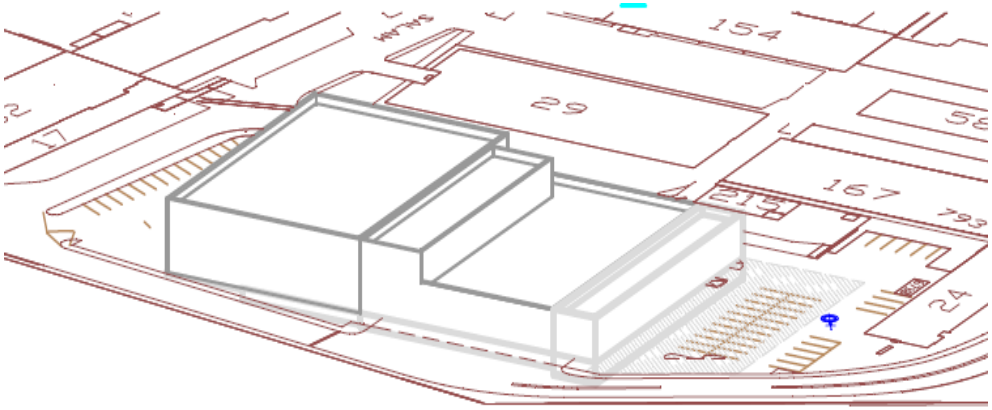
MPE Workshop
14/12/2010

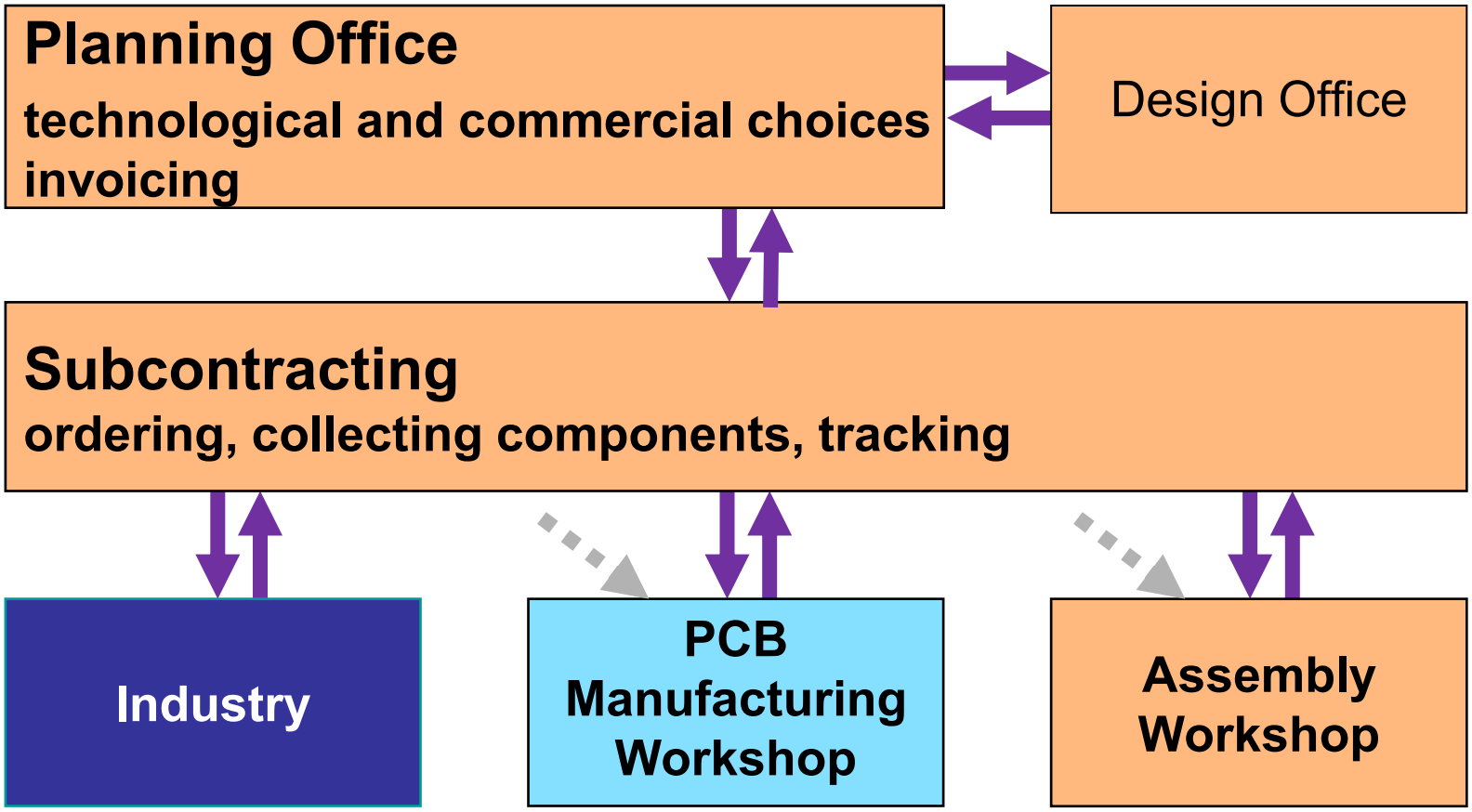
Building 107- project



TE-MPE-EM: structure & organisation

Section Leader: Fabio Formenti

