



# PLANNING BOARD - EFFICIENT CONTROLLING OF TIME-MANAGEMENT DATA

## Ideas on utilisation

Especially in small manufacturing companies, large lots and production orders are often only insufficiently tracked in throughput. A search for the cause of a missed delivery date, for example, is therefore more difficult or requires a lot of effort. One way to improve this situation is to record production times and assembly times or as current order processing status via mobile devices. This allows a higher resolution database for later evaluations to be created with only little additional effort.

## Potential adopters of technology

Small and medium-sized enterprises, where manual tasks are often carried out on many highly networked workplaces during production, benefit in particular from a small and lean implementation for data acquisition using simple mobile devices. Complex products with a high degree of customization and small quantities are typically part of the product range.

## Advantages of technology

Through a realized data integration, existing databases and operative systems can be used and evaluated in a joint context. The low-cost and a user-defined depth of the acquisition of production data improves the basis for an accurate time and cost forecast. Additional analyses can be used to optimize the utilization of machines and workplaces, throughput times and material flows. By using visualization tools, controlling can also be supported.

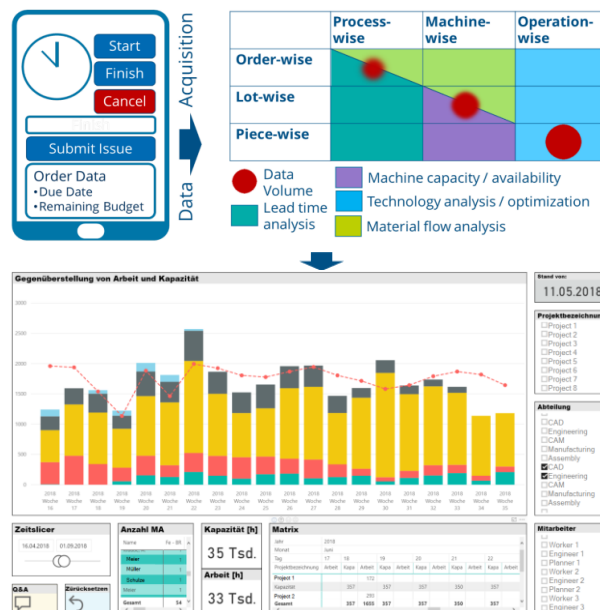


Figure 1: The acquisition of production data with mobile devices enables a variety of analytical evaluations to be carried out (Top), Example of Data Visualization in the

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## Market and context of technology

The data acquisition in production is either very occasional, since the technology used (terminal, scanner) causes effort in the acquisition, or is cost-intensive, if it takes place automatically through the use of complex technology (sensors on machines, component tracking, activity tracking via video). Maximum flexibility can be achieved through open source implementation using freely available components. The advantage here is that no finished solution is purchased, but only a construction kit with all required components is described. These can be individually adapted with instructions and maintained and operated by the company. Existing sources and systems can be integrated without problems. The use of the mobile recording devices (mobile phone, tablet) was fully accepted on shop floor level. Relevant here is to include all involved in the conversion and introduction, in order to create a higher acceptance.

## Preconditions in adopting enterprises

The use of an ERP or PPS system should be established. Simple digital work plans must be used for work preparation. As technical equipment, mobile devices must be purchased and an internal W-Lan has to be set up. It makes sense to assign an employee to deal with the technology and then is able to maintain the implementation. Once set up in a company, the technology can also be transferred to other divisions, e.g. construction, work preparation, in order to be able to acquire order-related expenses and costs.