

NSLS-II Beamline EPS PLC

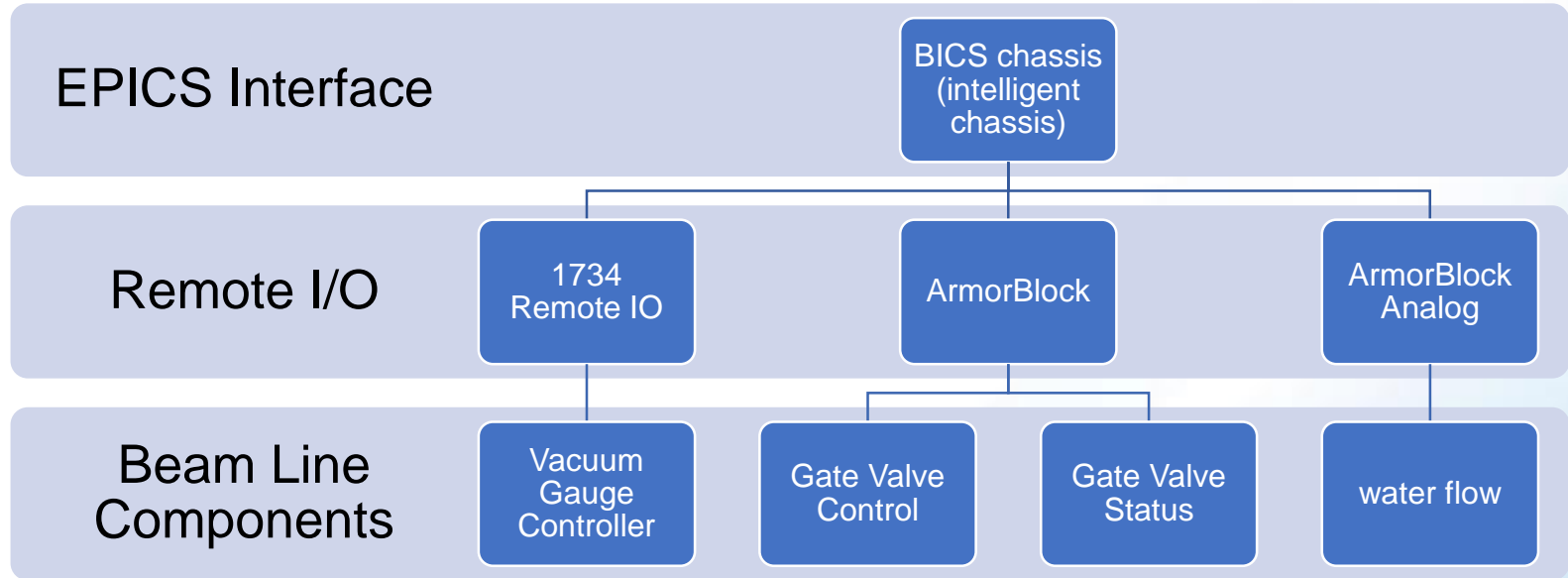
Chris Guerrero, Core Controls Group (Motion Controls and EPS)

