

Sustainable Management of Technology Based on UNIDO Approach

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Abstract

Sustainable management consists three main branches include environmental, social and economic. Actually to manage for earning money and benefit for current and future generations with respect to maintain and development of environmental aspects is essential for each sustainable management. On the other hand, technology management involves different methods and strategies to maintain and develop the technology for increasing productivity and life cycle of technology. This management will cause more benefits for humans. Therefore, successful technology management needs a systematic and global approach to all necessary aspects. Several models are defined for technology management and each method has individual advantages. United Nations Industrial Development Organization (UNIDO) has issued a model for management of technology with 5 steps. This approach is established with respect to external factors such as market and technology trends and also internal factors such as technology strategy, acquisition, and implementation. These steps involve environmental, social and economic aspects. Current article is an effort to discuss UNIDO approach to obtain sustainable management of technology (SMOT).

Keywords:

Sustainable management, Management of technology, UNIDO

1 Introduction

Sustainability is becoming an inseparable element in modern managements. Technology is known as a critical source for sustained value creation capability and competitiveness of an enterprise Global competition [1]. as usual, for making of a product, some factors such as equipment, human power, information, technical science and human software and so on is needed that can consider these factors as different technology elements [2]. Current study contains a descriptive review on United Nations Industrial Development Organization (UNIDO) approach in MOT and searches sustainability aspects in it.

2 Sustainable Management

Sustainable management is combination of sustainability concept with the concepts of management [3]. Sustainability is the capacity to endure and interfaces with economics through the social and environmental [4, 5]. So often sustainability is defined with three branches and aspects include the environmental, social and economic aspects. Using these branches, it creates the ability to keep a system running indefinitely without depleting resources, maintaining economic viability, and also nourishing the needs of the present and future generations. From this definition, sustainable management has been created to be defined as the application of sustainable practices in the categories of businesses, agriculture, society, environment, and personal life by managing them in a way that will benefit current generations and future generations.

Sustainable management is needed because it is an important part of the ability to successfully maintain the

quality of life on our planet. Sustainable management can be applied to all aspects of our lives. For example, the practices of a business should be sustainable if they wish to stay in businesses, because if the business is unsustainable, then by the definition of sustainability they will cease to be able to be in competition.

Klang et al. [5] represented real cases in sustainable waste management and showed to use recycling bricks and stainless steels can yields benefits in economic and environmental aspects whereas social aspects such as weight of bricks should be considered.

In another research Mitrache [6] states sustainability in academic research. He represents academic agricultural research should respect economic aspects and benefits. This object will achieve with holding applied and fundamental researches in a reasonable ratio together. From social aspect, he states advantages of team work include undergraduate until PhD students to rise productivity.

In another work Wantzen et al. [7] discusses about a sustainable management concept for ecosystem services of the Pantanal wetland. He states social aspects of people living there and gives some suggestion to hold and raise quality of natural resources such as fishes and so on. Finally, these activities will get economic benefits for region for generations.

In these researches and many other researches in area of sustainable management, there is an important principal. It is that all three aspects of sustainable management have to consider together. So necessary condition to be a