Consistent plant design with Comos

The planning work for complex industrial plants comprises a large number of design steps that involve an equally large number of engineering disciplines. From process engineering to plant design, to electrical and C&I engineering, and to process control engineering: the BMA Group can cover all planning steps that together make up the complete project.

At the planning stage, all the above engineering disciplines normally use their own methods and planning tools (software) to realistically model the structure of a plant. This can lead to negative effects, such as:

- Data redundancy resulting from multiple data entries
- Different levels of information

Integrated and consistent data management across all engineering steps is a logical and consistent approach that helps avoid these negative effects, allows information to be managed centrally, provides for more flexibility and allows tasks to be performed in parallel.

In 2007, BMA started to use the database-assisted Comos software, which offers modules for almost all engineering work that is of relevance for BMA.

The plant design environment was integrated with the "P&ID" module. This module allows piping and instrumentation diagrams (P&IDs) and specifications to be prepared, basic and detailed-engineering data to be evaluated, and it serves as a link to electrical and C&I planning.

Now, BMA is introducing an additional Comos module. In compliance with the principle of data consistency, data for which a functional description has been provided at the plant planning stage are described and specified with additional electrical and C&I details in the "EI&C" module. Switchgear and automation solutions can thus be planned and modelled in Comos. The generated electrical and C&I data are used in function charts, which are then used as a basis for developing automation solutions. Comos has interfaces for implementing the generated code in any conventionally used process control system. All Comos modules work with standardised object libraries which allow objects to be repeatedly used once they have been generated.

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- Parallel engineering reduces planning periods
- Smaller number of interfaces means fewer error sources
- Use of standards for more dependable planning

Comos: project phases

proceeding in parallel save time