



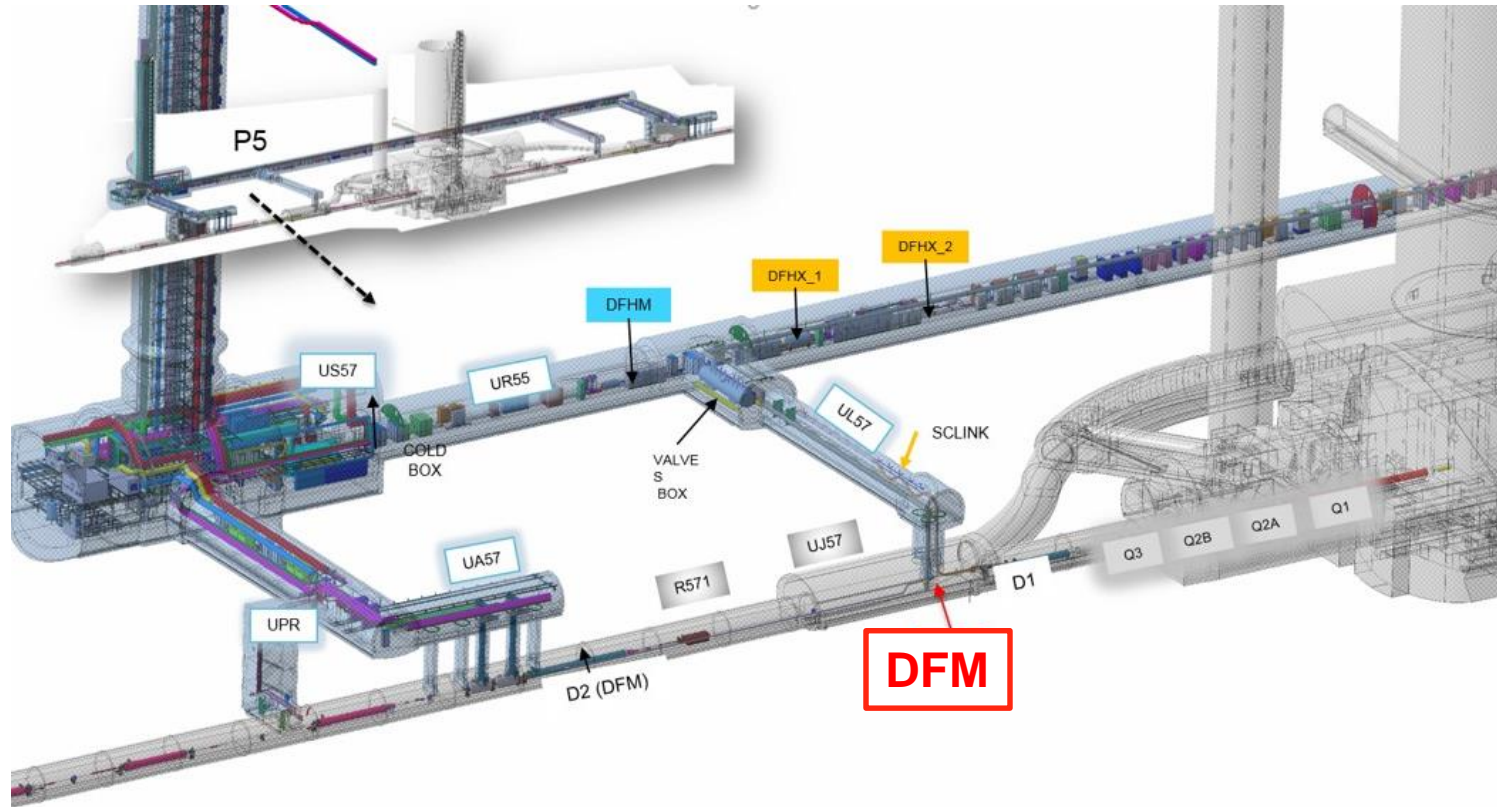
DFM in WP6a, Master Plan

A. Ballarino



DFM Detailed Design Review, CERN, 21/06/2019

DFM Cryomodule in WP6a



Interface between **SC Link** and **D2**. It provides the powering of the **HL-LHC Matching Sections** (D2 and its correctors)

