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# SUPPORTING THE TRANSITION TOWARDS A PAPERLESS MANUFACTURING WORK FLOOR

**Optimizing the implementation of the Smart Production Suite.**

This thesis aimed to research the current transition of digitalizing a manufacturing work floor by implementing the Suite created by Smart Production Solutions. Subsequently, it is investigated how this transition can be supported.

SWOT-analysis of paper-based versus paperless:

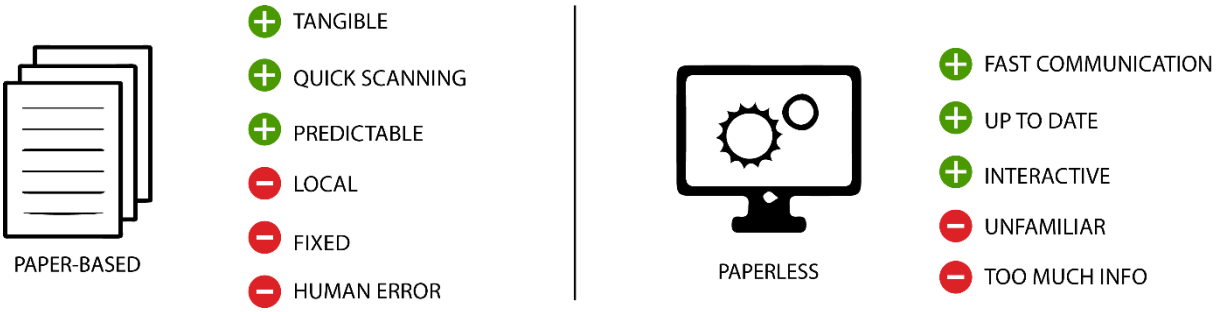


*Figure 1: SWOT-analysis*

In a paper-based work environment is communicated with paper files between different departments. The supervisor distributes the paper-based orders to the operators. When the operators filled in the papers, the administration puts the information in the online database. **These steps are sensitive to human error and are not efficient for the production process.**

In the paperless work floor, the operators put the information about the orders right away in the database. The communicated message stays the same but is way faster. The information goes to the ERP-system of the manufacturing company. **The Smart Production Suite provides a digital connection between the work floor and the office** (see figure 4). The Smart Production Suite operates following the principles of lean thinking, which focusses on the reduction of waste in the production process. The Smart Production Suite is reviewed with a heuristic and a participatory evaluation. It is concluded small details in the graphical interface could be reviewed more precisely and practical issues resulting from the experiences of the manufacturers could be considered. Yet, **overall the Smart Production Suite functions properly and has a convenient user interface.**


*Figure 2: Paper-based work floor*

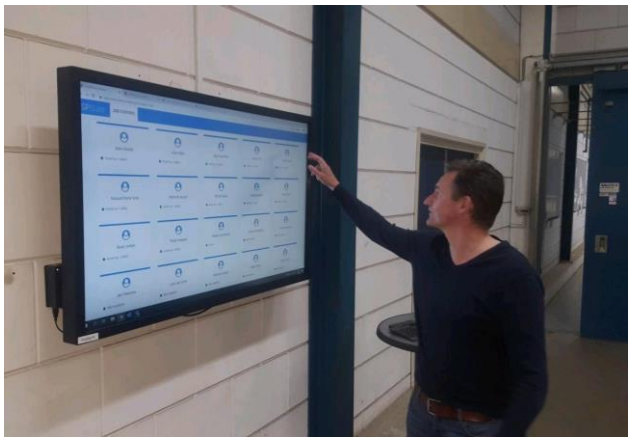

*Figure 3: Paperless work floor*

Various stakeholders are connected to the manufacturing work floor and influenced by the transition towards a paperless work floor. **The most interesting stakeholders are the supervisor, the operators and the administration department.** The supervisor gets more time to keep an overview of the work floor and aim for improvement. The operators receive more responsibility for putting the information in the system. The tasks of the administration department are partly replaced by the Suite. The quality of the administration improves as it is not sensitive to human error anymore, and the people have more time to organize other issues.

