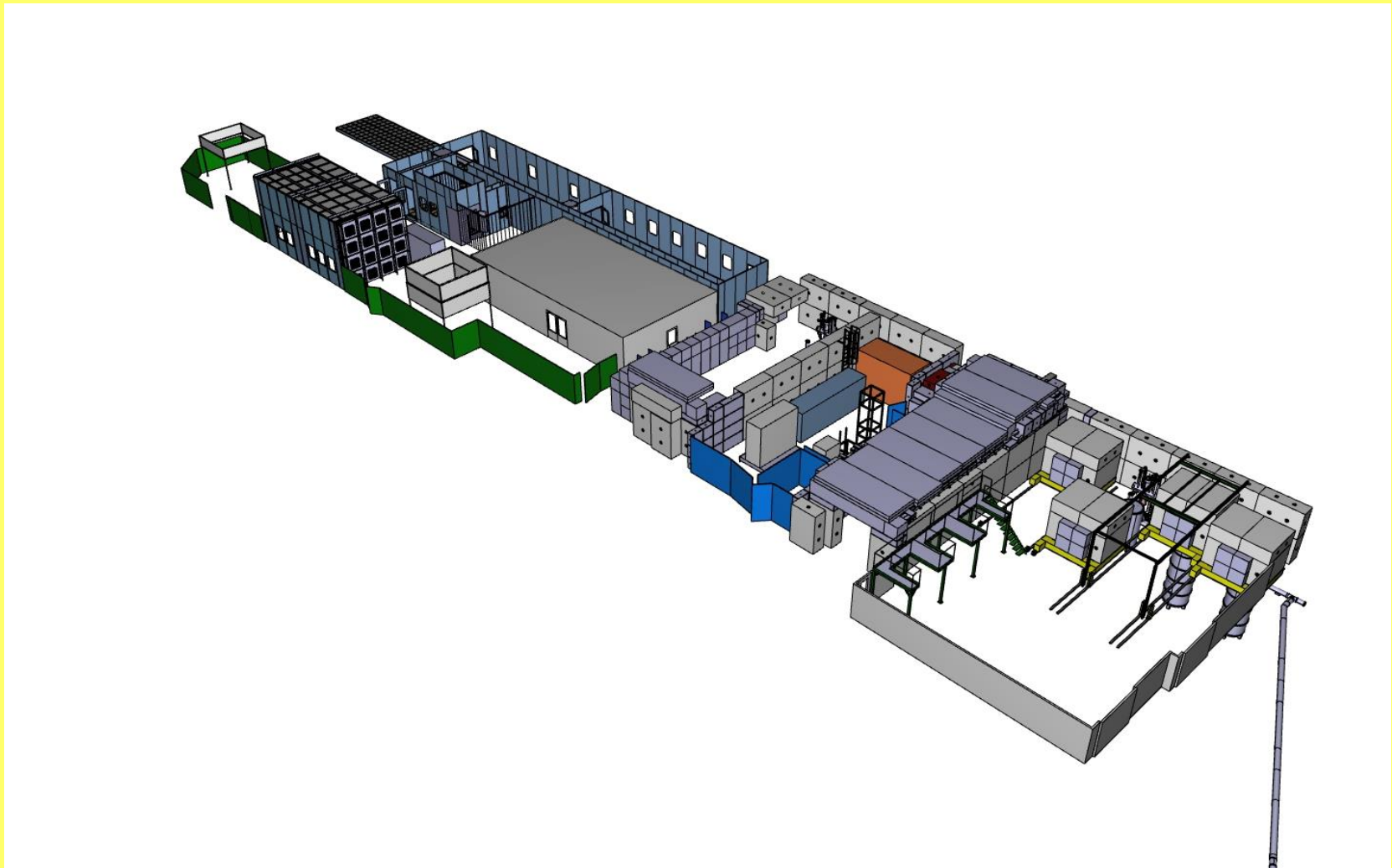
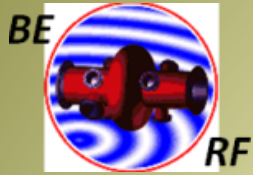


OVERVIEW OF CLEAN ROOM FACILITIES AND CLEAN ROOM PRACTICES IN SM18





Historical Overview



- **SRF infrastructure from 1990's for LEP II/LHC/SOLEIL projects – 4.5 K testing, ~8 MV/m, ISO 5+ processing**
- **EuCARD/CRISP: SRF Infrastructure upgrading for “High-Gradient” cavities – at CERN focus on SPL**
- **HIE-ISOLDE cryomodules: need for dedicated Clean-Processing, Assembly- and Testing Infrastructure**
- **Oct. 2015: In-sourcing of Crab cavity production, processing, testing and assembling in different configurations**



