

DRD1-WG6 Proposal

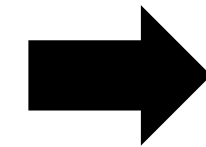
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Set-up common production facilities

Task 1

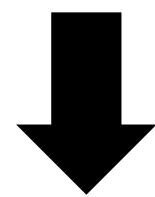
- Development and maintenance of existing common production facilities

- New processes R&D



3D printing	Technics to produce micro-pattern structures at the level of 1 to 10 μm
Laser machining	Technics to produce MPGDs on Ceramics , glass , quartz.
Sand blasting machining	Technics to produce ultra flat substrates for Pico-seconds timing resolution detectors
Ultrasonic welding techniques	Technics to produce Polymer based X-Ray detectors (OFETs)
New resistive layers and deposition methods	Technics to deposit wave length shifters
Improve screen printing resistive layer	
Sputtering for resistive material	
Technics to produce novel photo-converters	
Technics to produce bore based neutron converters	

- Extension / diversification of existing facilities (Where? How? Who? Means?)
- Inventory and classification of facilities (Components, integration, mechanics, gluing, etc.)



- From the survey:
 - Create Common RPC/MRPC facility at Cern
 - Fund common facilities (ex: sputtering)
 - Investigate additive manufacturing

Process industrialization

Task 2

- Quality control implementation
- Cost-effective processes
- Large volume production

- From the survey:
 - How can we use efficiently the existing QA/QC expertise

Collaboration with industrial partners

Task 3

- Large production exceeding common facilities capacity
- Allow price reductions due to large scale and/or industrial manufacturing methods
- Assure the availability for commercial applications
- From the survey:
 - Improve technology transfer to industry
 - GEM manufacturing survey
 - Survey for DLC deposition equipments / companies (RF or Ion beam)
 - Investigate additive manufacturing

Material database

Task 4

- From the survey:
 - Trigger a composite materials survey
 - Survey on low background materials
 - Create a database of base material available in institutes