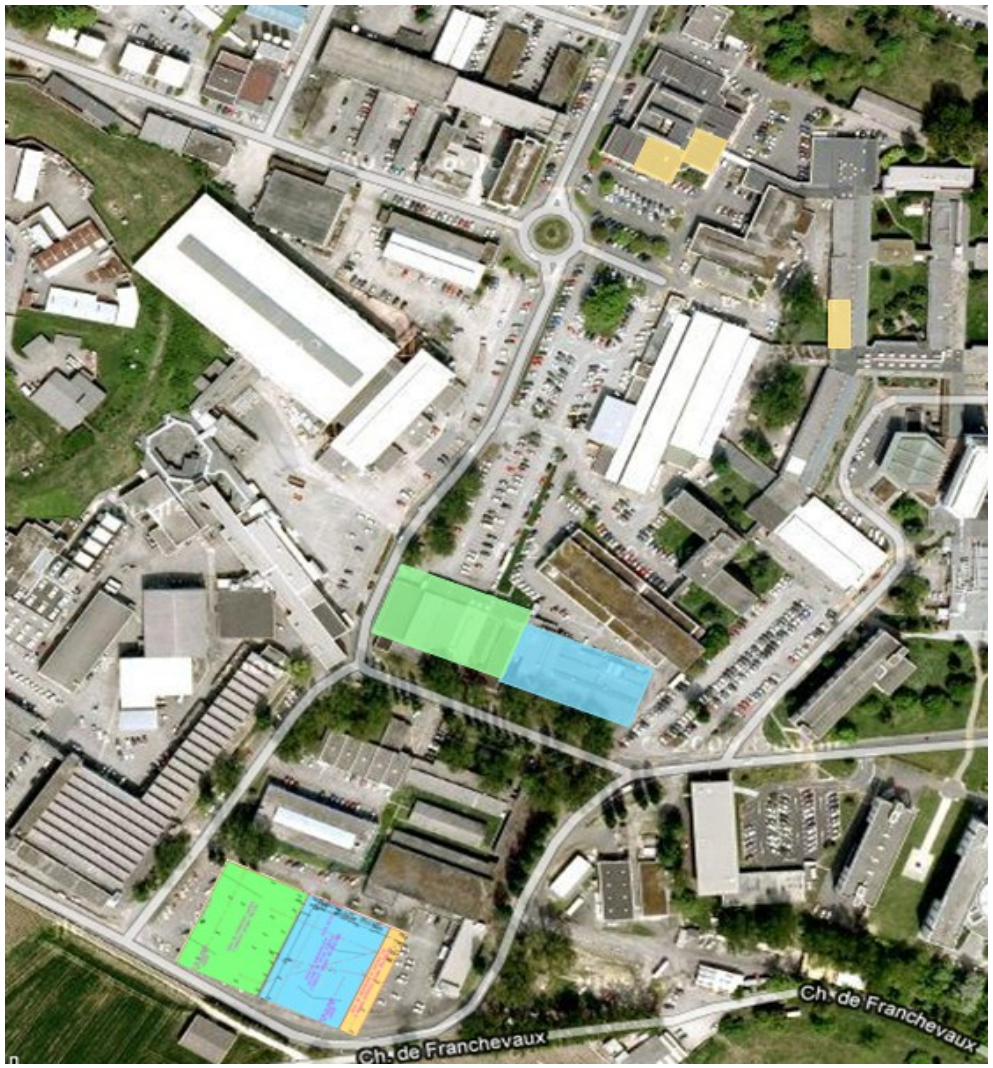
Number of workers: 41



Building 107-project

A new building - why?

- DG stated that this project is a priority for CERN
- Conformity with the current regulation