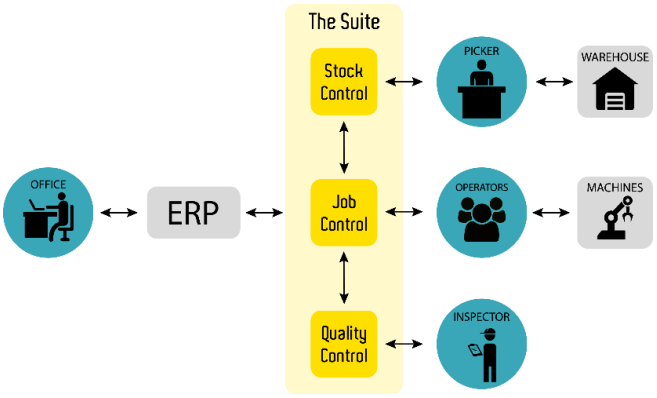


*Figure 4: Communication on the paperless work floor*

Actions of people are influenced by their perception. Human perceptions are affected by the past, the present and the future. Besides, the performing of human is closely related to rewarding. Next to these core principles of human behaviour, different learning styles are investigated. **Blended learning is often applied to the learning process of an application.** This concerns a combination of face-to-face instruction and computer-mediated instruction.

The optimization of the implementation of the Smart Production Suite is a framework called the FITS as feature for the App & Running methodology. **The Smart Production Suite truly bears fruit when it is accepted by its end-users.** The FITS guides the manufacturing office in the implementation process and tells the office per stage which steps should be taken. It acknowledges the value of the cognitive aspects of the employees during a transition. In the design process, managers and supervisors are interviewed and operators are questioned making use of a survey.

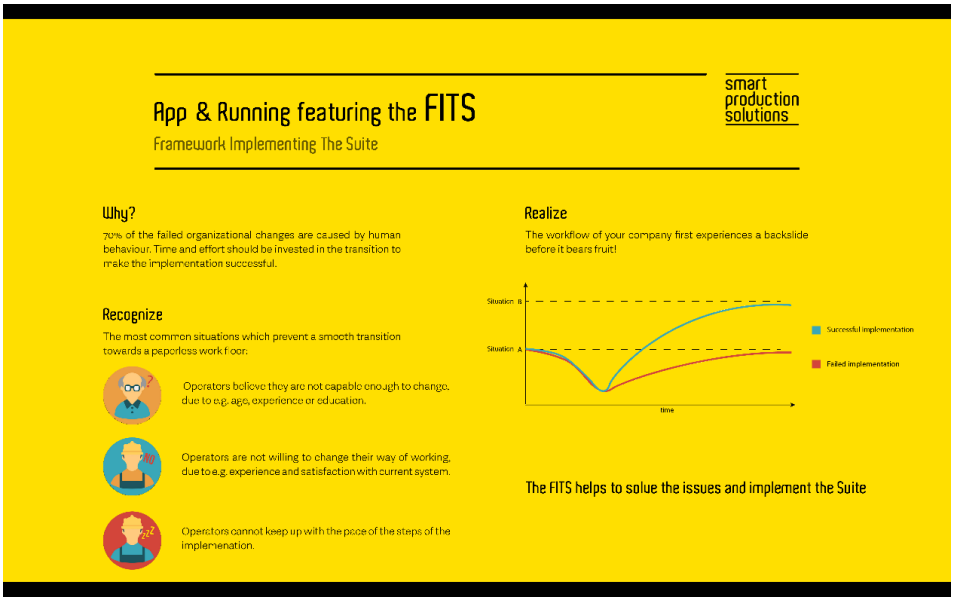


*Figure 5: Frontpage of the FITS*