

SEENoTC Sponsored Workshop
**Ionising Radiation Detection
and
Data Exploitation Workshop**



Welcome by
Philippe Perol,
Head of the Electrical Engineering Department
D/TEC, ESTEC

SEENoTC and its Objectives

- Space Environments and Effects Network of Technical Competences
 - Grouping of the active players in Europe prepared to contribute to a coordinated effort.
 - Organisation:
 - Working Group and Steering Board
 - Representatives from member states' ESA and Eurospace,
 - Liaisons with ECSS-RWG, SPINE, SWWT

- Objectives:
 - Improve coordination of active players in Europe
 - Enhance value of activities;
 - Increase opportunities for community
 - Ensure activities address user needs

→ One tool to do this is with *workshops*

SEENoTC Scope

Space Environments & Effects on Space Systems

- Radiation environments & effects
- Plasma environments & effects
- Space Weather, but:
 - Only as it affects space systems;
 - Excluding EM propagation and atmospheric effects;
- Explicitly excluded:
 - Space debris & micrometeoroids
 - Thermal
 - Surveillance
(= “tracking”)

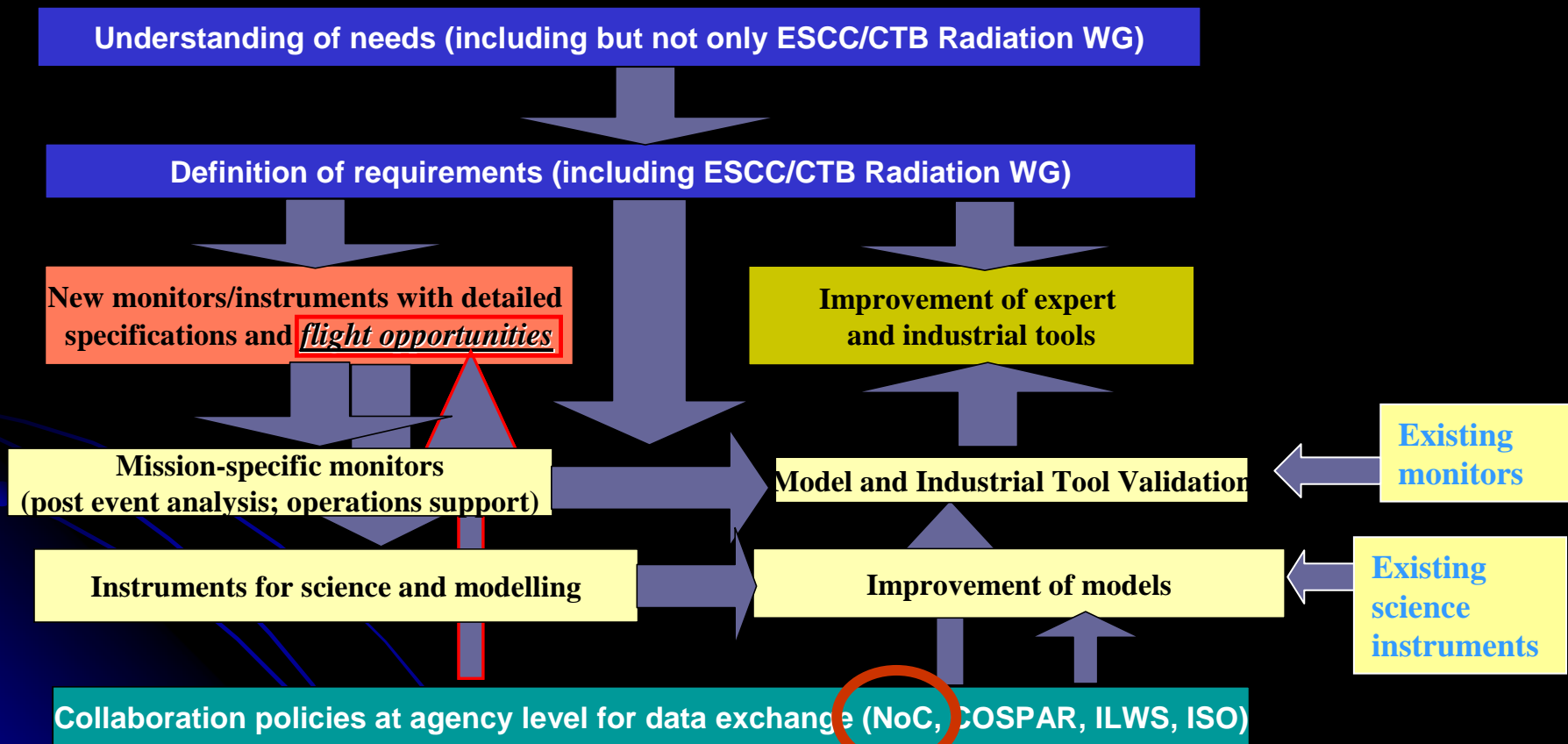
detailed SEENotC objectives

→ = This workshop supports these

- support increased coordination among the activities carried out in Europe on space environments and their effects activities;
- provide for the execution of a coordinated programme of:
 - **in-orbit technological experiments;** →
 - **ground facilities establishment and exploitation; and**
 - **analysis and modelling infrastructures;**
- → coordinate planning of actions:
 - **share opportunities for experimentation in a more efficient manner;**
 - **share resulting data for spacecraft development and operations;**
 - support activities performed in spacecraft development phases;
 - initiate activities to:
 - **establish and maintain support infrastructures,**
 - **validate models and tools; and**
 - **verify the compatibility and coherence of the tools and facilities of the SEENotC's member; and**
- take into account the requirements and views of industry to ensure that the products developed by the SEENotC Participants result in improved efficiency and competitiveness for the European industry.

- **Radiation detection** addresses several needs:
 - Radiation housekeeping
(anomaly and performance investigations, human dosimetry etc.)
 - Alerts and triggering of operational countermeasures
(e.g. Science missions)
 - Future mission preparation by improving knowledge
of external and internal radiation environment
- **Various measurement approaches** can be anticipated;
- Results of various approaches should be **coordinated**;
- **Exploitation** implies data consolidation and exchange;
- SEENoTC foresees funding actions to aid
the working of the network

Example Overall approach in preparing a Roadmap (from Eurospace/ESA in a “Harmonisation Action”)



Role of the Workshop

- To discuss the main technical problem areas and development approaches, including “roadmaps”
- To identify organisational and/or programmatic hurdles to be overcome, e.g. flight opportunities
- Make recommendations (to WG) for SEENoTC actions:
 - funded through the partners and
 - funded as the underpinning ESA support