

Control System Development at the South African Isotope Facility

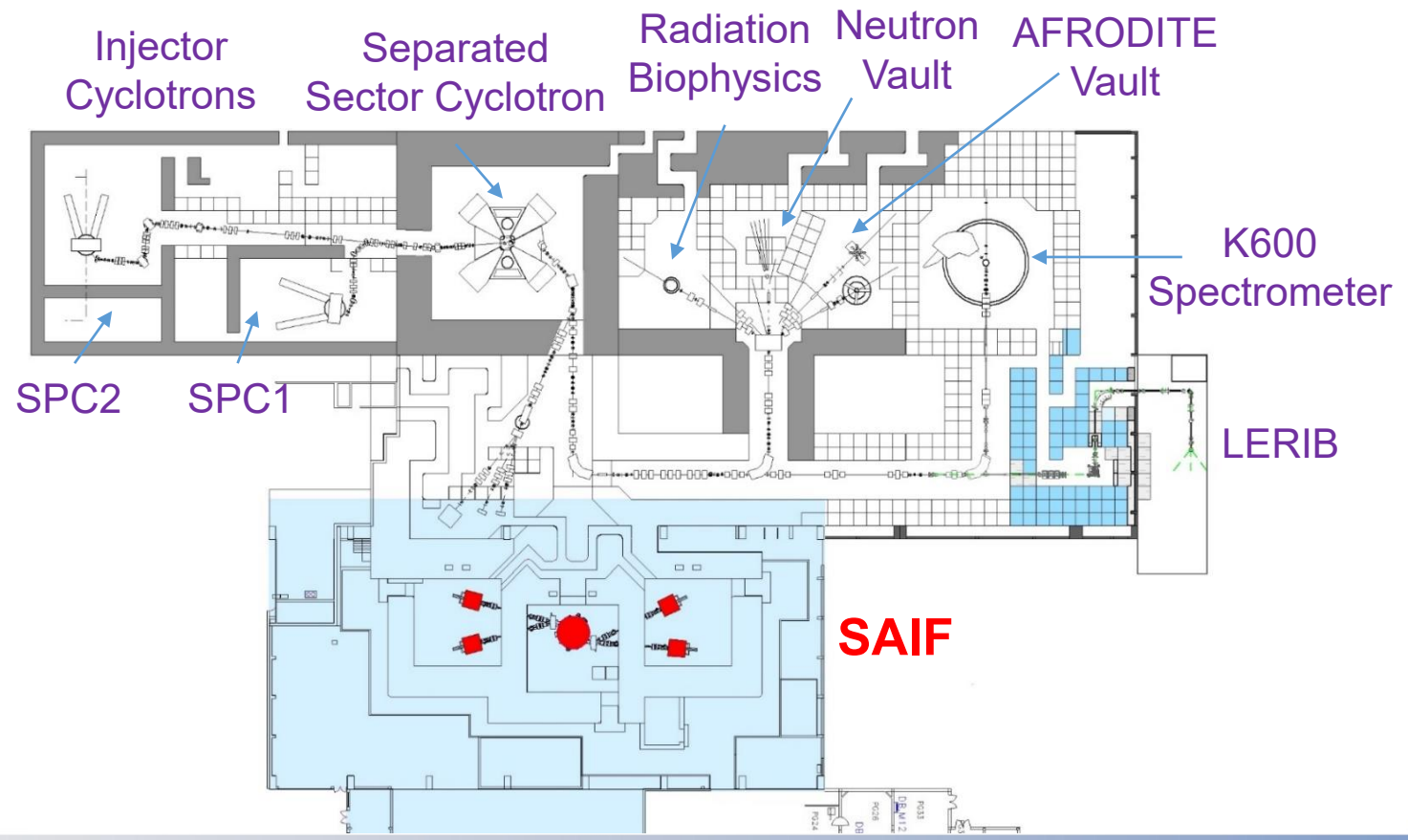


Paving the future at iThemba LABS...

