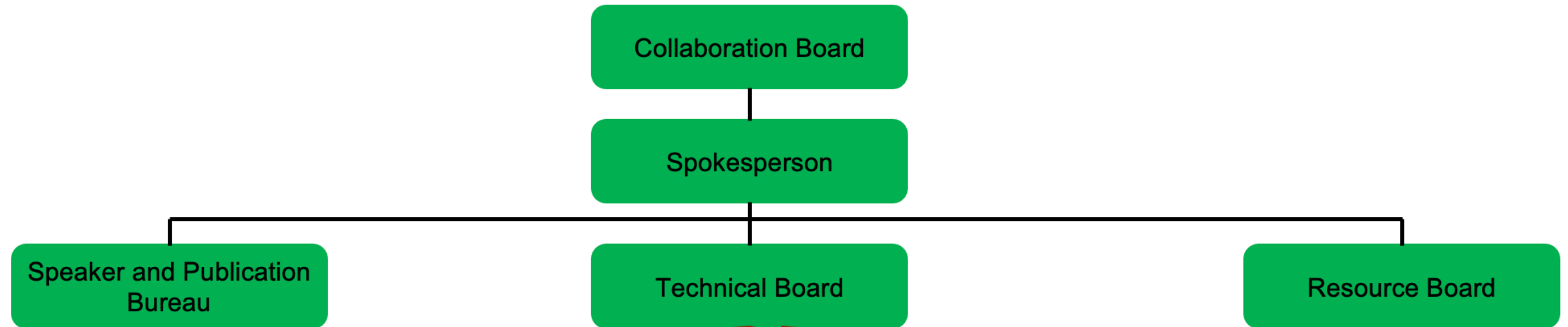


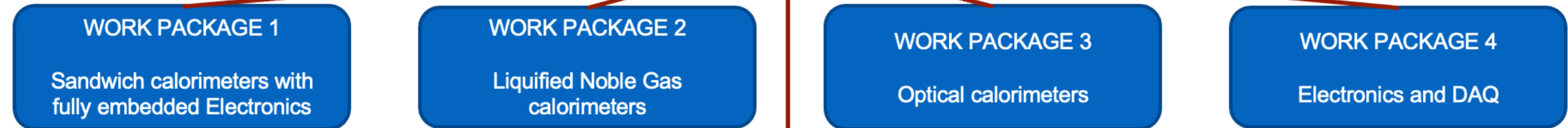
# Role of the Working Groups

G. Gaudio - INFN Pavia

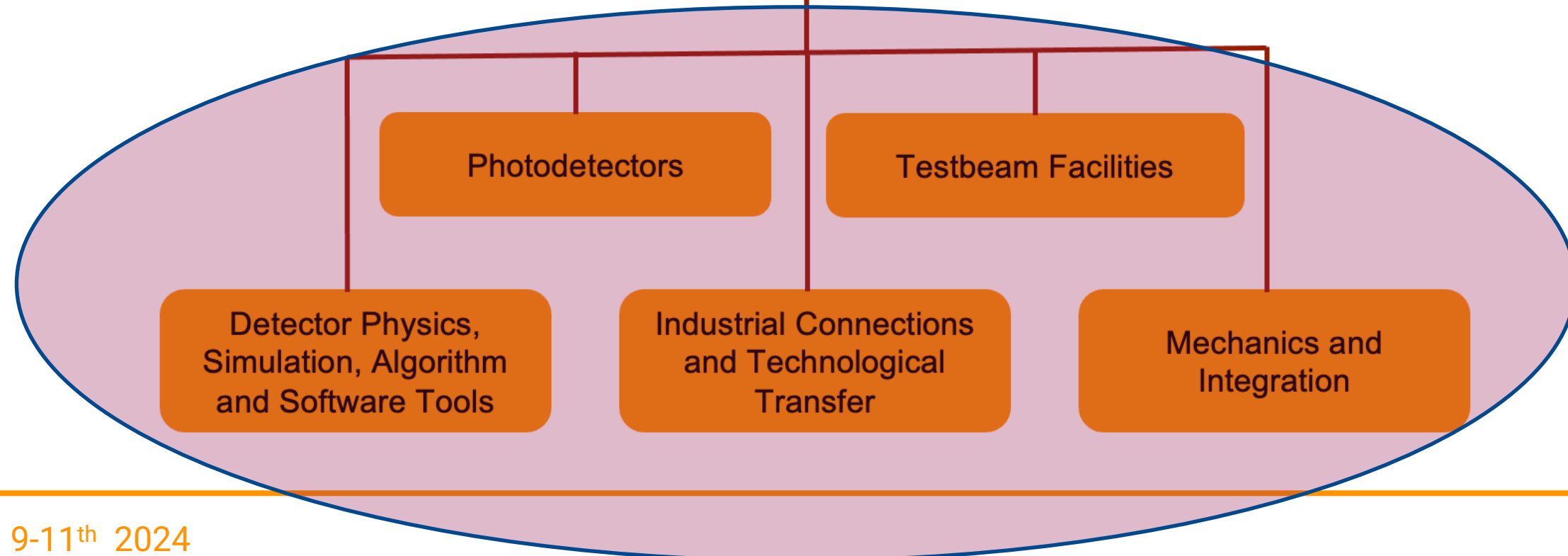
## MANAGEMENT:



