

DRD1-WG6: Detector Production Proposal

G. Charles (IJCLab), Wires
A. Delbart (Irfu Saclay), TPC
R. De Oliveira (Cern), MPGD
G. Iaselli (INFN), RPC/MRPC
F. Jeanneau (Irfu Saclay), MPGD
I. Laktineh (IP2I), RPC/MRPC

Mandate and objectives

- **Mandate**

- Production aspects of gaseous detectors covering all essential construction elements
- Development of production techniques and innovative solutions
- Transfer to industry

- **Objectives**

- 1: Development and maintenance of common production facilities and equipment
- 2: Quality control and large volume productions
- 3: Collaboration with industrial partners
- 4: Establish and support a forum for sharing experiences, knowledge, and best practices

Task 1

Production facilities and equipment

- Propagate the RD51 model to other technologies
- Need for a large-RPC production facility
 - Electrode base material
 - Silkscreen printing
 - Gluing tooling
 - QC tests
 - Mechanical tools for assembling
- Wire Chambers → need to maintain the equipment in working order

Reference	Description	Deliverable Nature
Task 6.1.1	Production Needs: detector type and size, production volumes and quality	Report with estimation for each technology
Task 6.1.2	Production Capabilities: detector type and size, production volumes and production quality	Report with inventory for each technology
Task 6.1.3	Needs and Capability Matching (costs)	Report with required resources in terms of equipment and personnel
Task 6.1.4	Identify Resource Pooling strategies for the creation or the upgrade of production facilities	Resource Requests

Task2

QC and production

Reference	Description	Deliverable Nature
Task 6.2.1	QA/QC protocols for each technology	Report
Task 6.2.2	Inventory of missing but required instrumentation for QA/QC	Report

Task3

Collaboration with industrial partners

- Production volume exceeds the capacity of the facility
- Cost reductions
- Availability for potential commercial applications

Reference	Description	Deliverable Nature
Task 6.3.1	Technology transfer checklist	Report
Task 6.3.2	Technology transfer database (project, industrial partner)	Database

- Important aspects for technology transfer:
 - Identification of the market (market surveys)
 - Matching of the production level with the capacity of the industrial
 - Interest of the industrial for new methods and to address niche markets
 - Clarification of intellectual property licensing

Task4

Collaborative forum (+ DATABASE of existing and available material)

Reference	Description	Deliverable Nature
Task 6.4.1	Establishment and support of a forum for sharing experiences, knowledge, and best practices on gaseous detectors	Online Forum