ARC Advisory Group – Briefings

Briefing: New Developments in SIMATIC IT Suites
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During the Hanover Fair, ARC was briefed by Siemens on the new developments with the series of SIMATIC IT Suites. SIMATIC IT Production Suite is enriched with standard and custom libraries and industry templates. The SIMATIC IT Intelligence Suite, is taking shape with the integration of the IndX's XHQ functionality and the development of an integration platform, and a new SIMATIC IT R&D Suite is under development; its design is based on the needs of end users in process industry with product life cycles focus, as in food and beverage, CPG, pharmaceuticals, and specialty chemicals. Siemens has developed a business consulting function to help clients and integrators justifying software investments.

Production Suite

The Siemens SIMATIC IT Production Suite exploits the ISA S95 standard that includes levels from individual equipment to the enterprise, thus offering the possibility to standardize the automation of production management as far as possible, while leaving some flexibility for different implementation at the lower levels, in order to allow for individual needs and differences in plant equipment and work flow. The suite aims at large scale implementations for large or global organizations. Most industries are under cost, profit, and time-to-market pressures, and Siemens' response is to make implementation less costly and shorter, impacting both the competitiveness of the integrators and the end users. Siemens has developed cross-industry libraries with reusable components to build processes and applications from. Library components can represent physical or logical process steps, rules for building processes, as for example methods for tracking and tracing of material (batches). These libraries can be used by partner integrators to build industry or client specific application libraries or application templates.

Intelligence Suite

Siemens is creating the SIMATIC IT Intelligence Suite by adding the functionality of XHQ from IndX, one of the Siemens companies, to SIMATIC IT. The functionality is built upon a data warehouse and messaging infrastructure adapted to frequencies and data quantities required to integrate process control, SIMATIC IT and other enterprise applications. Variables can be displayed in role-based dashboards. They can be technical, production or consumption related, of financial nature, or they can be combined in Key Performance Indicators (KPI's). Events and alerts can be visualized in real-time.

Variables can appear aggregated, while allowing on-line drill-down. Production context, such as relationships between displayed information and equipment or batches, will be included. User roles can vary from operators via supervisors, to plant or enterprise management. The potential is for users to be alerted, run on-line analysis, manage performance, and get appropriate support for decisions. Examples could be reducing the time that costs exceed desirable levels, and catch opportunities for increased revenue earlier, thereby impacting cash flows positively.

ARC believes that periodical and real-time reporting and analytics should be a single integrated functionality, with variable time windows from quasi real-time to weekly and monthly views. Visualization of historical KPI's could be considered in the same environment, or alternatively be integrated with process or product analysis capabilities.

R&D Suite

Industries with focus on the product lifecycle have shown needs to introduce production management into the R&D, or innovation, process. Applying the same rigorous methodologies in modeling the process and collecting experimental data, improves knowledge capture. This facilitates the protection of intellectual property and eases technology transfer to industrial production by providing standard operating procedures. For documents and experiments handled by R&D suite, version control and electronic approval with audit trail will be available.

The functionality complements document management systems, and Siemens added the existing formulation and specification capability (Interspec) and LIMS (Unilab).

The R&D suite aims to visualize the progress of product development projects by presenting experiments and trial production within planned project stages. Periodical KPI reporting will be available as well as the issuing of certificates of compliance.

SIMATIC IT R&D Suite is using the same framework as Production Suite. "Smart client" architecture will be available for off-line usage with synchronization to accommodate for the speed and flexibility R&D personnel need.

ARC believes SIMATIC IT R&D Suite promises coverage of the functionality required and used in product development oriented R&D organizations. There is potential for delivering additional value on top of isolated functionalities through integration, collaboration, and an integrated framework. ARC feels it is important for the degree of adoption of the R&D suite, that a clear mapping of business processes and applications be available for the complete innovation process, and the collaborative interactions and seamless interfaces with other applications be presented to clients, along with idea management, discovery data management, recipe simulation and collaborative process development, document management, and project and portfolio management.

Consulting

Siemens has built a business consulting capability to help clients justify software projects. Before an economically justified functional design can be made, a target business process needs to be defined. Siemens' experience is that end users may not have analyzed existing processes or defined target processes. Siemens' intent is therefore to build up guidelines for optimal production management processes by industry. ARC welcomes this approach, while recommending each end user assess the added value for their current business processes, and design the target business process, system and implementation, based on the incremental added value that a new project would bring.