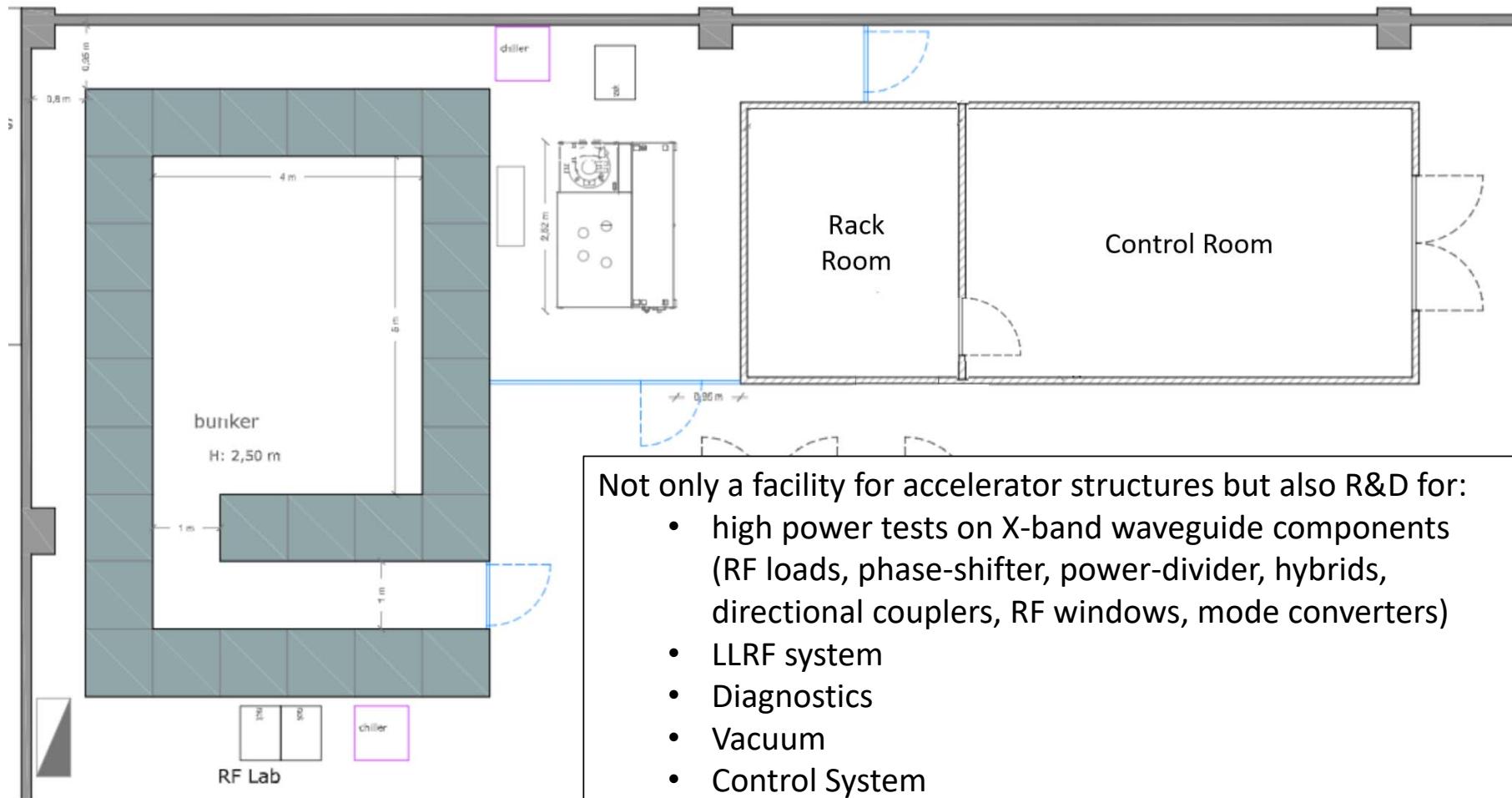
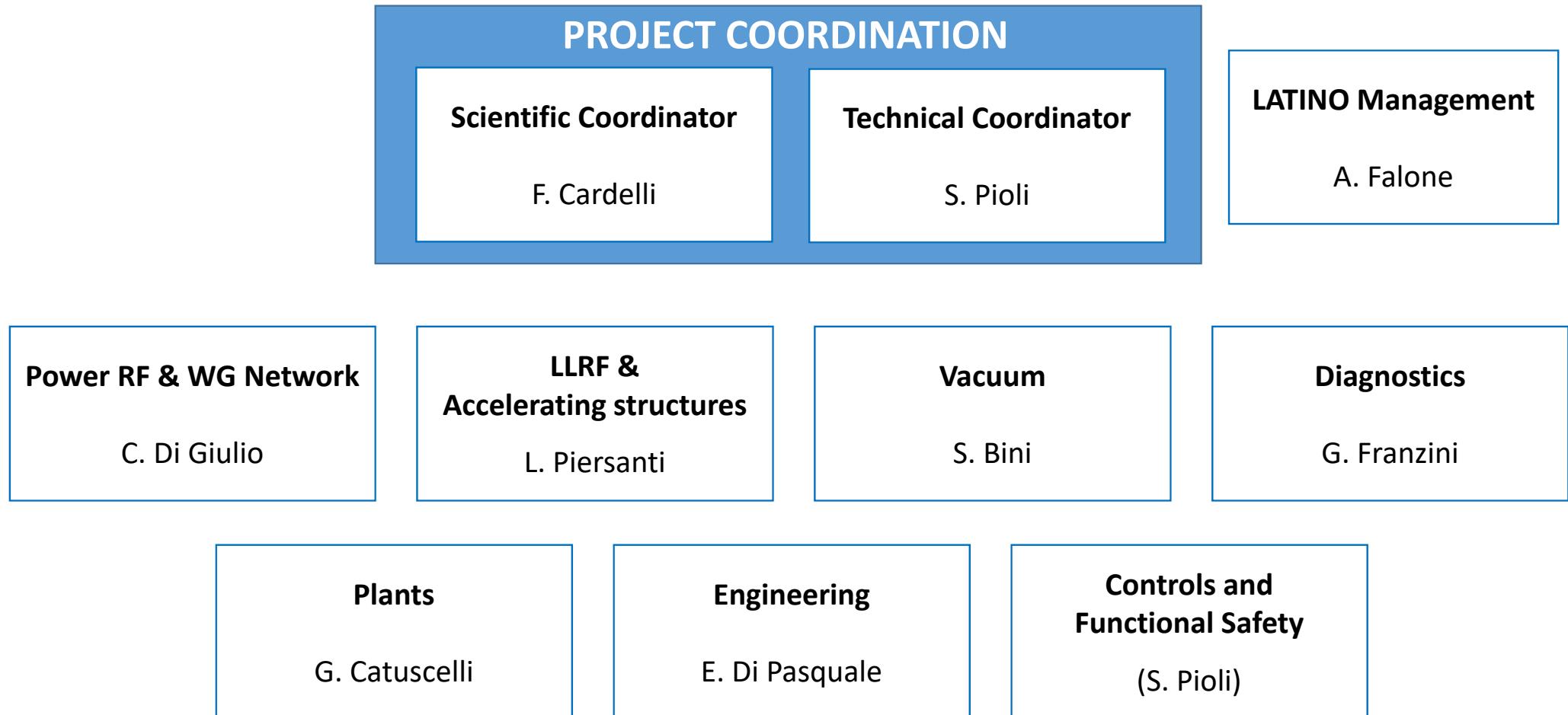


