

How to Prevent Problems Before They Occur

An MIS in an organization might be subjected to many types of risks; there are problems which can arise from different types of data, such as the risks associated with big data and dangers of bad data among the others. If such risks take place, it might be too late for the organization. Hence, organizations have to take right measures to prevent themselves such problems before they occur. It is obvious that this depends on the organization's ability to predict the possible risks that the MIS might face, and the problems that such risks could raise.



Recommendations

As MIS helps to evaluate risks within an organization, it means that when decisions are based on an imperfect or defective MIS, then risks will directly increase. Defectives might refer a number of situations like; the MIS is not programmed well, is not secure (i.e. data might open to the manipulations), requires repairs (i.e. there might be some blockages on routine flow of processes) and such problems may lead to the wrong decisions. These may also cause operational risks which affects other areas, or other levels of the organization's operations. General information systems or specific mitigation measures might deal these risks.

I. General Information System Precautions

Preventing problems before they happen is part of "risk management". There are four issues to take into consideration which are commonly used when designing a risk mitigation framework: Policies and practices, Operational processes, Staff and management and Feedback devices.

In most cases, feedback devices and operational processes work together so, it can be hard to separate them from each other. To consider an MIS as efficient and usable, we don't have to look only operational side, it should also informational. Decision makers must be able to use MIS to measure performance and manage resources, also make sure that the organization meets regulatory requirements (i.e. accounting reports). Controls are used to support risk management systems via policies and practices. An organization should establish a policy framework to identify risks easier, to ensure effectiveness of MIS and to establish reliable monitoring.

Today's world, organizations make the most of technological opportunities but there are also some risks. In one hand, decision makers have ease of access to more information for making decisions. On the other hand, there are more risks of inaccurate reporting, which directly affects decision making. There are many systems which data can be extracted from; there is increased need to have some procedures to ensure the correctness of the data and also the relevance of the information. And for another important point, it is a fact that MIS is based on multiple equipment platforms (i.e. minicomputers, tablets, mainframes), so it is important to ensure that the systems on each devices have well-defined controls like in larger mainframe systems.

II. Specific Elements of MIS Usability

The usability of the MIS can be defined based on five elements:

Timeliness: The MIS should ensure immediate decision making by providing current information. From this perspective; MIS should collect data, edit and summarize the data quickly. Moreover, it should adjust and correct any errors.

Accuracy: To ensure the accuracy of information, the MIS should have automated internal controls throughout its processing system. This ensures proper editing and balancing, and internal controls check.

Consistency: This refers to consistency for data collection, processing and reporting. At the same time, the MIS should be updated with changed procedures so the processes of data collection and reporting can change over time. There should also be effective monitoring procedures for such kind of changes.

Completeness: The system must provide complete necessary information, and this helps to avoid information overload for any decision makers.

Relevance: The MIS should provide only the appropriate and concise information that is complete and relevant for the decision making process. Relevance means that the MIS should only provide the information needed at the management level.

In the lack of any of these elements, MIS might provide “bad data”, and the bad data could be “poorly defined... simply wrong, incomplete, or out-of-date” (Redman, 2012). To give an example for the dangers of bad data; Redman underlies that the bad mortgage data which financial companies called “Collateralized Debt Obligations (CDOs)” in the mid-2000s led to the financial crisis in 2008.

Many organizations which deal big data experience such kind of problems (Redman, 2012) (Franks, 2012). Frank suggests that when dealing with new data, the organization should avoid a lot of information at the same time, rather the organization should “start small” (Franks, 2012). This suggestion also makes it easy for the organization to test and evaluate the results, so starting with small data should be considered as a test drive; the company still needs to evaluate big data but need to see itself how ready to play with big data. In other words, organizations learn on-the-job.