70 YEARS OF
DISCOVERY

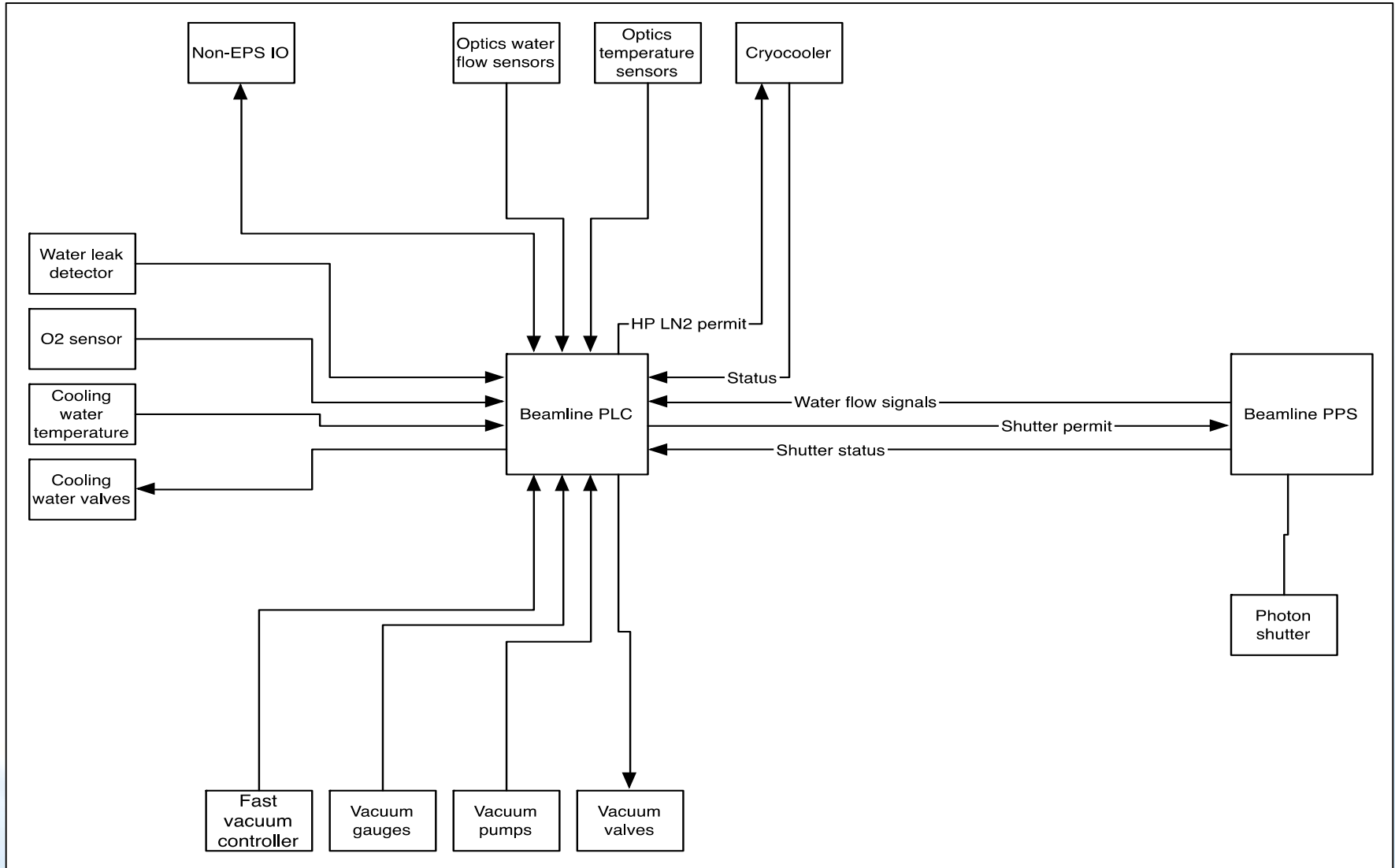
A CENTURY OF SERVICE



Beamline EPS PLC System



Beamline EPS System Architecture



Workshop Topics

- Requirements and Specifications
 - Based on NSLS-II Beamline EPS Standards
- Project Engineering
 - Depends on components and engineering groups involved
- Testing
 - We perform test reports on all EPS components based on standardized procedures
- Application Management
 - All software is backed up and managed on gitlab.nsls2.bnl.gov/EPS
 - Documentation is centralized on Gitlab/Sharepoint (internal) and Dropbox (external)

