

## Chapter 5.9

# Workplace Safety and Personnel Well-Being: The Impact of Information Technology

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### **ABSTRACT**

Information Technology (IT) has emerged as the global driving force behind business success, improved performance, ease of operations, and accuracy. The growth of a business cannot be separated from the security and safety of the business environment, where the health of employees and facilities must be guaranteed. Therefore, this

paper examines the role of IT in the management of workplace safety and personnel well-being in a challenging economy. The paper covers IT application in a safe working environment, personnel health, machinery safety, occupational hazards, risks, and accidents. This paper also addresses challenges that hinder the use of IT in the administration of health safety and environment issues. It concludes with a strategy for an effective utilization of this important tool in the development of health safety and environment.

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## **1. INTRODUCTION**

The issue of workplace safety and well-being has conveniently enlisted among current global challenges that call for effective management measures so as to secure the future ahead. Appreciable effective management could be reached through direct application of Information Technology (IT) strategies and tools. For instance, IT tools are used to monitor workplace environment and track some geographical locations to trace a fault or correct a problem. Also various IT tools are used to keep track of activities in work-areas that offer preventive strategies that save many situations that are hazardous to safety and people's well-being.

Health and safety, Ray Hurst (2009) declared is about being prudent and intelligent in decision making. The world economy may be enduring a tough time at the moment, notwithstanding Health Safety and Environment standard must be optimally secured to avert the danger of people being needlessly hurt or killed. Information technology has been discovered as the backbone for effective management of Health Safety and Environment Policy in every challenging workplace and global economy. Rapid and dynamic growth in Information Technology has resulted in the discoveries and arrival of tools like different kinds of computers (with incredible functionalities, unbeatable speed and alarming strength), memory devices, Computer Aided Training tools, Noise level measuring device, Dosimeters, Breath Analyzers for drug and alcohol testing, Illuminometers, computerized personnel identification card, In-Vehicle Monitoring Systems (IVMS), Vehicle Tracking Systems, Smoke and Heat detectors among several other Information Technology appliances that are daily being used for Health, Safety and Environment data generation, audit, procedure review, safety training, and workplace overall management.

Therefore, this paper addresses the role of Information Technology in the administration of Health, Safety and Environment for the purpose of securing a safe system, safe people and safe

environment regardless of the current global economic challenges.

## **2. HEALTH SAFETY AND ENVIRONMENT MANAGEMENT SYSTEM**

Safety, Ameer Ali Abdeali (2007) explained, as not merely about rules and regulations and procedures but as a serious matter that affects life and death. Safety is the prevention of incidents that kill, permanently destroy the livelihood of victim or business. This above definition is in agreement with Joseph Portelli's (2008) definition of safety which he defined as absence of danger or physical harm. Occupational safety covers equipment, structure, materials and workplace where risk of harm has been eliminated or reduced to an acceptable level.

Workplace environment according to Tan Kia Tang (2007) encompasses hazardous chemicals, physical factors such as noise, vibration, ionizing and non-ionizing radiation, extreme temperature as well as biological agents which on due exposure usually results in health hazards and occupational diseases. This Berjak et al. (1977) listed her composition as microbial decomposers, detritivores, small carnivores and large carnivores.

The protection of the environment according to David Towlson (2006) is influenced by workplace environment such as light, sun, heat and external environment such as pollution, damage to air, land and water outside the workplace that may affect the work activities.

Health is the "state of well-being" which includes:

- Physiological and psychological sense.
- Physical condition of body and mind of all people, employee, visitors and their protection from harms, noise, fatigue, stress, and so forth.

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