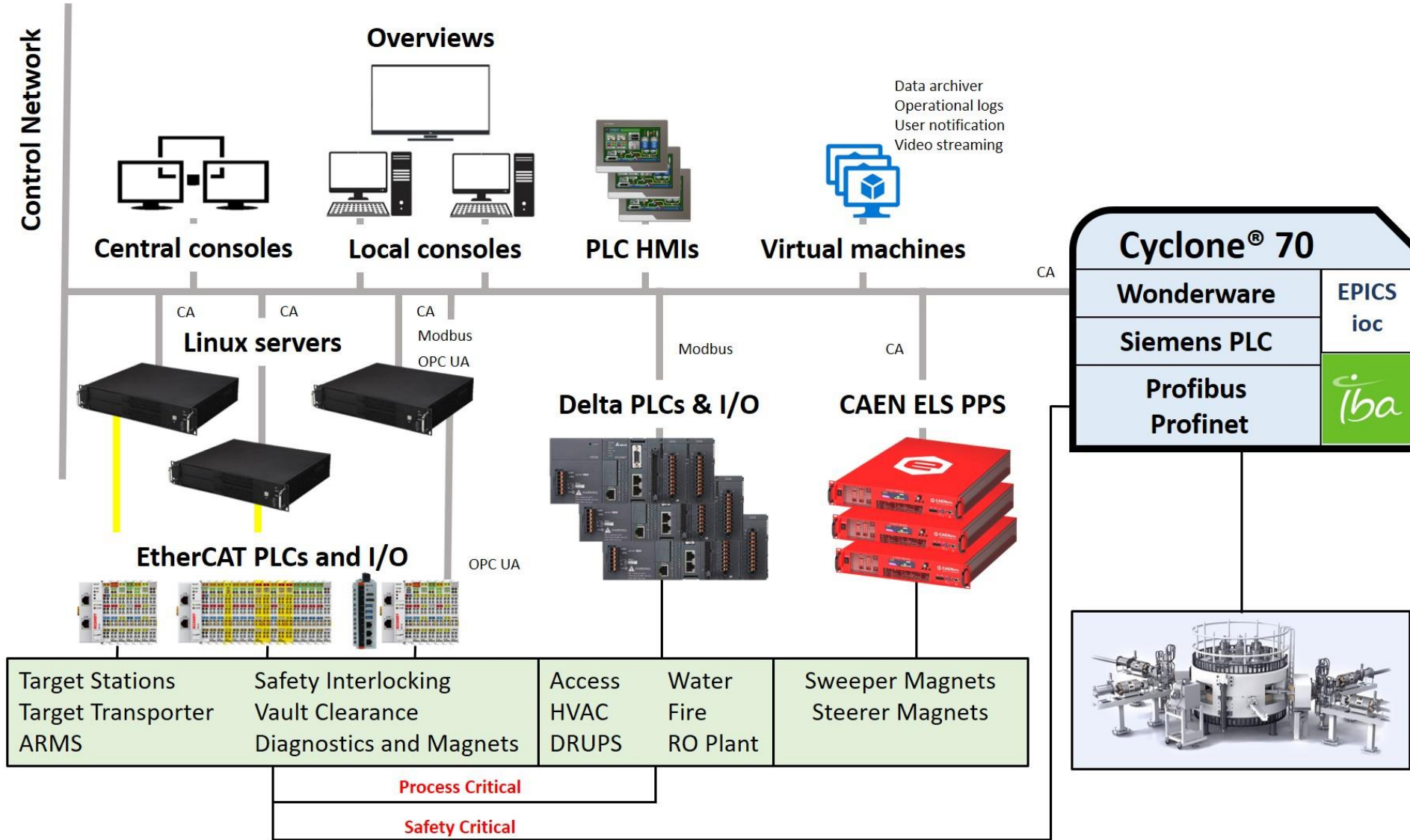




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Control System Overview




