**How information derived from business performance and other external information source can be a key to improving competitive advantage.**

**1: Leads to insights into business that the competitors cannot have.**

This makes it easier to outsmart the competitors since the unique information at hand, cannot be retrieved by them. Customers now shift to buy your products and acquire your services.

**2: Helps in gaining a new perspective.**

Customers are the most important people in a business, so it is advisable to take the perspective of the customer and ask how the information system should be designed to enhance customer experience hence to make them happy with your products or services.

**3: Reduces reaction time for change.**

Reduction of reaction time is the success of the business. Fast decisions typically means more mistakes and mistakes in business can be very fatal its effective progress.

**4: Used for predictive analysis so that the organization is one step ahead of the competitors.**

Extracted information from the existing data sets to determine patterns and predict future outcomes and trends. This leads to a better understanding of the customers, products, competitors and identify potential risks and opportunities for a company.

**5: Makes the organization effective and efficient.**

Information will always make a business firm or an organization be alert and know what is coming their way. This makes it always to know what to do, how to do it and when suitable something is to be done hence making it more effective and efficient.

**Unethical methods adopted by unprofessional IS personnel to compromise the integrity of information systems and business performance in general.**

**1: Piracy.**

One of the most unethical way of use if information system is piracy. It includes downloading software or files including games and movies. Pirating is the cyberspace equivalent of stealing, like using an image on a website without giving any credit to the original creator.

**2: Hacking.**

The act of invading another person’s file in order to take valuable assets or information. Hacking can also turn quickly to identity theft and exploitation.

**3: Cyberbullying.**

Act of intimidating someone through violent or intimidating means. Calling someone names or harassing someone in a cyber space can lead to very serious consequences like suicide.

**4: Data fabrication.**

This is the alteration of records and forging signed documents for the purpose of deception. Data fabrication can occur where a student alters with his/her school academic records to have a higher score or good disciplinary remarks.

**5: Phishing.**

Sending an email to a user falsely claiming to be some type of organization attempting to scam the user into giving up private information that will be used for identity theft.

**6: Plagiarism**

This is the using or presenting the work of others as your own work even if it is committed unintentionally.

**Describe five service clusters that can be used to set up IT infrastructure in modern business organizations.**

**1: Intelligent System Technology.**

Intelligent System Technology compasses on deducing and inducing inference, deep learning, machine learning, tools and techniques used to present and process data, information and technology.

**2: Interaction Technology.**

Uses wearables to track people, individuals’ health, friends and transactions and just everything people do see or learn. Extending this technology to customers provide the organization with a new powerful way to track what their customers are doing with their products.

**3: Software Technology.**

It provides an upgrade for solutions and hence become available for customers and has a reduced maintenance cost.

It also provides customers with unique offerings to specifically meet their needs.

**4: Sensor Analytic Technology.**

The primary goal of a Sensor Analytic is to detect anomalies.

It is capable of tracking, analyzing and predicting all sorts of activities including threats since the sensors will be “always on.”

**5: Cyber Security Technology.**

It protects computers, servers, mobile devices, electronic systems networks and data from malicious attacks. Also known as Information Technology Security. The Cyber Security Technology cluster requires continuous attention, investment, testing and implementation within an array of clusters.

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