Powering the Matching Sections

Matching Sections

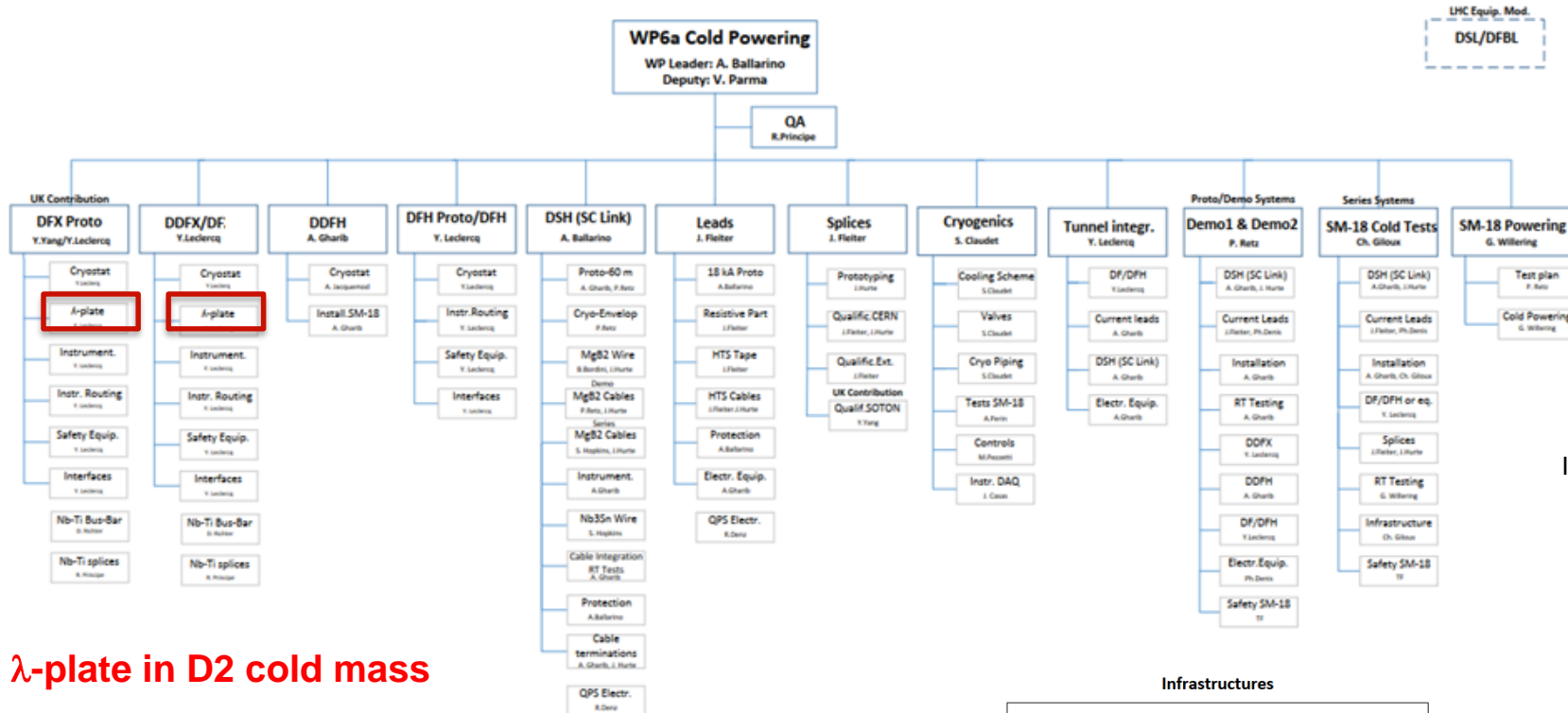
D2 and its correctors

Rating (kA)	N _{leads}	N _{cables}
13	2	2
0.6	8	8

Triplets

Rating (kA)	N _{leads}	N _{Cables}
18	4	4
7	-	3
2	12+3*	12

DFM in WP6a Organogram

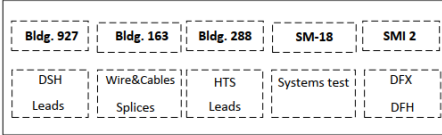


LHC Equip. Mod.
DSL/DFBL

Interfaces

- WP6b-Warm Powering (M. Martino, S. Yammine)
- WP3-Magnets (E. Todesco)
- WP17-Mach. Protection (D. Wolmann)
- WP17-Integration (P. Fossa)
- WP12-Vacuum (J. Espinos, C. Giran)
- WP16-String (M. Bajko/M. Pajer)
- WP9-Cryogenics (S. Claudet)