TEX - TEst-stand for X-band

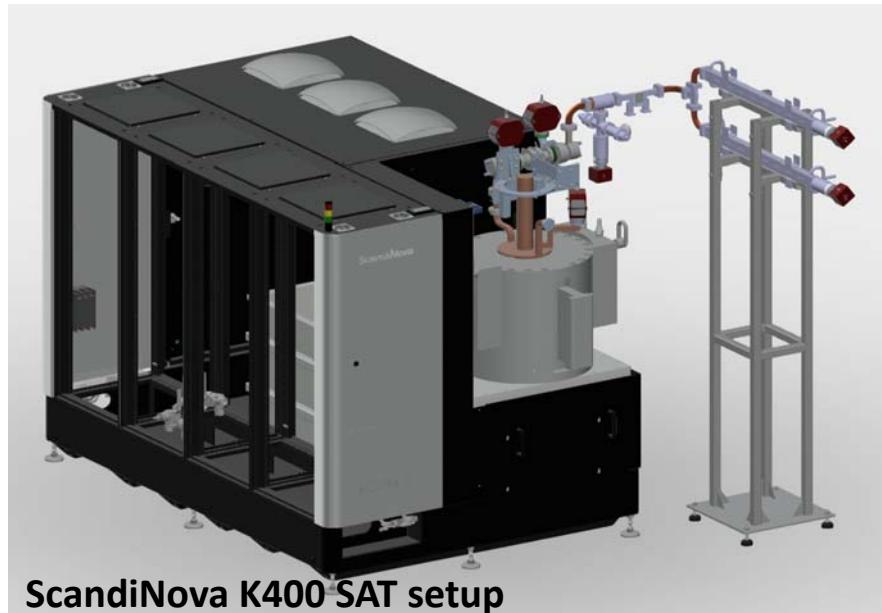
LNF brand new test facility for X-band accelerating structures conditioning for EuPRAXIA, CLIC and SME (LATINO Project)



