Baseline Documentation

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HL-LHC Standards and Best Practices Workshop (11-13 June 2014)
Contents

- Definitions
- Systems life-cycle
- Baseline documentation
- EDMS structure
- Other documentation
Definitions

Baseline documents:
Documents that will have to be stored and updated until the dismantling of the LHC.

Non-baseline documents:
Documents that are required for the well functioning of the project but which storage will not be considered critical after the commissioning phase.

HL-LHC is an upgrade of LHC and therefore all documents will be stored and managed according to LHC procedure
Systems life-cycle

Decision gates (reviews)

- Concept Stage
  - Requirements definition

- Development Stage
  - Functional specification
  - Engineering specification

- Production Stage
  - Fabrication, Assembly and Verification
  - Installation - Commissioning

- Support Stage
  - Operation & Maintenance

- Retirement stage
  - Dismantling

Organizational Project-Enabling Processes

- Project Processes: Planning, Measurements, Assessment, Control, Risk, Configuration, Information, Decision Management

Acquisition Process

Safety processes (NSI)

- Advice & support on identification of safety requirements

- Advice & support on risk assessment, risk reduction and risk control

Verification of procurement specifications

Initial inspections & tests

Periodic inspections/Re-qualifications tests

Work in Progress

HL-LHC Standards and Best Practices Workshop (11-13 June 2014)
Baseline documentation (1/2)

EDMS: 1361462

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<tr>
<th>Concept Stage</th>
<th>Development Stage</th>
<th>Production Stage</th>
<th>Support Stage</th>
<th>Retirement stage</th>
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Evolving documents (progressively updated)

Typical contents (may not be applicable to all systems):
- Design/engineering reports
- Arrangement drawings
- Assembly drawings
- Interface, interconnection drawings
- Construction drawings
- Product drawings
- Elevation drawings
- Engineering drawings
- Installation drawings
- Logic diagrams
- Numerical control diagrams
- Piping diagrams
- Process and instrumentation diagrams
- Wire lists
- Schematic diagrams
- Wiring and cable harness drawings
- Model, simulations or design databases or reports
- Software design documentation
- Software source code listings
Baseline documentation (2/2)

(see also presentation from J. Gascon & Th. Otto)

Links to already existing documentation will be made, whenever required

EDMS: 1361462
EDMS structure (1/2)

- Repository of the HL-LHC baseline documentation (under the LHC hardware baseline, for which specific nodes will be created in case of new equipment)
Each Work Package will have a pre-created EDMS structure based on its systems architecture and on the required contents of the baseline documentation.

- WBS
- Schedule
- APT
- Procurement
- Specifications
- Design
- Fabrication, Assembly and Verification
- Installation-Commissioning
- Operation & Maintenance
- Dismantling
- Safety File

(links to documents in upper nodes whenever required)
Other documentation

- Non-baseline, documentation (e.g., follow-up meetings, scientific publications) can be stored in the WP workspace
- Structure will be defined with each WP
Thank you for your attention!

Questions?