- Need more space for new physics development and for the new machines dedicated to these products (MPGD)
- Safety for environnement and personel



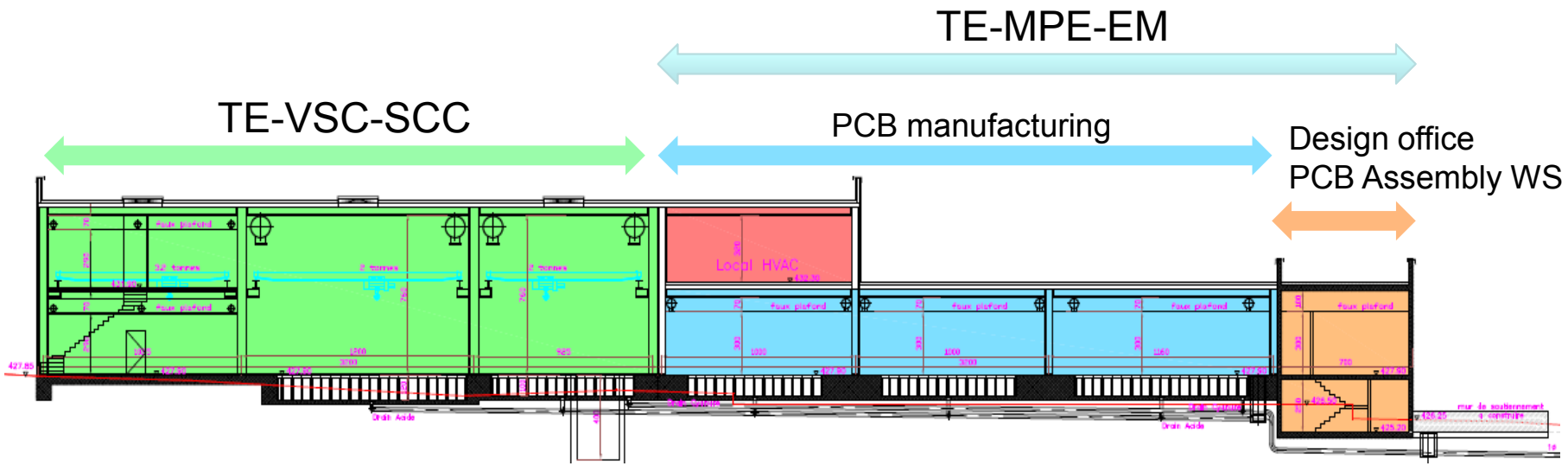
Who is concerned?