TEX - Organization chart



TEX - RF Source Commissioning

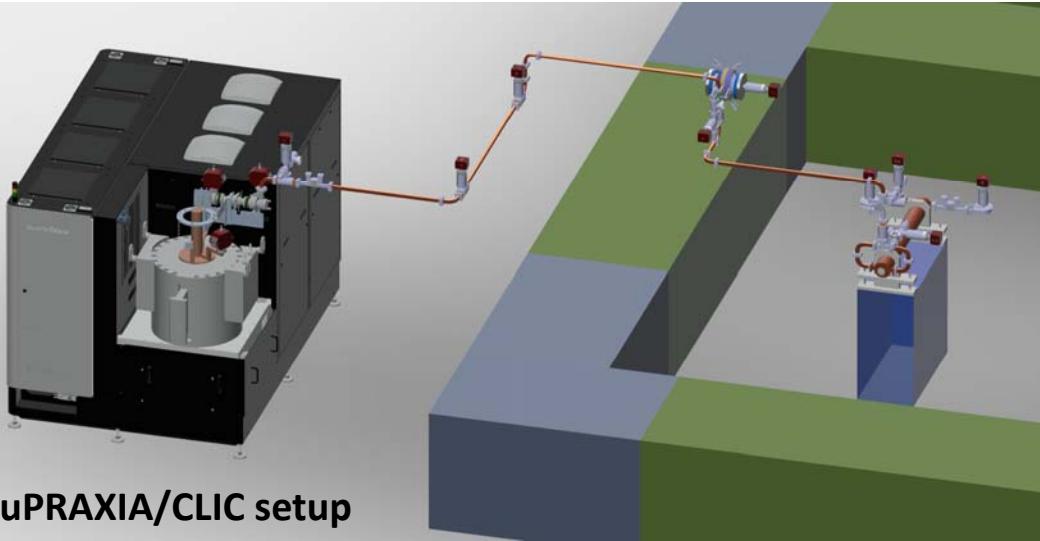


ScandiNova K400 SAT setup

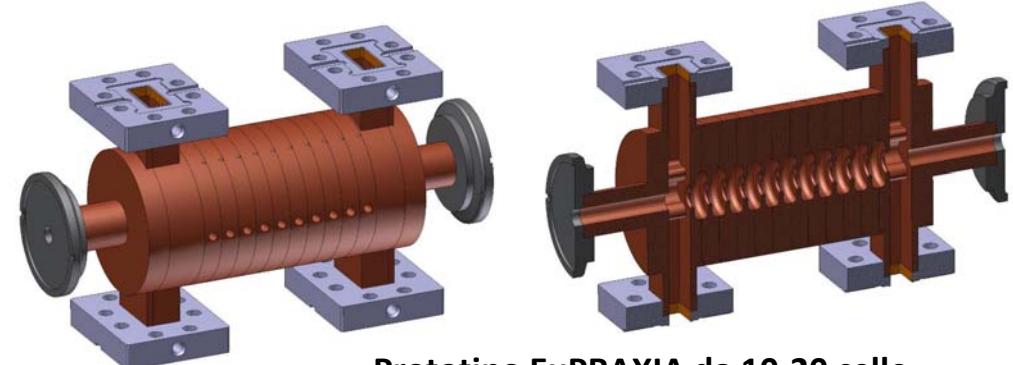
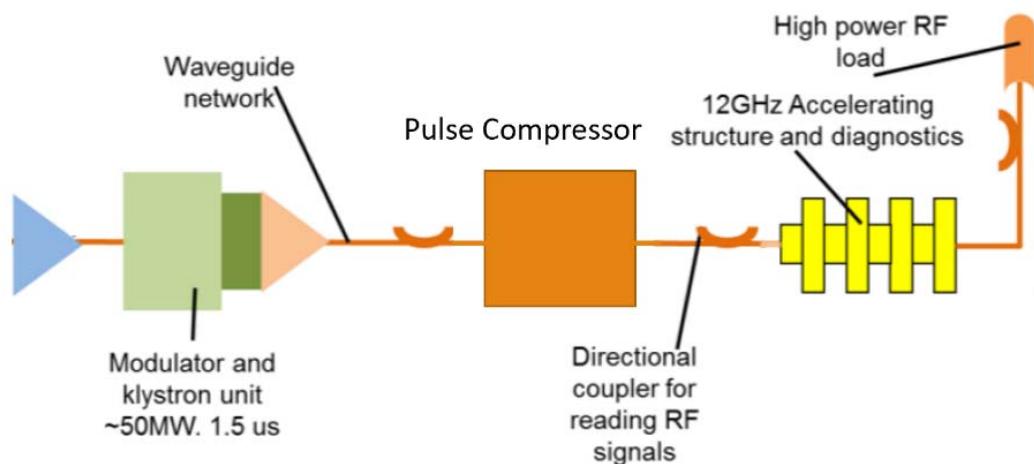
VKX-8311A CPI Klystron
Cathode Voltage 428 kV
Cathode Current 328 A
Operating Frequency 11.994 GHz
RF Drive power 865 W
RF Output Power 51 MW



