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Efficiently balance workload variability in your warehouse with Labour Management in SAP EWM.

Introduction

Every warehouse manager, whether working for an ice-cream producer, a sunglass manufacturer or any other company, is aware of the workload variation in the warehouse. Many managers wonder how to accommodate this workload variability. Knowing upfront what workload is expected and balancing the resources accordingly are imperative to control this variability. Furthermore, it is important to track the actual performance of resources to be able to act proactively in case of deviations from the initial plan.

Many companies struggle to have visibility on how much work is heading their way, how much staff they need in specific warehouse areas and how they can measure the efficiency of their operators. This paper will first discuss Deloitte's point of view on best practices for Labour resource management. Next, it will dive into the Labour Management functionality in SAP EWM. Finally, the paper presents monitoring capabilities in SAP EWM.

Successful Labour Resource Management

A successful Labour resource management approach enables companies to plan how much time and resources are necessary to execute a predefined amount of work. Warehouse managers ought to optimize Labour efficiency and allocate resources to the area where the work exists by calculating the time necessary to complete each key task. Having such moment-to-moment visibility on the workload is only possible with real-time updates. Managers should take the requirements for each different stream, such as base receipts from suppliers, stock (re-)deployments from and to other facilities or returns from customers, into consideration.

An effective Labour resource management typically consists of four stages. These can be categorized as long-term planning, short-term planning, execution, and control of execution performance.

01. The long term planning stage gives a forecast estimate of the workload for different warehouse activities, e.g., picking or putaway based on planned receipts and customer orders. The warehouse manager must be able to efficiently plan his resources based on the workload in the different designated areas before the products arrive at the warehouse. In environments with long lead times, seasonality and high demand fluctuation, the long term planning has to be reviewed and adapted frequently.

02. The short term planning stage is the detailed workload calculation performed when goods arrive at a facility or when the orders are released, and contains information about the work area, activity type, and duration to calculate the amount of shipping or receiving work for each activity and work area. The detailed workload information for the coming hours and days gives the warehouse manager the possibility to adapt the resource planning in order to meet target completion times.

03. During the execution stage, the progress tracking of the workload is crucial. It enables the identification of fluctuations in the process, ability to react properly despite limiting factors (bottlenecks) and capacity to shift resources to ensure all the work gets done within the boundaries of the warehouse-relevant KPIs. Unplanned activities, such as sweeping or clearing up can also be captured to build up a complete picture of the worker performance.

04. The execution performance control stage is based on the gathered data about planned duration, actual duration, Labour resource, and type of activity. By comparing the actual and target times, deviations from the standardized cycle times can be quickly identified, which should lead to agreed action points to improve performance. This last stage is fundamental to drive efficiency and allow the continuous reduction of Labour costs.



Labour Management Stages in SAP EWM

Labour Management, an embedded functionality of SAP EWM, enables efficient management of resources throughout the four stages described in the previous section. LM uses existing warehouse management objects, such as warehouse task or activity area. The Engineering Labour Standards for each key task are used for time calculation based on different predefined and flexible settings.

In SAP EWM, three main Labour Management stages are defined:

01. Preprocessing

The preprocessing functionality in SAP EWM provides an overview of the upcoming workload for inbound, outbound, and cycle counting activities before the warehouse tasks are created. The result is only used for planning purposes and allows resource planning for a particular activity or activity area.

02. Planned workload

The planned workload phase begins when warehouse tasks are created. Warehouse tasks will determine the destination and/or source bin location of the activity. Detailed information about the workload for the coming hours and days for each activity area is available to assign resources.

The planned duration of each individual task is calculated by using Engineered Labour Standards. A warehouse task, like picking, is a combination of different work steps. To calculate the timing for a specific task, the time for each work step, which varies by warehouse zone, needs to be defined in advance. Predefined conditions (e.g. weight >=0) and formulas (workload duration calculation) are

determined for the execution of a specific task in a specific warehouse zone, e.g. use condition 1 and formula 1 in the light parts zone for putaway. All these parameters and calculation options in the different phases provide full transparency about operations. Moreover, the conditions and formulas are easily adaptable, which enhances the flexibility for the warehouse manager.

03. Executed workload

The executed workload documents contain all relevant data after activity completion, such as name of processor, start time, and end time. The data facilitates the comparison of actual and planned execution times. It also indicates the changed planned duration, which can deviate from the originally calculated planned duration because of the defined speed of the resource type, a quantity difference or unforeseen steps that had to be performed.

For a complete coverage of the work of the employees, unplanned activities, such as sweeping, need to be captured as well. Therefore, SAP EWM introduces the concept of an indirect Labour task for these activities. Each worker can independently record time spent on specified tasks and indicate the content of the work. The input can be recorded with a scanner using a radio frequency (RF) device or on the desktop. Users can also upload indirect tasks by mass, e.g. for a team meeting. This allows for more independent time management for each worker and provides the manager with a broader picture of the employee's work performance. An entered record is changeable by the supervisor if the entry is not consistent with reality.

Labour Management Monitoring in SAP EWM

For day-to-day business follow up, the SAP EWM Warehouse Monitor is a powerful tool to display the relevant information in a way that is easy to handle. To display the executed activities more easily, Labour Management offers a wide range of preexisting measurement services like the count of posted physical inventory documents. Beside these preexisting ones, personal measurement services can be built, which provide the flexibility to decide which KPIs should be tracked in your warehouse without any custom development. An example of personal measurement service could be the number of work packages (warehouse orders) that were performed by an employee during a specific timeframe. Furthermore, activity trends can be displayed in a specific warehouse zone to check for productivity improvements, execution time variation or actual and planned time deviations.

The Labour Management functionality of SAP EWM allows for easy comparison of employee performances through evaluating efficiency of each employee. LM uses the actual duration of one or more employees during a specified timeframe and compares it to the planned workload that was calculated based on the Engineered Labour Standards. This complete overview of the workers' performance can be used as valuable input for the 1-to-1 performance sessions and to determine rewards for outstanding performance results. Due to the link with the HR module, the frequently created performance documents can also be sent out of the SAP EWM system. This prevents double system input and makes the general performance process more effective.

By comparing the recorded direct and indirect Labour with the actual working hours, the distinction can be made between productive and unproductive time. This comparison can help identify performance improvement opportunities, by indicating when an employee is losing time and needs to work more efficiently. Additionally, employee salaries can be based on this information, with the system configured to trigger payment only for the hours electronically recorded.



Conclusion

In times of high Labour costs, a Labour Management tool can assist warehouse managers to plan their workload more easily and assign resources efficiently. The Labour Management functionality of SAP EWM is used to make warehouses more productive through more effective resource planning. It offers a wide range of features that facilitate scheduling of warehouse activities and enables better resource performance

tracking. SAP EWM presents all required information in a structured way to drive an easier decision making process for managers. Self-defined KPIs can be easily monitored and negative trends can be identified quickly, allowing for prompt recovery plans. The combination of these functionalities makes Labour Management in SAP EWM an essential tool that makes warehouse manager's life easier every day.



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