

**MANAGEMENT INFORMATION SYSTEMS**

**This paper is prepared and submitted by**

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**COMPUTER AND TECHNOLOGY**

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- (1) There are certain elements that must be defined as the internet infrastructure is under design. In order to manage the data resources and the required data interfacing capability of the data infrastructure, it is necessary to establish what is called administrative structure and the methodologies that must be used to store the data. The processes that will be used to manipulate the data as well as the interface that will be used to control the data across and between different systems are as much of importance at the design level.

Part of the design process is to include backup equipments that allows data storage and/or data retrieval in any eventualities that may disrupt the flow of data (i.e. power surges leading to black outs or accidental deletion of important files). Back up equipments include uninterrupted power sources (UPS), diskettes, external drives, and software programs and internet sites that enables data retrieval in unexpected cases. This ensures that data can be recovered and retrieved safely without the burden of losing important data.

Because the project is a campus-wide IT infrastructure, the use of the system is not exclusive to students as school administrators and teachers are given access to the system. This would mean that a filter or accessibility option must be integrated in the system to restrict unauthorized access to sensitive files that may be uploaded (or downloaded) within the system (banning students from editing the grades that teachers submit for example). By the time that these concerns can be fully addressed, together with the issues on the data architecture and infrastructure's design, and the whole system passed the test-run standards, only then can the on-campus internet infrastructure be made available to students.

When designing an IT infrastructure, the major types of data, software, and equipments necessary to support the enterprise must be defined at the planning stage so by the time implementation stage comes, retrieved data are complete, consistent, and easy to understand. Not to mention the physical media or hardware that will host the data. These thorough preparations are necessary to be able to test-run the system repeatedly to ensure reliability. After the system is validated and checked for reliability, scalability then follows. Scalability is the measure of a system's ability to maintain reliability and availability without compensating on its performance. Scalability can be achieved through repeated reliability and availability testing.

Some of the constraints that will influence the IT infrastructure design includes the requirement, technology, budget, policies and processing of data of the campus. Schools will generally look for an effective IT system with good performance capable of storing voluminous data and at the same time economical. Enterprise and infrastructure requirements will generally include such elements as economical and effective system expansion, acceptable performance levels (especially system access speed), transaction reliability, and transparent management of data. It also generally allows provision for future expansion and technological integration. Thus, the design should be able to predict future expansion and gives allowance for upgrade-able system to be able to pass for implementation. To be able to exactly do that, the infrastructure design must be able to show calculations and hardware provisions for upcoming software and hardware upgrades.

(2) The five most important reasons why organizations need to develop IT systems are:

1. Organizations, especially the larger ones, need to store data and information on as little space as possible, be it electronic or printed, that are considered necessary by the organization.
2. IT systems have the abilities to streamline, refine, and validate the storage, warehousing, and retrieval processes of data so that every part of the organization can access the same data they need.
3. IT systems allow speedy, reliable, and accurate data management and sharing across the organization's network.
4. Complex processes within the organization can be handled single-handedly by IT systems and are usually more reliable than when the classical method of data storage and sharing is employed.
5. IT systems help prepare the organization for bigger challenges by providing it with efficient, fast, and reliable data processing.

These five reasons assert the importance of all the concepts discussed in every chapter of the text book.