WP4 T3+T4 Status

- 1) [Cryogenics upgrade](#) and new He transfer line –completion during the winter shutdown with commissioning in April 2013
- 2) Vertical cryostats: modification of two cryostats for 2K operation - completed in March 2013
- 3) A CRISP supported engineer from ESS is working at CERN for 18 months on test and commissioning of the new cryogenics systems, and will assist in cavity and cryo-module testing.
- 4) [Main clean room upgrade in SM18:](#)
 - Finance Committee agreement for purchase in December 2012.
 - Now in negotiation with the company that supplied and maintained the existing clean-room. Initial upgrade of the air supply/filtering system planned before extending the clean-room.
- 4) SM18 rinsing cabinet: Order placed – delivery in July 2013.
- 5) UP water station: order placed – delivery in July 2013.
- 6) [Ancillaries and diagnostics:](#)
 - Kyoto optical device operational.
 - Temperature mapping systems for single and multi cell 704 MHz cavities being prepared for tests in 2013
 - Second sound measurements using OSTs – several measurements and tests done. Interpretation not straightforward – studies proceeding.



Clean Room Upgrade and Extension



GABRIEL PECHAUD : GABY 16 4202



CLEANROOM EXPERT

- 30 years in the RF groupe (permanent staff)
- 15 years experience in cleanroom work ISO 5 et 4
- **Bldg 252 TSO**
- Preparation and mounting of RF superconducting structures in controlled environment (LHC, HIE-ISOLDE, CRAB, Quadrupole Resonator)
- Reference for cleanroom work procedure
- Cleanroom Management in 252
- Bldg 252 organization

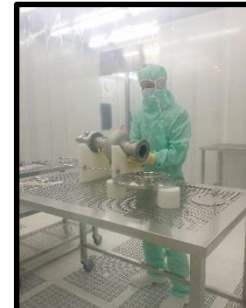
LHC



HIE-ISOLDE



OTHER



MAX GOURRAGNE 16 9448



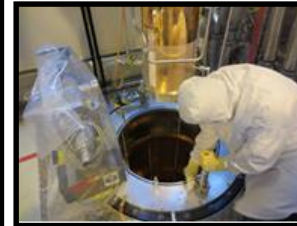
CLEANROOM EXPERT

- 13 years in the RF groupe
- 13 years experience in cleanroom work ISO 5 et 4
- Preparation and mounting of RF superconducting structures in controlled environment (LHC, HIE-ISOLDE, CRAB)
- Reference for cleanroom work procedure and tooling
- SM18 organization (construction site management, UPW maintenance...)

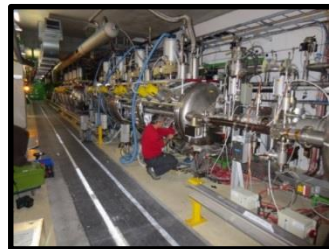
LHC



HIE-ISOLDE



OTHER



SAURO BIZZAGLIA 16 7343



CLEANROOM EXPERT

- 2 years in the RF groupe
- 20 years experience in cleanroom work ISO 5 et 4
- Cleanroom Manager in SM18 (equipment, maintenance, upgrade, tooling, training,)
- Back-up for preparation and mounting of RF superconducting structures in controlled environment (LHC, HIE-ISOLDE, CRAB)
- Reference for cleanroom work procedure
- SM18 organization (area arrangement, UPW maintenance...)