- **TE-VSC-SCC** (Surface, chemistry & coating)
- **TE-MPE-EM** (Electronic modules)
  - Design & planning office
  - PCB manufacturing
  - Assembly WorkShop

→ Opportunity for EM to be grouped in one building

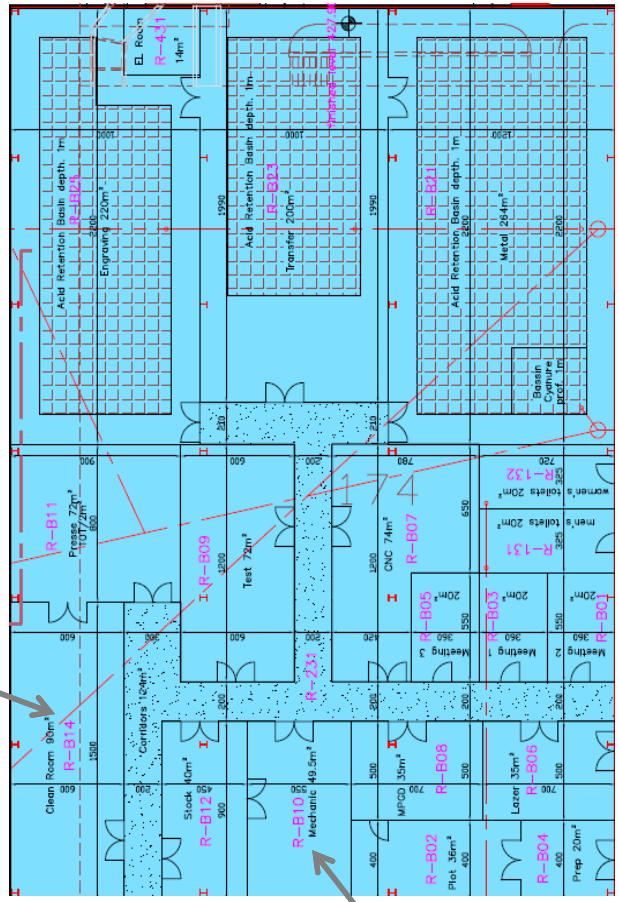
Building 107-project

TE-MPE-EM: proposed layout 1/2

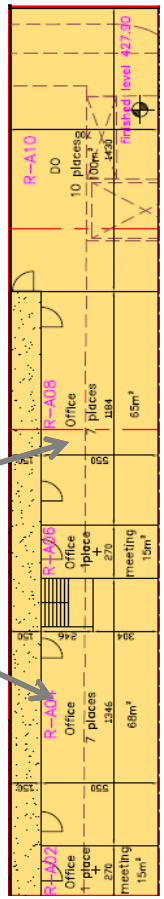


TE-MPE-EM: proposed layout 2/2

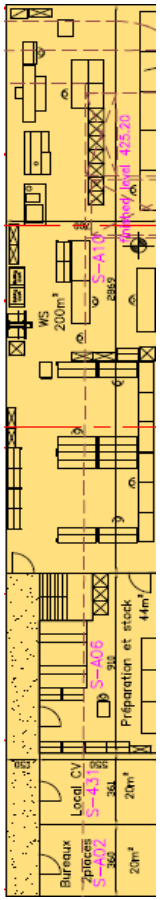
PCB manufacturing



First floor: Design office



Ground floor: PCB Assembly WS



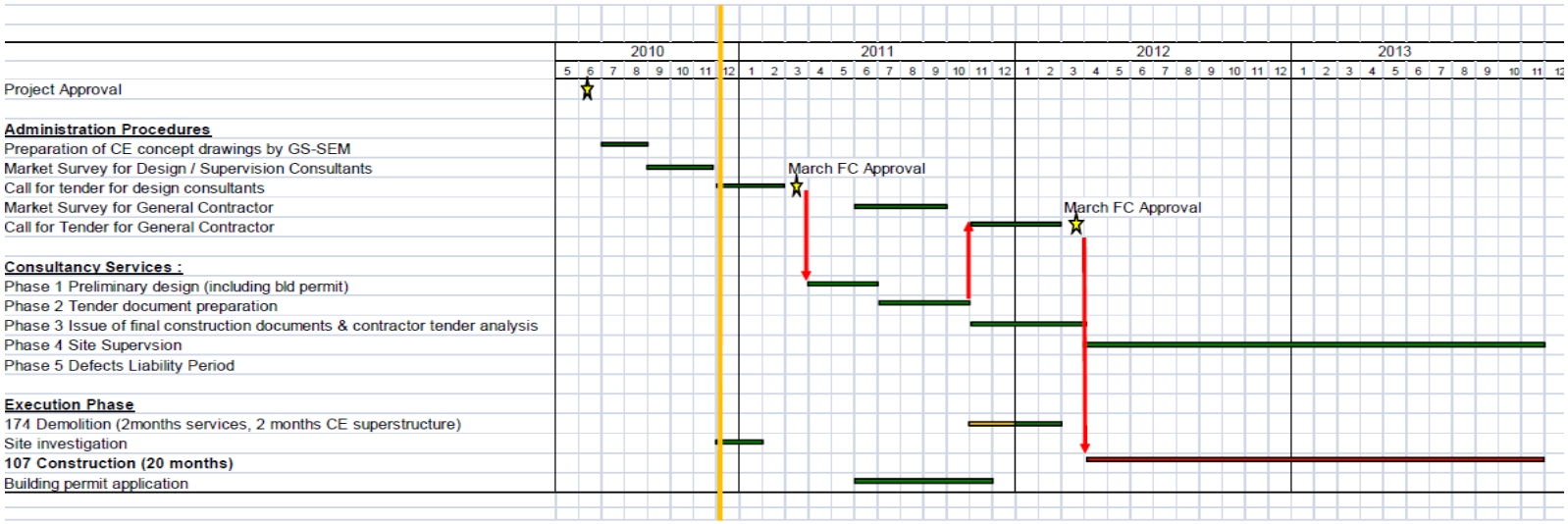
Main characteristics of the new building

- Civil engineering:
  - Total floor Area of the building: 3200m^2
  - Underneath the ground floor of the wet processes, collecting basins for retention means have to be installed
    - 100% of the capacity of the largest tank and
    - 50% of the total capacity of all associated tanks
  - Connection to the existing waste water treatment plant (building 676) located approx. 100m from the building 107 site
- Cooling and ventillation infrastructure:
  - Hazardous air extraction and treatment
  - Air conditionning and humidity control
- Electrical infrastructure:
  - Connection to an existing 18kV sub-station with a new transformer dedicated for the new building
  - UPS, 48VDC and diesel back-up network
- Other:
  - Access control
  - IT Network
  - Alarms (fire and gas detection)

Organization and planning

Due to the short planning, the project will be split in 2 contracts:

- For the design and supervision
- For construction works



•Phase 1:Preliminary design [April - June 2011]
•Phase 2:Tender design [July - October 2011]
•Phase 3:Construction design [November 2011 - March 2012]
•Phase 4:Site supervision of the construction works [April 2012- November 2013]
•Phase 5:Defects liability period [one year after the end of construction]

Building 107-project

Summary:

- A new building to be:
  - conforming with the current regulation
  - Able to build new physics big detectors (MPGD, GEM)
  - Safety for environment and personel
- TE-VSC-SCC & TE-MPE-EM are concerned
  - Opportunity for EM to be grouped in one building. Benefit for team spirit and for synergies
- Big challenges for the new building regarding all the processes implemented on site
  - Waste water treatment
  - Cooling and ventillation treatment
  - Electrical with connection to the sub-station 18kV with new transformer
- Short planning from April 2011 to November 2013
  - Project split in 2 contracts