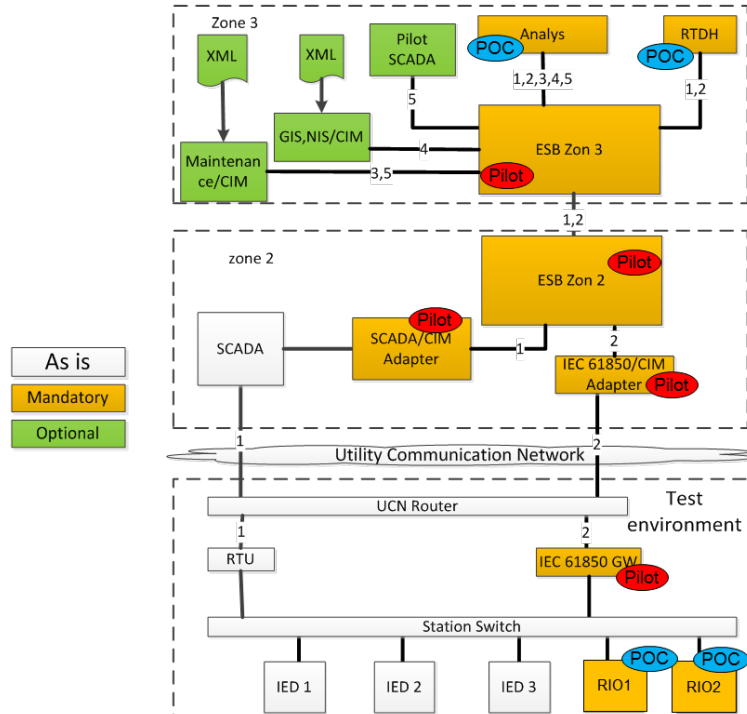


Using 61850 and CIM to enable condition based analytics of substation equipment. A review of a pilot project.

For DSOs, gathering online information at central level instead of substation level, or silo specific application could lead to more accurate maintenance and better operation decision support, by e.g. use of asset health information. In order however to avoid increasing costs linked to complex integration, standardized information exchange from station to central level should be preferred. A pre-study was first made in order to present a suitable scope of a pilot installation based on the IEC TC57 reference architecture concept. The pre-study aimed to propose a realistic scope, i.e. the scope should be as limited as possible while at the same time enabling the main parts of the reference architecture to be verified. The resulting pilot project is focusing on:

- determining how to provide analytic applications, such as Asset Health Index, with access to up-to-date, as well as historical process information according to IEC TC57 reference architecture
- Supporting the information exchange between components at central level based on CIM, including IEC 61968 and IEC 61970, and Enterprise Service Bus
- Enabling configuration and use of IEC 61850/CIM gateway to transfer data from substation automation systems to central systems
- Utilizing SCL to associate substation data with CIM asset, equipment and measurements



The purpose of this presentation is to present the results and outcomes of this pilot project as well as share our views and experience as a DSO on how to use and implement IEC 61850 and CIM to fulfill our requirements and needs.