Cleanroom Manager in SM18

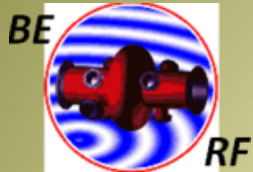


HIE-ISOLDE

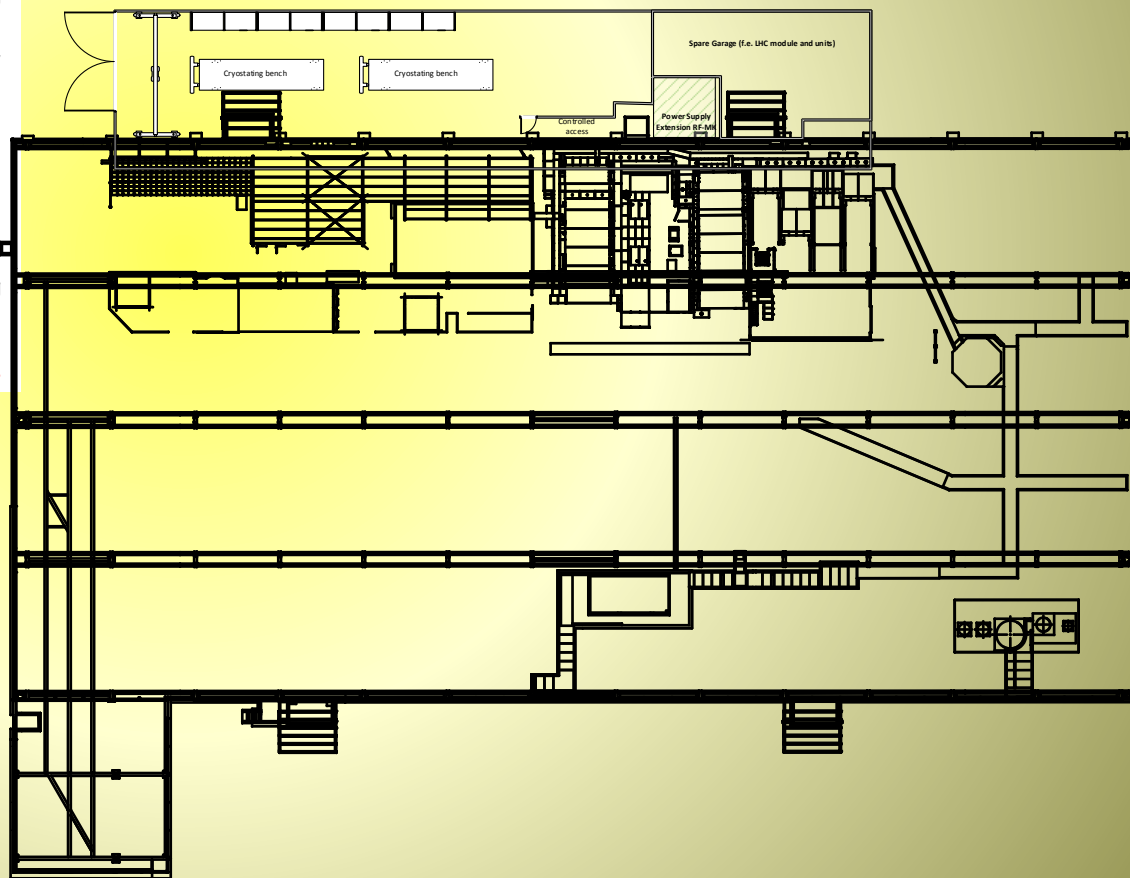
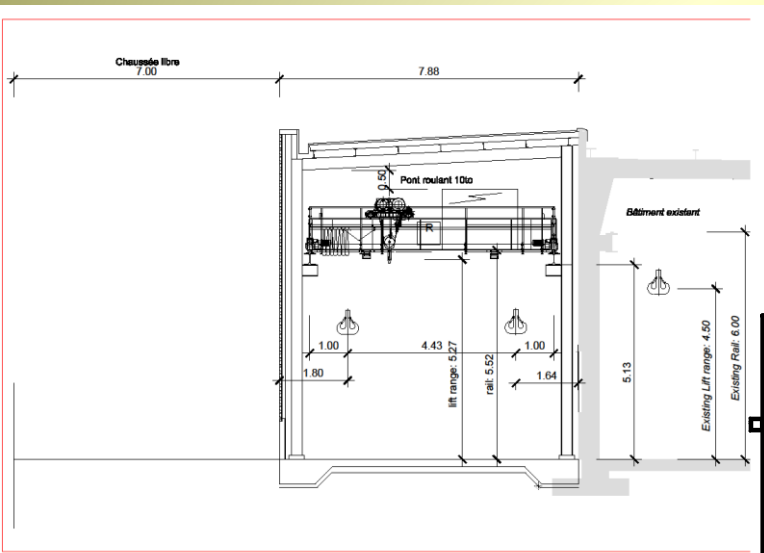


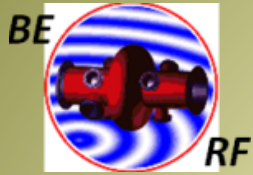
SM18 infrastructure organization





SM18 side extension





Summary



- Procedures for the SPS Crab module are adapted to the existing infrastructure boundary conditions
- The responsibility for the operation of the infrastructure stays with the experienced SRF staff. They will make sure that the needs of different programmes are respected
- The infrastructure is not adequate for series production – needs to be assessed after the SPS module experience
- Additional space is required a.s.a.p