MIDDLE TENNESSEE STATE UNIVERSITY

Continuous Improvement and Problem-Solving

MGMT 6760

Cause and Effect Diagram

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People

Information

**Cause & Effect Diagram**

Processes

Too Few

Too many

Not provided – (User related)

Website/Software crash

Poor Organizational skills

Poor technical skills

Poor Time Management

Poor multitasking skills

Poor attention to detail

Lack of Training

Skills

Availability

Poor Temperature

Slow Internet

Employee Output

Operating hours

Hours logged

Process Repeats

DPMO

Poorly Trained

Not permanent

Inconsistent hours

Completed orders

Instruction level

Poor Communication

Insufficient Computers / Capital

Small Workstation

Noisy Environment

Measures

Substandard Tasking

Large email traffic

Poorly Defined

Too many checks

Excessive steps

Poor process handoffs

Environment

Poor Order Cycle Time

**Cause and Effect Write-Up**

The six depicted categories that contribute to poor order cycle time are: people, processes, information, skills, measures, and environment. Of those six categories shown: the users' skills, their work environment, and their current processes are the most impactful.

Currently, the employees must manually review and approve or deny each new order that is received. To do this, the employee must first:

1. Locate the purchasing organization’s order code,
2. Research the approved amount for the billing period,
3. Determine the purchasing organization's remaining allotment, and
4. Ensure sure that the supplied quantity will not cause the customer to exceed their maximum allotment permitted for that billing period.

This process requires the employee to examine multiple spreadsheets, while also potentially multitasking. The time-consuming nature of this process, coupled with the fact that many of these steps could be automated within Excel, contributes significantly to the poor output metrics. For this reason, the process is a primary reason for poor cycle times.

In addition, insufficient technical skills among employees, specifically in Excel, have been identified as a significant factor that contributes to poor order cycle times. While employees possess an understanding of their roles and responsibilities, they lack the necessary proficiency in Excel and computer literacy to perform effectively. A review of the process has revealed that data filtering could provide an efficient way to access some of the necessary information, but staff members have not utilized this option and instead resort to manual searches. With enhanced training, improved attention to detail, and better technical skills and organization, higher output could be achieved per workday. For these reasons, the users’ skills have been identified as a primary reason for poor order cycle times.

Lastly, it has been discovered that the work environment is having an adverse effect on order cycle times. Following an internet speed test, it was found that some remote employees in the business have slow wireless connections, while office employees have fast, wired connections. This disparity in internet speeds has caused significant differences in the efficiency and speed of business operations. Those with slower connections have experienced repeated delays in accessing critical information and applications, resulting in reduced productivity and increased errors or mistakes with orders. As a result, slow internet connections have negatively impacted the team's ability to complete tasks and slowed down the overall pace of work. Moreover, employees' frustration and time wasted dealing with slow connections have affected their morale and job satisfaction, which management believes has further hindered productivity and performance. It is now apparent that slow and unreliable internet connections among remote employees have had a substantial impact on the business's success and competitiveness. For this reason, the work environment has been identified as a primary cause of poor order cycle times.