Infrastructures



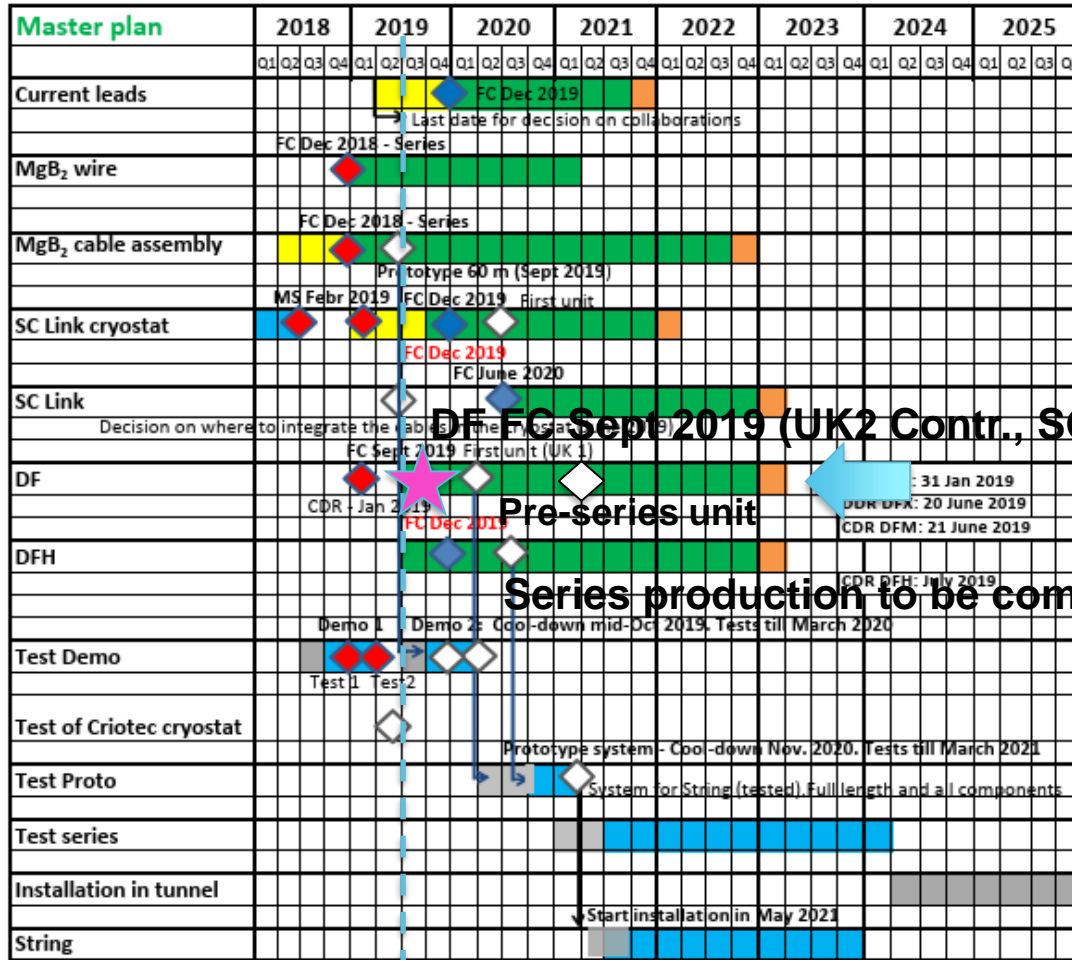
λ-plate in D2 cold mass



DFM

- **Baseline:** construction of five **DFM cryo-modules**, via **UK 2 contribution** to HL-LHC, by **Southampton University (SOTON)**. Design carried out by CERN, in collaboration with SOTON (direct coordination by Y. Leclercq, CERN, and Y. Yang, SOTON).
- **Five** cryo-modules: **one pre-series** unit (also spare for HL-LHC) and **four series units**.
- No DFM test in nominal cryo/electrical conditions is planned (we rely on the experience with the Cold Powering System for the HL-LHC Triplets. The SC Links and the HTS Current Leads for the HL-LHC Matching Sections will be tested.

WP6a Master Plan



- Tendering
- Manufacturing
- Tests
- Installation
- Spares
- ◆ Achieved milestone
- ◆ Future milestone
- ◆ FC dates

DF FC Sept 2019 (UK2 Contr., SOTON)

Pre-series unit

Series production to be completed by March 2023



Thanks for your attention !