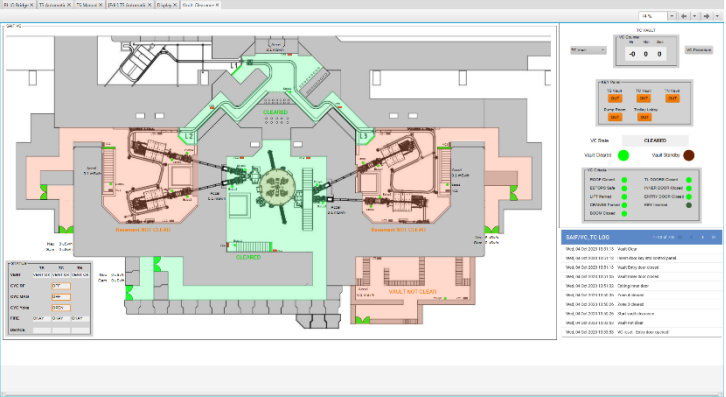
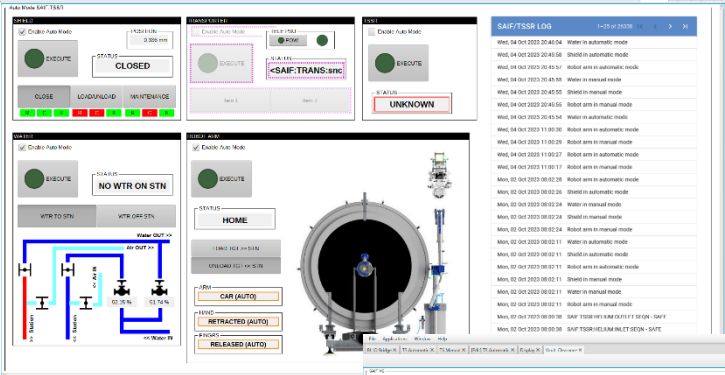
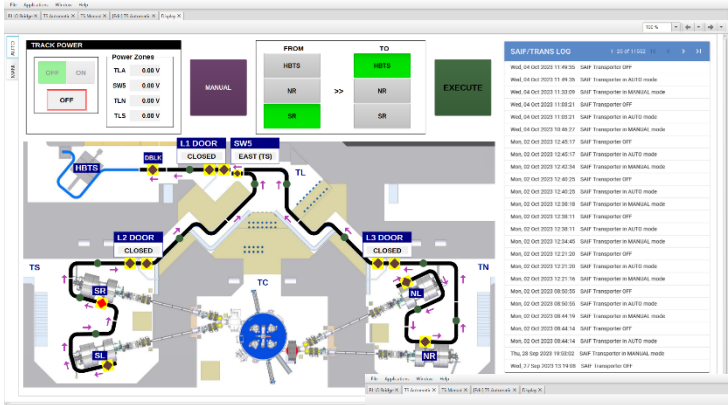
Control System Hardware