NSLS-II Accelerator Vacuum & Utilities PLC

Ibrahim Saleh, Accelerator Controls Group

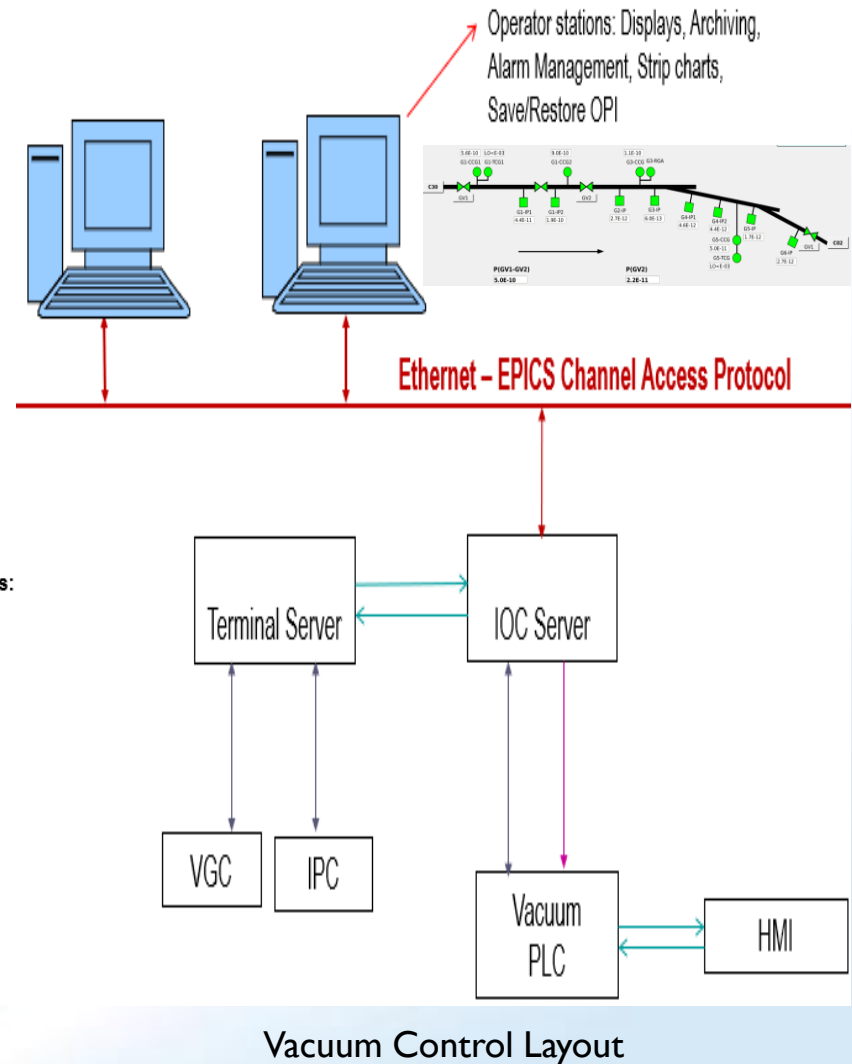
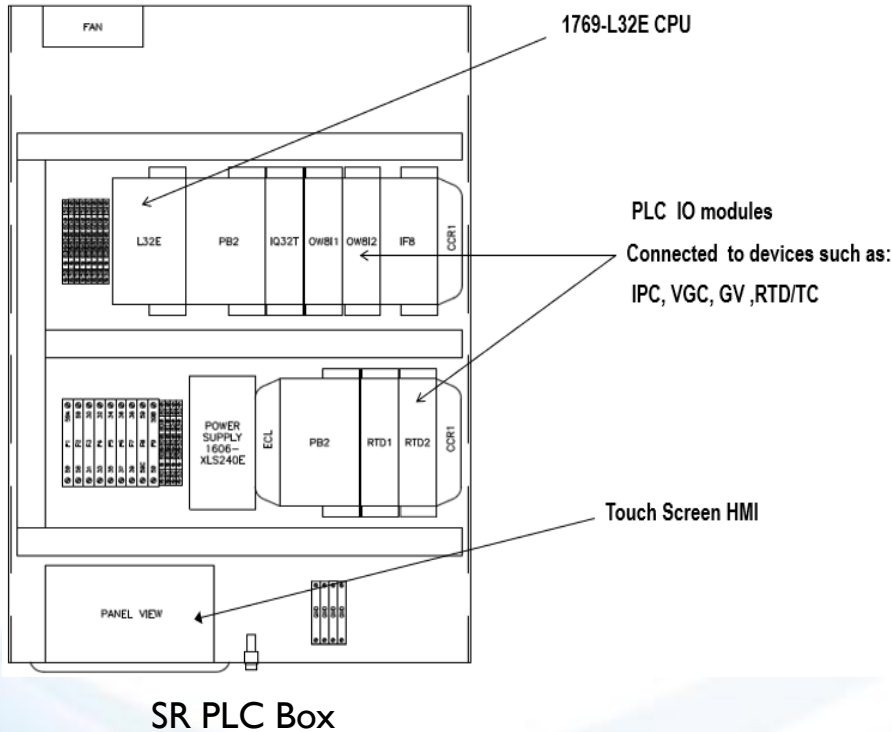
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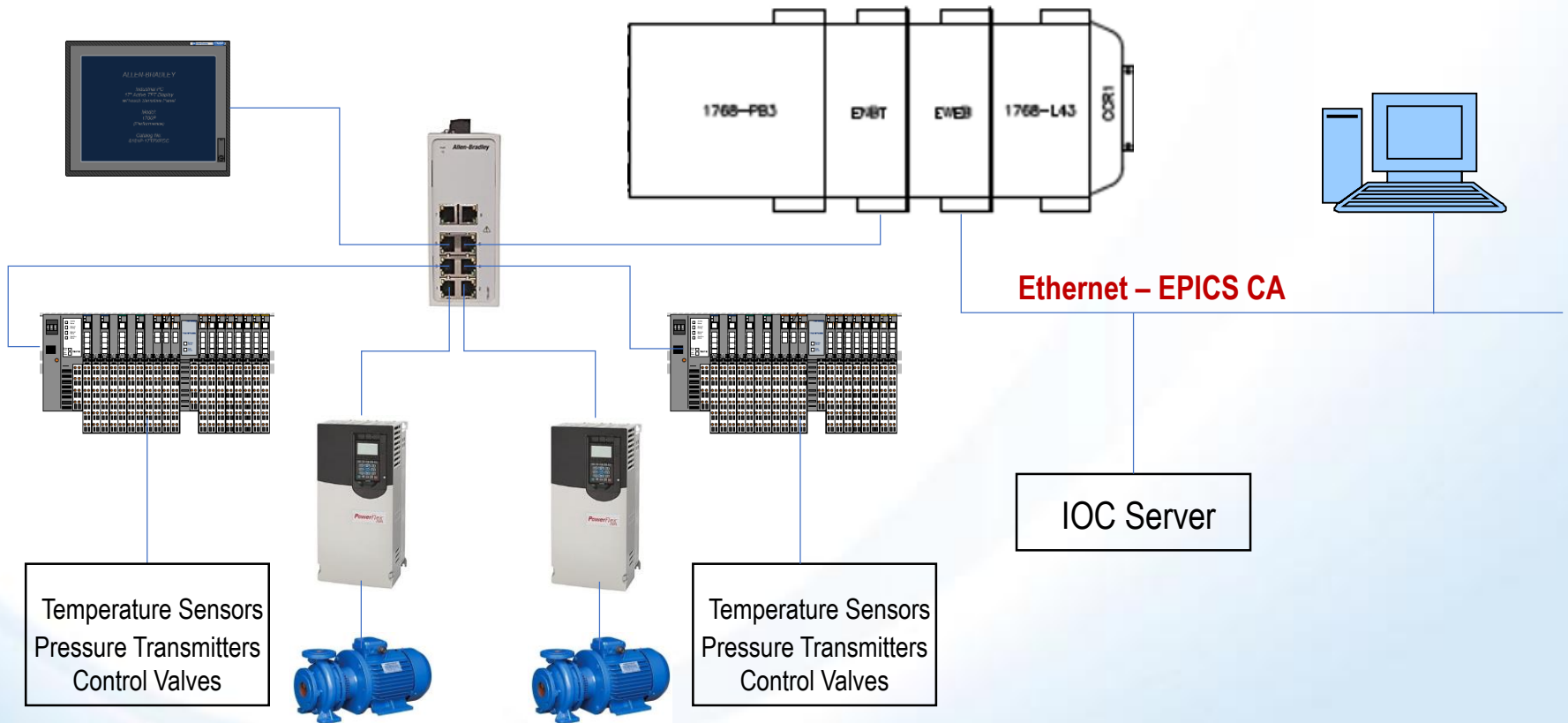
Accelerator Vacuum PLC

- 61 Allen Bradley CompactLogix PLCs
- Injector: 6 PLCs (1769-L32E CPU)
- Storage Ring: 30 PLCs (1769-L32E CPU)
- Front Ends: 25 PLCs (1768-L43 CPU)



Accelerator Utilities PLC

- 7 Allen Bradley CompactLogix PLCs (1768-L43 CPU)
- 14 Remote IO Racks (1734)
- 29 Allen Bradley VFDs (PowerFlex 755)



Utilities Water Pumps Control Layout

Workshop Topics

- **Requirements and Specifications**
 - Based on NSLS-II System Standards
- **Project Engineering**
 - Manage the project based on the available engineering resources
 - Perform regular maintenance and checkups
 - Put plans for system upgrades to replace obsolete hardware
- **Testing**
 - Perform test reports on all system components based on defined procedures.
 - Perform testing and validation after any modification on the system (Hardware or Software)
- **Application Management**
 - Documentation is centralized on SharePoint (internal)
 - All software is backed up and managed on SharePoint
 - We are looking to have more Version Control options