

How Digitalisation can unlock hidden value in Substation Automation Systems

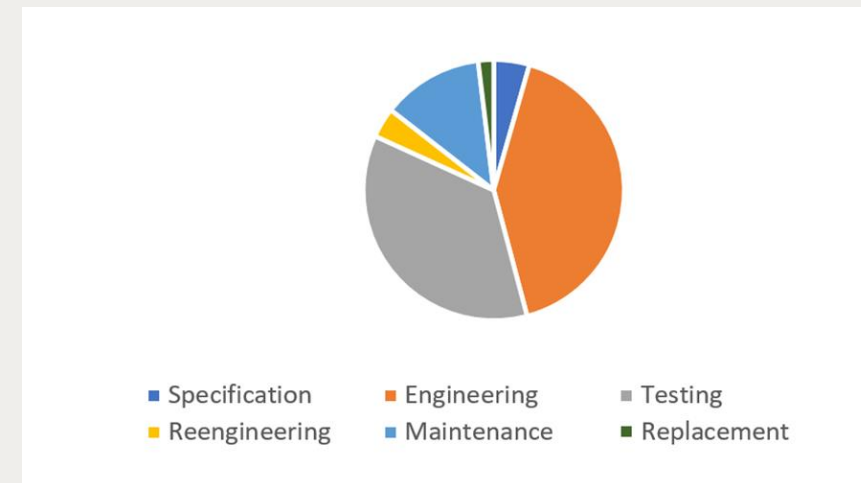
Study Committee B5, PS 1

Question 3.05 What are your expected
benefits of using digital substation concepts
and how to measure if the benefits can be
realized?



Unlocked Value per Lifecycle Phase

- Engineering
 - Enormous gain made simply by standardizing!
Standardization, Device Management & Command Line tools necessary for automating the process
- Commissioning
 - Single Data Origin + Less project engineering = Less Project Testing
 - 61850 requires **system test more than element** test approach
 - Top-Down Approach with SCD necessary for Optimized FAT – in order to emulate missing links
 - 1:1 relationship between Substation HMI and SCADA further streamlines testing



Group Discussion Meeting

Unlocked Value per Lifecycle Phase

- Reengineering
 - Flexibility to add new positions or IEDs
 - Extremely necessary for incorporating new Distributed Generation in existing PAC systems
- Maintenance
 - Corrective Maintenance upskilling
 - Firmware upgrade Remote & Batch Processed
 - Setting or Configuration Change
 - Remote Test
- End of Life Replacement
 - Plug and Play
 - Switchgear & IED lifecycle dilemma