## WORK PACKAGES:



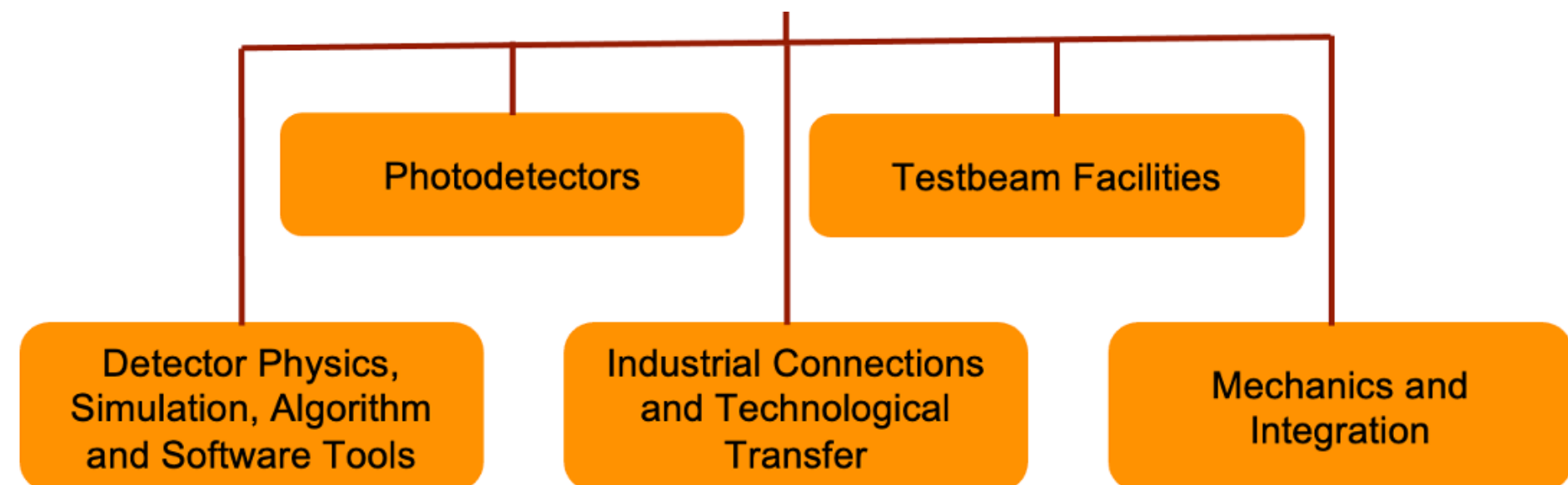
## WORKING GROUPS:

