Discussion-8 IS maintenance phase

Discussion Topic:

Your organization has successfully implemented a new order processing system. The system has now entered the maintenance phase and management has asked you to outline methods for gauging the maintenance program's effectiveness. Provide your management with some key measurement indicators and examples of effectiveness.

My Post:

Hello Class,

To gauge the maintenance program's effectiveness, different metric indicators can be tracked to measure the effectiveness of a maintenance program. Metrics such as Mean Time Between Failures (MTBF), number of failures, and type of failure.

Mean Time Between Failures (MTBF) is a metric used to measure the amount of time between failures, providing the basis to calculate a widely used measure of system quality (Valacich & George, 2020). In other words, the metric measures the average time that passes between one system failure and the next. An MTBF increase is an indicator that the maintenance process is resolving issues. On the other hand, if the MTBF does not increase, it is a sign that problems or issues are not being adequately addressed. An effective MTBF use case example could be the use of the MTBF for the order processing system, increasing by 20%, from 150 hours to 180 hours. This indicates that the maintenance process is resolving issues that were previously present in the order process system.

The number of failures can be defined as the number of times the system has failed over a period of time. A decrease in the number of failures during a period of time indicates that the maintenance program is resolving issues and that it is effective. On the other hand, if the number of failures does not decrease, it is a sign that the maintenance program is not effective. An effective number of failures use case example could be last month, we only had one Priority 1 incident, compared to four in the previous month, which significantly reduced order processing delays. This indicates that the maintenance process is resolving issues related to priority 1 incident - order failures that were previously present in the order process system.

Type of failure is a categorization of failures; it is how failures are classified through the process of examining them. Analyzing the type of failure happening can be an indicator that provides a clear picture of where, when, and how failures occur, revealing the cause of issues and pinpointing problematic areas that may exist in the system. A maintenance program can use the information provided by the analysis to identify or better understand a reported issue, as well as to proactively address other issues before they are reported. An effective type of failure use case example could be an analysis of failure types showed that 'Incorrect Product Discount Application' errors accounted for 30% of all order discrepancies, and it is up 5% from last month. Investigating this failure type could help the maintenance team discover a potential bug in the recently updated promotional module. Fixing a potential bug related to incorrect discount issues would prevent future inaccurate promotion calculations and allow the team to correct existing ones.

These three indicator metrics can help gauge the effectiveness of a maintenance program, making them an essential component for managing and improving maintenance processes.

-Alex

References:

Valacich, J., & George, J. (2020). Chapter 14: Maintaining Information Systems. *Modern Systems Analysis and Design (9th ed.)*. Pearson.