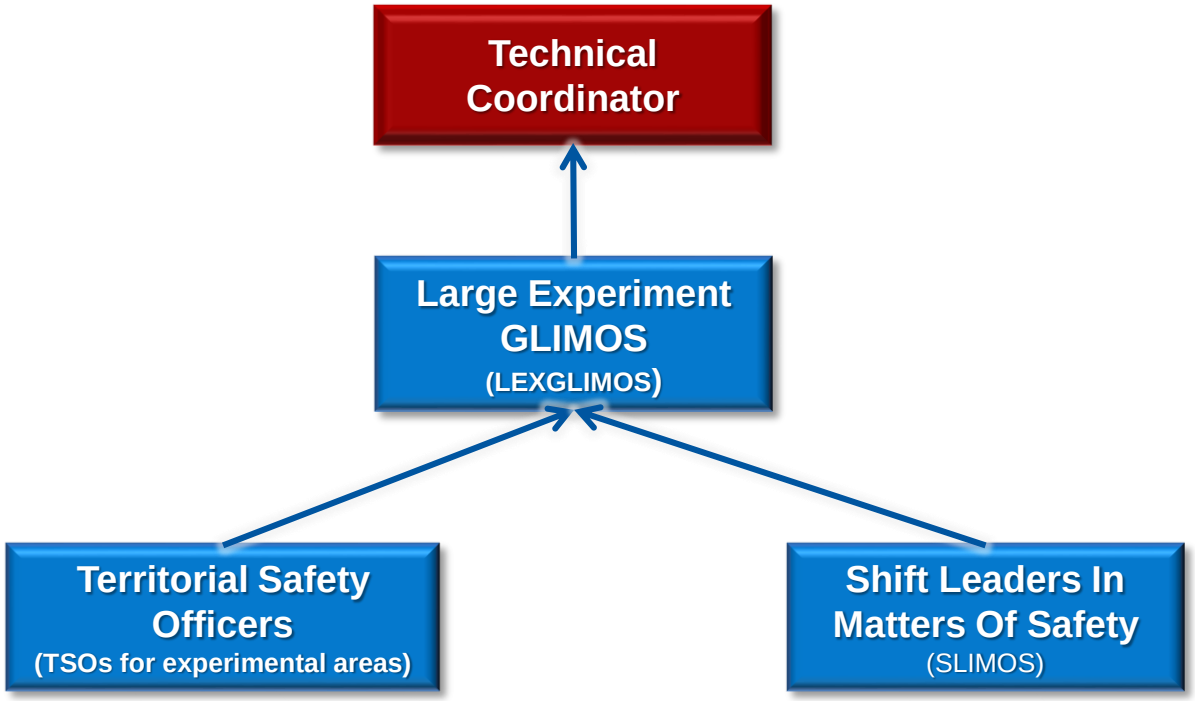


Department: Safety Officers and their reporting Lines



Large Experiments: Safety Officers and their reporting Lines

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