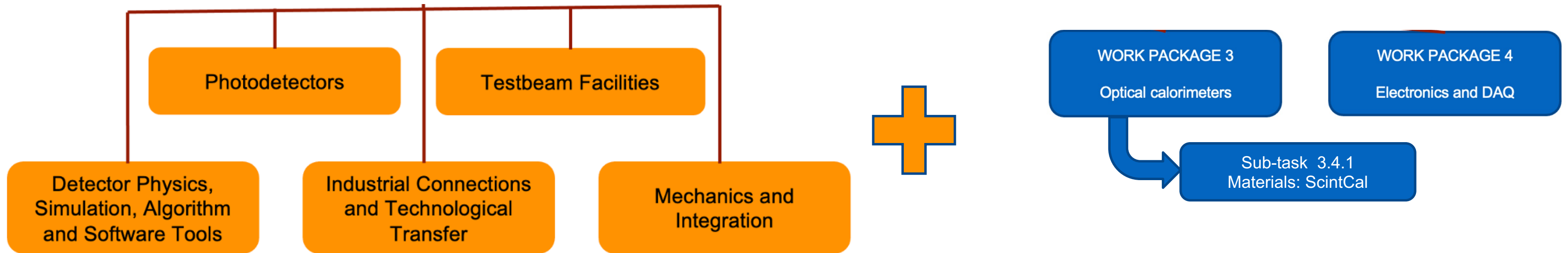


## Our definition:

transversal activities needed by all the sub-tasks in the DRD6 collaboration

- Avoid duplications (=> Save time and money)
- Share experience (=> Progress faster and better)
- Built the collaboration (=> connect people from different groups, projects, institutes)





- In the DRD organization Working Groups cannot be resource loaded
  - No funds required for the activities
  - Promote “Material” and “Electronics &DAQ” WGs to Work Package (see previous talks in this session)
- Internal organization of the WG under discussion
  - “Testbeam Facilities” and “Detector Physics, Simulation, Algorithm and SW Tools” have a dedicated parallel session this week, to start brainstorming on the activities and organization
  - Others will follow.

- Mainly connected to WP3-Optical Calorimeter and WP1- Sandwich Calorimeters (for optical based sandwich calorimeters)
- Radiation hardness, time resolution and extended sensitivity, in both the UV and infrared regions, over a large, and linear, dynamic range are the main characteristics the projects are seeking for
- Mainly SiPM and MCP-PMT
- Digital SiPMs are an interesting option
- Aim of the WG
  - Understand our needs to provide calorimeters requirements
  - Recollect information from available (or under development) photosensor

*In close connection  
with DRD4*

- Testbeams play a crucial role in the development cycle of a calorimeter
- Needed characteristics
  - A large energy range from a few GeV to hundreds of GeV, electrons, pions, muons + other particles
  - Enough space to host a  $\sim 1 \text{ m}^3$  device
  - Moving tables that can carry devices of several tons
  - Beam telescope to determine impact point and reference time
  - Threshold Cherenkov counters to distinguish particle species
  - Magnets to measure the performance in magnetic fields
- See dedicated parallel session on Wednesday afternoon

*To be shared and  
handled as a community*

- Some common software tools can be prepared and shared among the community
- Aims of this Working Group is to create a pool of experts
  - Help in the core development of the different tools
  - Can assist newcomers from the particular project to develop the detector-specific part.
- **Software items**
  - Data models and data management
  - DAQ software (see Andreas's talk on Thursday)
  - Simulation
  - Particle flow algorithms
  - Machine learning approach
- See dedicated parallel session on Wednesday afternoon



- Material and electronics we use require close connection between scientific community and industrial world
- Three main types of collaborations
  - Market survey : check what is already developed by industries, and what trends influence the industry production
  - Knowledge-transfer from our lab to companies
  - Synergic R&D: exploit the technical industrial capability for production addressing the needed developments
- Aims of the WG:
  - Create a pool of industrial partner of DRD6 interest
  - Address Intellectual Properties Protection issues according to different institute and countries regulations



- Calorimeters are, in general, large detectors, with a sizeable weight
- Mechanical supports cannot be neglected
- $4\pi$  detector design need to be addressed
- Services connections become more and more important as number of channels tends to grow more and more
- DRD8 was supposed to address this.
  - At present the idea is to develop withing each DRD

- Working Group coordinators, together with Work Packages Coordinators, will be part of the Technical Board
  - To be understood how to organize the WG, how to nominate/elect the coordinators
    - Still under discussion + approval of the CB