Control System Software



EPICS iocs
 DLS EtherCAT scanner
 IgH EtherCAT master

 Headless with PREEMPT_RT

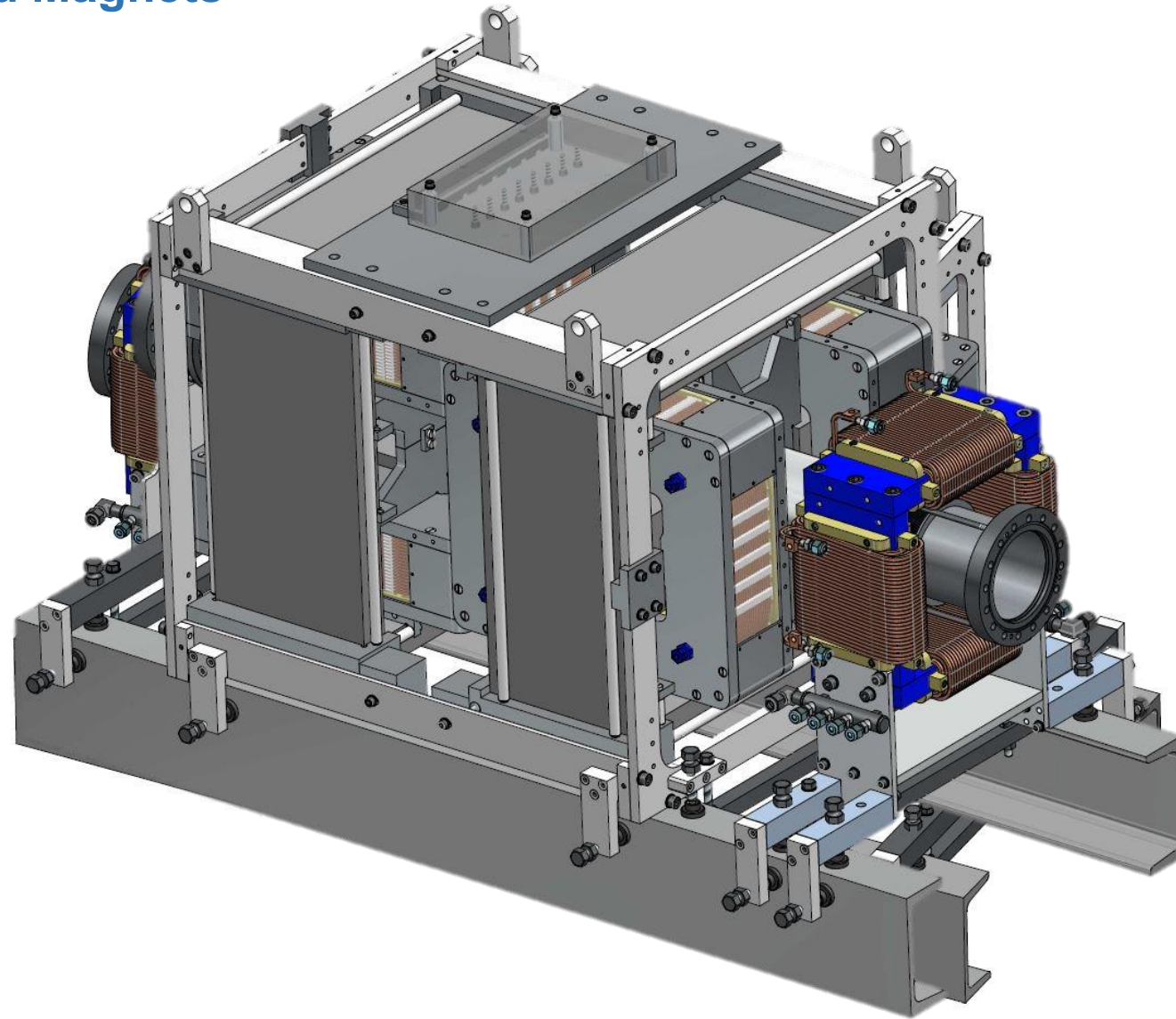


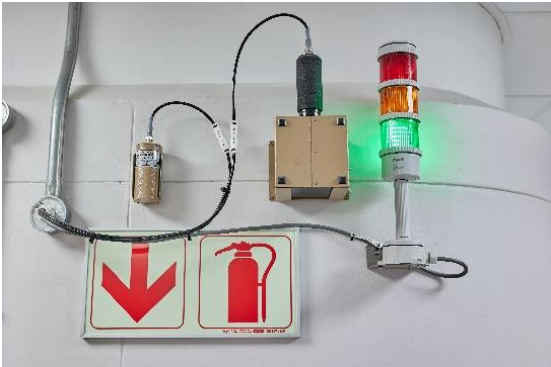
IBA Cyclone® 70 System



Target Bombardment and Handling Facilities







Building and Peripheral Systems (DRUPS)



Building and Peripheral Systems (Chiller)



- ❖ Small team to tackle large scale project with many interfaces and systems
 - Customizable off the shelf hardware – EtherCAT
 - Mature hardware toolchain with scripts (Excel with VBA)
 - Stick to standard interfaces – Modbus, OPC UA etc.
 - Community developed UI frameworks and tools 🙏

- ❖ Project well into commissioning
 - Mostly changes to User Interaction Layer

- ❖ Ongoing maintenance and updating