942 new demands since 01.01.14 of which
- 394 new designs or design changes
- 385 manufacturing of PCB (166 at PH-DT-DD)
- 368 assembly of prototypes in the assembly workshop
- 38 assembly of MPGD for PH-DT-DD (227 pces)
- 149 assembly repair or modification in the assembly workshop
- 140 outsourcing of PCB or crate assembly

Load back to normal since July
- 100 jobs on-going
- 50 jobs on the waiting list

Visibility always limited to 4 to 6 weeks
TE-MPE-EM

A CERN wide service
TE-MPE-EM

Applying CERN purchasing policy

- **Manufacturing of Printed Circuit Boards:**
  Until Sept 14, manufacturing orders to 3 member states: UK, Finland, Italy
  Since Sept 14, contracts signed with 2 firms (Italy) for 3 years.

- **Assembly orders through 9 member states:**
  Belgium (1), Denmark (2), France (3), Germany (1), Greece (1), Norway (1), Spain (1), Switzerland (3), UK (1).

- **Regular orders with 2 firms employing disabled persons**
TE-MPE-EM

Highlights

- **TE-CRG:**
  Production of 2 batches of 800 boards

Beam Screen Heater
1.2kV TT Insulated Card
TE-MPE-EM

Highlights

TE-EPC:
Design and manufacturing of 40 R2E projects
Clean-up and upgrade documents of old projects for TE-EPC-CCE

TE-MPE:
• Production related to QPS
  1300 DQLIM crates assembly
  Series of boards for DQLPU crates
• Production of 600 A switch tester boards
• Expertise for DQLPR manufacturing problems
BE-RF : design of electronics for SPS Damper loop
From: Daniel Valuch
Thanks to your hard work, we have managed in about 4 months to design, manufacture, test and install the transverse damper system boards in the SPS, just in time for the restart last week.
Some of them very complex, most of them passed even through the version 2.

PH-ESE : production of 48 boards Full SRB for NA62
Design, prototypes, series manufacturing and assembly in less than 6 months, without any design change.
12-layers PCB (400*360mm), 1400 components, 7 FPGA
The firm who did the design stops this activity, the design files are not released and do not correspond to the prototypes.

The manufacturing and assembly files must be issued from scratch. The assembly of 40 pieces must be done in 2 week time.
Support to ATLAS: Wiener low voltage power supplies

- 60 power supplies, 20 modules per supply
- After a 1 year test, ceramic capacitors break due to an inappropriate assembly process (wave soldering)
- Action: replace some 2000 SMD components by through hole ones.
- Challenges: limited space on the modules, tight planning, supplier not expert in assembly and repair processes, reliability of the repair procedure.

TE-MPE-EM has been requested to visit the facility, control the repair procedure and give advices on best practice and quality standards for this domain.
TE-MPE-EM

New equipment for conformal coating

Set up in January to recover 1600 modules DQLPR
Will be installed in new building 107 and available for any requirement
TE-MPE-EM

Electronic Modules but not only

TE-ABT : design of an HV Switch Board for SPS
GS-ASE: reverse engineering of a search box
Thank you!