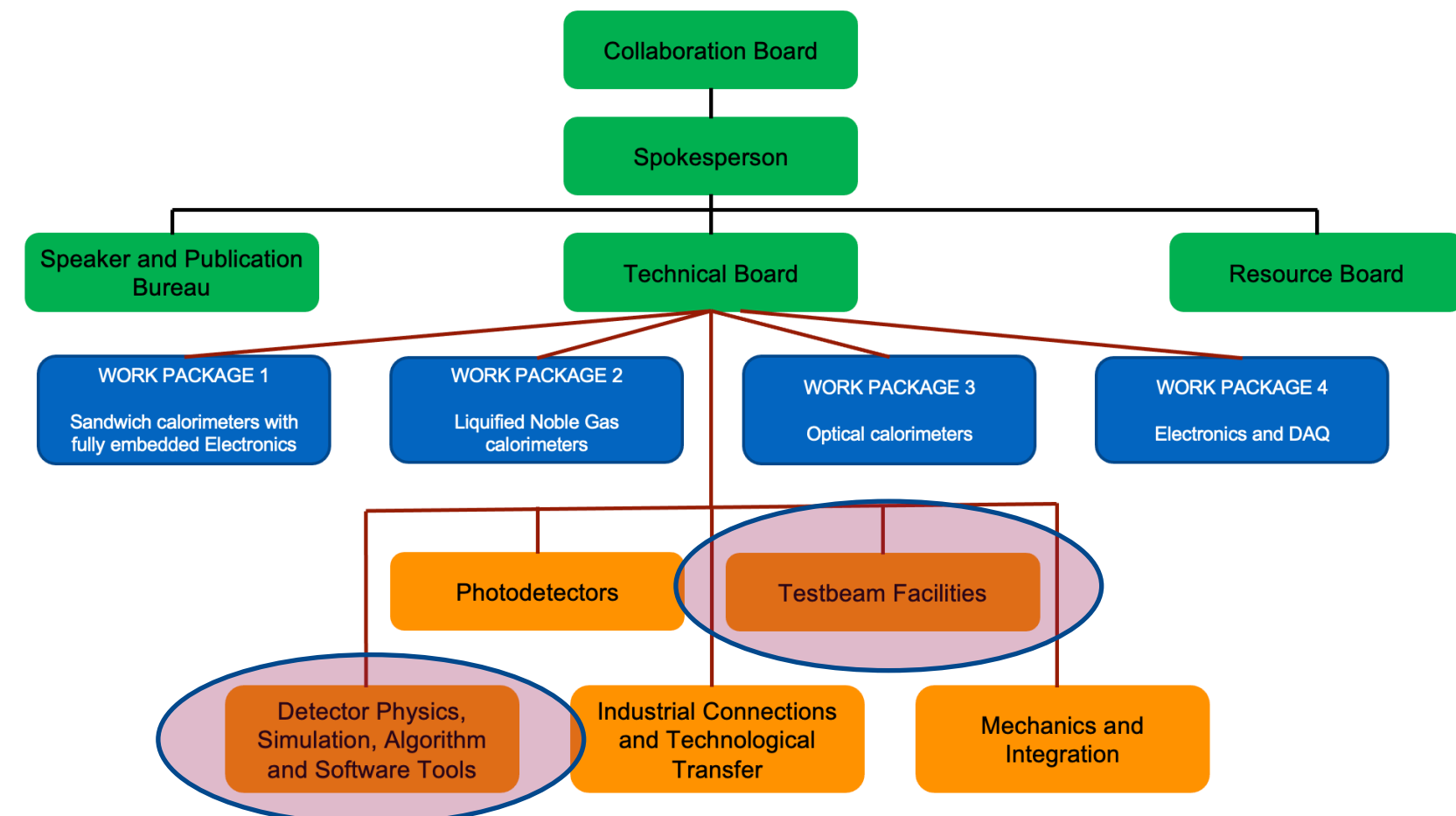
This week we'll start on 2/5 WGs

Join us in the dedicated parallel session!

### MANAGEMENT:

### WORK PACKAGES:

### WORKING GROUPS:



- Working groups covers activity that are of general interest for the DRD6 community
- They are not resource loaded
  - Based on willingness of groups (and funding agencies) to support activities “beyond” the core R&D part
    - *NOTE: Those activities will be needed anyway in each project*
  - We need to make sure that “technical” work will be fully recognized!