TEX - RF Source Commissioning



EuPRAXIA Structures Parameter	Value
Frequency [GHz]	11.9942
Average acc. gradient $\langle G \rangle$ [MV/m]	60
RF pulse [μ s] (before pulse compression)	1.5
Kly. power [MW]	50
Average iris radius $\langle a \rangle$	3.5
Iris radius a [mm]	4.3-2.7
Structure length L_s [m]	0.9
No. of cells	109
Shunt impedance R [M Ω /m]	85-117



TEX - Control System

Front-end devices:

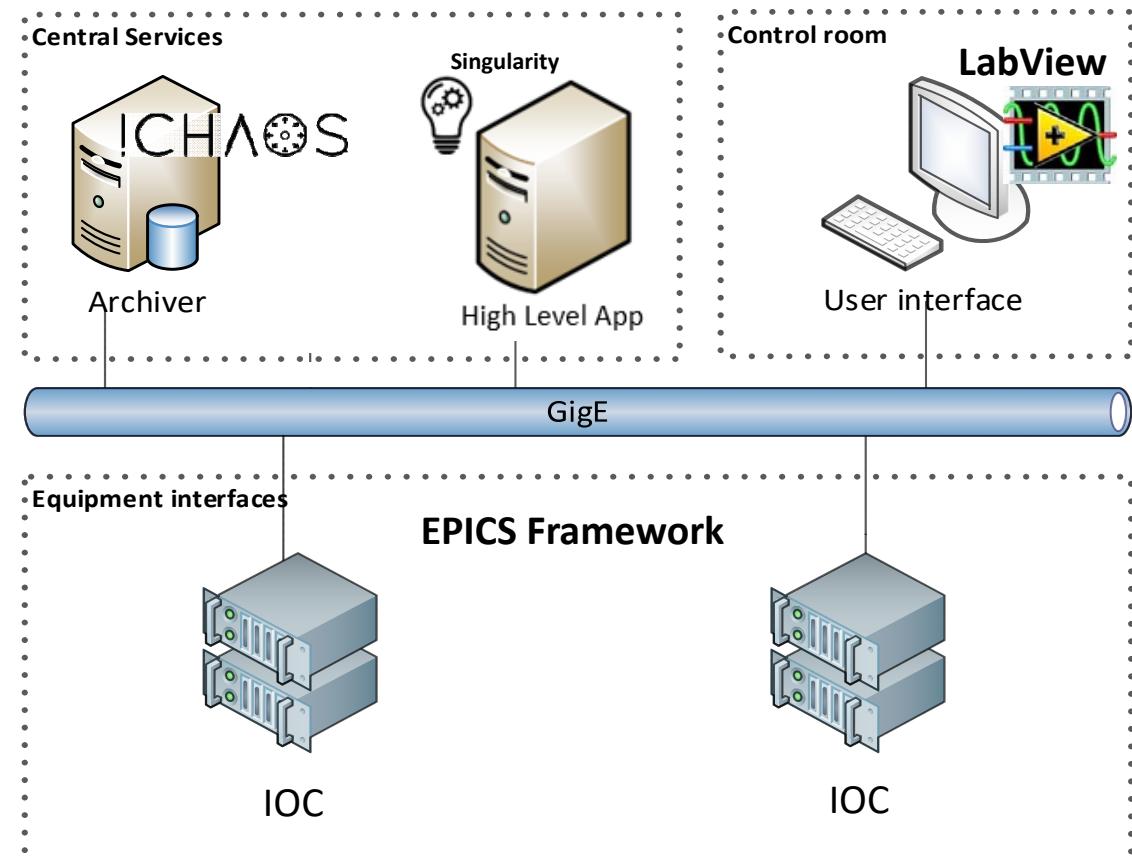
- Modulator
- Libera LLRF
- Ion Pumps
- Vacuum gauges
- Functional Safety
- Chillers
- RF Amp.

