Innovation by design: SOP Digitalization - From Paper to Tablets

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The fine chemical industry with its large mono-product and smaller multipurpose production plants operates in a very raw material, energy and capital intensive space. These challenges are amplified by intensive competition. The chemical industry is therefore today featuring in many domains a high degree of process automation and digitalization. However, several key aspects of the chemical production activity have yet to reach the same level of digital transformation. Standard Operating Procedures (SOP) providing production instructions for the operator are one typical example. Today, SOPs are still mostly written with standard word processing tools, used and completed manually by operators as a paper document, manually transferred to and evaluated in spreadsheets and finally archived in paper or scanned form. This is clearly not an efficient approach and calling for a radical change; a digital transformation. – However, tools allowing to create, use, evaluate and archive SOPs in a digital, fully integrated and user-friendly manner are not readily available on the market.

At Firmenich, we decided to develop our own web based application in close collaboration with Apptitude SA allowing us to digitalize the entire SOP life cycle. Chemists and production experts can now create and update SOPs in a modular fashion with a computer-assisted tool. Operators in the plant follow the instructions on a tablet allowing them to easily add photos, observations and videos. Production supervisors and chemists can track the entire production process remotely and in real time together with the widely available process parameter trends. Last but not least documentation, evaluation and storage occur on-line and automatically. - An 'Innovation by Design' rather than an 'adaptation of an existing, generic tool' approach has been adopted to ensure that the system provides the required functionalities while granting at the same time full digital integration in a simple and efficient manner.

The following presentation will describe the system put in place to digitalize the entire SOP process, to move from paper to tablets, to ensure data as well as improved process safety and, last but not least, we will discuss the actions put in place to earn the crucial buy in of all stakeholders and users.