

Decision analysis task 1

Finance



Workflow Study: “ Shuzworld” Case Study Celina Flores January 28, Workflow Study: “ Shuzworld” Case Study A. Improving the Current Workflow One of the major recommendations I would propose for improvement of the present workflow at Shuzworld’s Shanghai production facility for Rugged Wear boots is that the management should rearrange the production process into a five step process using an assembly of five workstations from the current 8 workstations. For example, the results of the assembly balancing decision analysis tool revealed that the efficiency of the workflow at the assembly line can significantly be improved by reducing the number of workstations from the current 8 to five and combining certain tasks at some of the workstations in order to minimize idle time.

Justification

Based on a quantitative analysis of the above results of assembly line balancing tool, the overall efficiency of the workflow at the Shuzworld production facility for Rugged Wear boots assembly line can significantly be improved by reducing the number of workstations from the current 8 to five and combining certain tasks at some of the workstations in order to minimize idle time. Generally, it is evident that a number of the current tasks in the production facility can effectively be performed in one cycle without the need to exceed the cycle time. For example, task A takes full cycle time (10min) and therefore should be left on its one station alone. On the other hand, task B and C require 9 minutes and 10 minutes cycle while task D is an 8 minute task. However, the three tasks E, F and G can easily be performed by a single workstation. This decision can be explained in the calculations below:

in order to effectively determine the minimum number of workstations

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required to enhance the efficiency of workflow, the cycle time can be calculated as follows:

Cycle time= Production Time available each day

Units required each day

However, since there are up to 40hrs of work in a week, it can be assumed that the each day has 8 hrs 60 minutes of work. Consequently,

In this regard, number of workstations required to enhance the efficiency of workflow can be calculated as:

The Min. no of workstations is therefore 4.6 which is approximately 5 workstations.

Finally, the choice of assembly line balancing as a decisions tool in the workflow analysis is particularly based on the fact that it enables the organization to effectively determine the layout and organize its assembly line in the most efficient way by using the correct number of workstations (Heizer and Render, 2010).

B. Analysis of the Initial and ongoing Costs

The initial and ongoing costs required for the new sandal line that is currently being introduced including the number of hours and the cost of labor every month can effectively be determined using an appropriate decision analysis tool. In this task, the selected decision making tool is the learning curves. Learning curves decision making tool has particularly been chosen because it provides the most appropriate way of analyzing both the initial and ongoing costs needed (Goemans and Williamson, 1997). In addition, the tool also establishes the important relationship between the times required for the production.

Based on this analysis, it has been determined that a 4 month production run of Maui sandal will cost approximately 20, 121. 71 at the labor rate of \$1. 08 per hour, taking a total of 20126. 97423 labor hours. With regard to the impact of the costs on the decision to continue with the implementation of the new line, it can be seen that the hours required for sandal production decreases with the production of more sandals. As a result, by continuing to produce the line, the total labor costs of the company will continue to decrease but at relatively lower rate due to the production of more sandals.

C. Recommended Staffing Plan

The recommended hiring plan is that the organization should adopt a strategy in which instead of hiring new employees, operations' management includes the development of current employees to acquire an all-rounded skill set which enables the company to not only be economical but also highly efficient in delivering quality products based on the efforts of equally and highly competent line managers and employees who can deliver on both ground work and management tasks. This would particularly aim at placing the right workmanship in the most desirable positions, allocating resources that directly influence the quality and efficiency of deployed efforts.

With respect to prioritization of efforts, all employees entrusted with the responsibilities of serving in various departments or lines of production would be trained and developed such that they are able to handle various tasks that are outside their main job description. Through this approach, departments with high priority tasks can have extra labor borrowed from other departments to ensure priorities are met in a timely manner without the need of extra costs (Zatzick, Moliterno and Fang, 2012). In this case, instead of having specialization strategy employed to specify the tasks and

responsibilities assigned to each employee, all employees would be trained to acquire equal competencies useful in any line of production, management and supervision or projects.

D. Short-Term Scheduling Techniques

Based on the analysis of the production at Shuzworld's Shanghai production facility, two short-term scheduling techniques are recommended to ensure efficiency and output of the production facility namely:

a. Forward Scheduling

In this technique, scheduling starts immediately after processes' requirements are known. Processes and tasks are performed to customer orders and delivery is requested as soon as it they are completed. However, one downside of this technique is that it promotes backlog of work-in-process inventory.

b. Backward Scheduling

This technique takes the final tasks and schedules them first. The processes of the entire task are ranked one after the other in reverse order. However, based on the nature and complexity of the tasks, neither the forward nor the backward scheduling techniques can be deemed the perfect approach.

Hence, combining both techniques helps to delimit the constraints of using one method.

Finally, for better results in the scheduling, it is recommended that line managers be able to limit the completion period through Prior determination of the period required to complete one job facilitates this objective, Maximize utilization of resources, Limit work-in-process inventory, and Limit the order waiting period.

References

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