WP4-Task5: Integration

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# Recap: What we would like to do for XLS

- Help **establishing alignment and stability requirements** for each component in the linac

- Develop **design for support structure** of components for the entire length of the accelerator

- Use lessons learned from CLIC module for **high quality and affordable** realization of **support design**

- Use **synergy** in **prototyping** for **CLIC module** to improve XLS support design if necessary

Task 5: Integration

Description:

- Providing a framework for condensing/bringing together mechanical designs and related systems designs

- Translating stability requirements of components in concrete mechanical designs for supports

- Ensuring proper interfacing with adjacent injector and undulator

- Establish lists of components for costing exercise

- Issue space allocations?

Examples CLIC-module
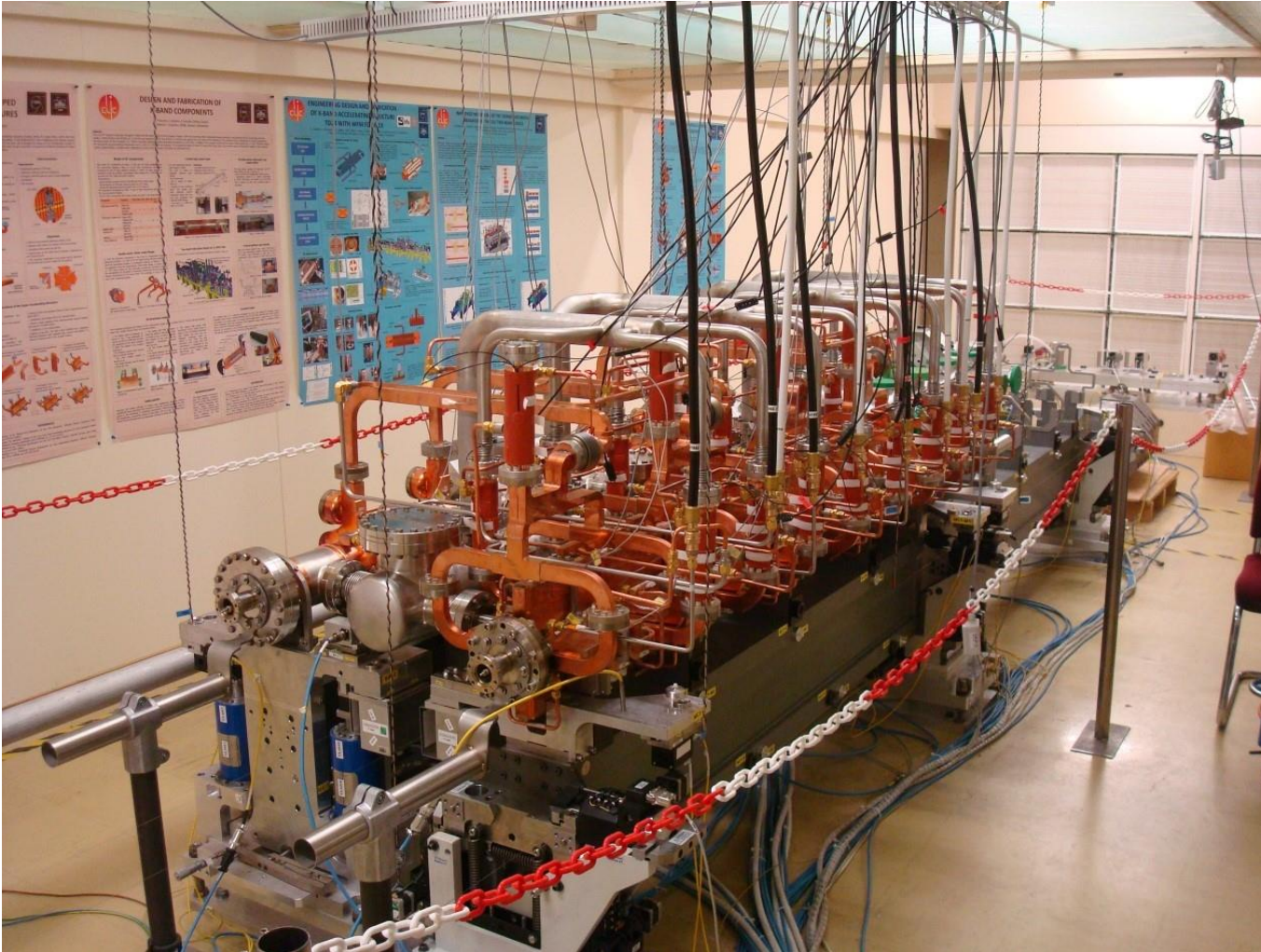
CLIC CDR baseline design from 2013 test-mockup
- Running thermal tests combined with numerical simulations in order to predict individual deformations and compensate for
- Testing individual components for installation and alignment methods
- Powering and cooling of individual components for establishing heat dissipation to air and cooling optimisation

CLIC 380 GeV klystron
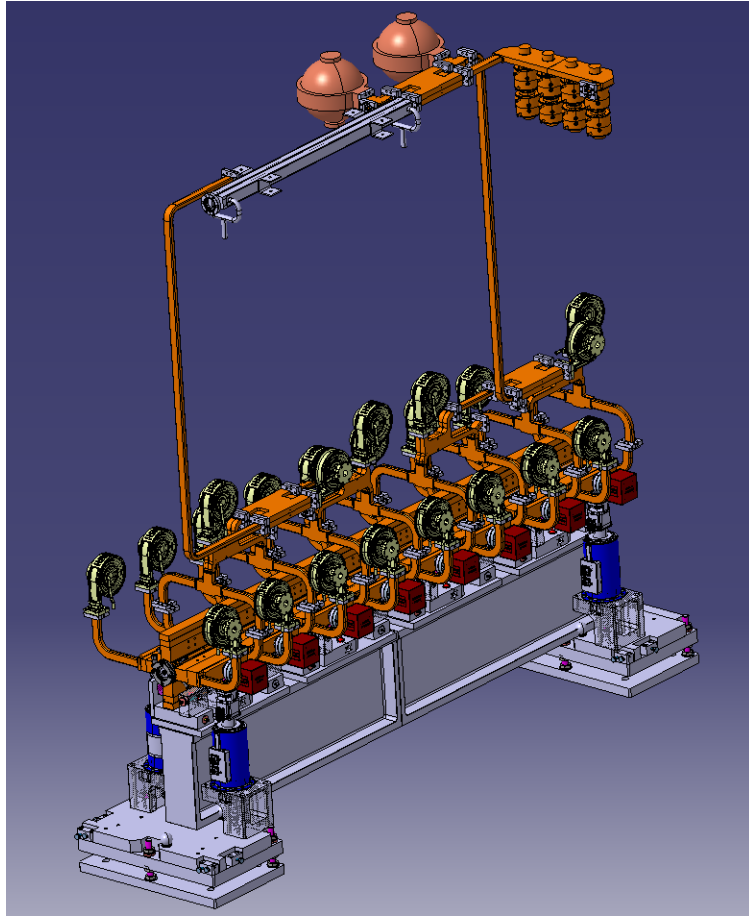
Infrastructure/tools available at CERN:

- Catia V5
- Dassault Smarteam data management software
- Extensive database of RF components for CLIC
- Smarteam allows for online publishing for feeding back to your designers

We can start as soon as we agreed on some basic parameters:

- AS length
- Module layout
- Powering scheme