Services:

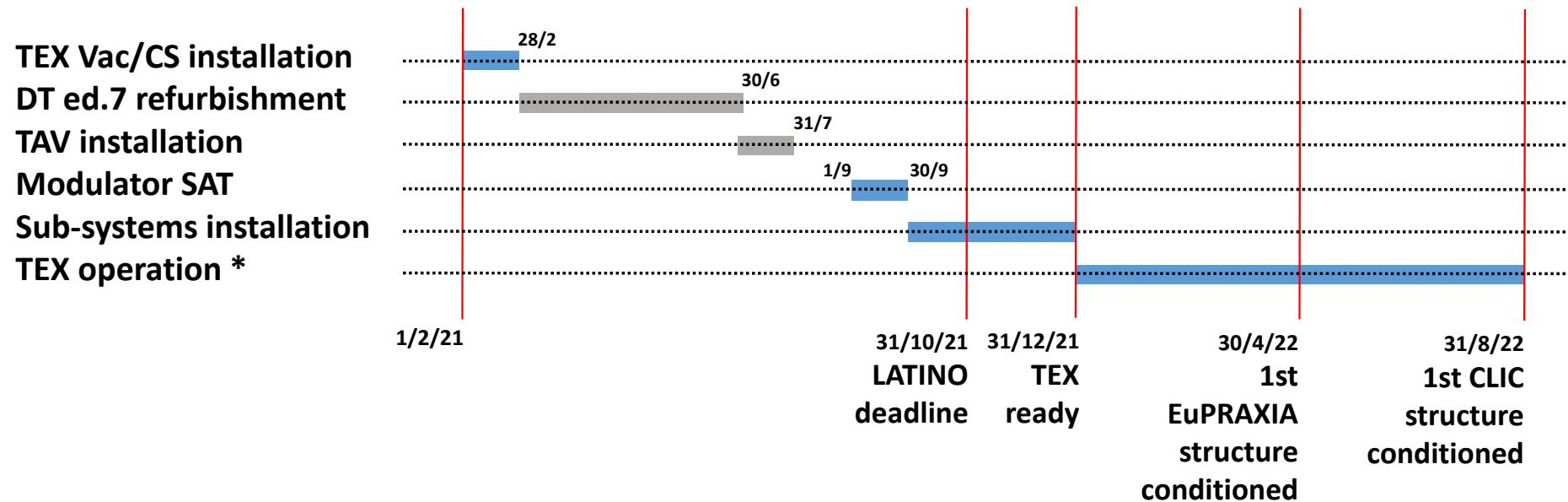
- !CHAOS framework for data archiving
- Singularity (CSN5 Project) for machine learning based High Level Application

Control Room:

- Labview-UI (Web-UI upgrade on going)



TEX - Gantt Schedule



* To be update according to SABINA schedule

TEX - Accelerator Division man power requirements

Servizi DA	Task	2021 - commissioning	2022 - operazione
RF	Setup per SAT Modulatore a potenza nominale, installazione LLRF	0,4 FTE Tecnologi 0,5 FTE Tecnici	0,3 FTE Tecnologi 0,2 FTE Tecnici
LINAC	SAT Modulatore a potenza nominale, installazione sicurezze	0,4 FTE Tecnologi 0,5 FTE Tecnici	0,3 FTE Tecnologi 0,2 FTE Tecnici
Meccanica	Progettazione ed installazione network guide d'onda per setup definitivo e SAT Modulatore	0,4 FTE Tecnologi 0,3 FTE Tecnici	0,1 FTE Tecnologi
Diagnostica	Progettazione ed installazione delle due faraday cup	0,2 FTE Tecnologi 0,1 FTE Tecnici	0,1 FTE Tecnologi
Vuoto	Progettazione ed installazione network guide d'onda per setup definitivo e SAT Modulatore	0,2 FTE Tecnologi 0,2 FTE Tecnici	0,1 FTE Tecnologi
Controlli	Installazione sicurezza funzionale, sviluppo interfacce, sviluppo applicazioni di alto livello e corso operatori	0,4 FTE Tecnologi 0,1 FTE Tecnici	0,2 FTE Tecnologi
Operatori	SAT Modulatore, operazione	120 ore	5000 ore