

# Application of Six Sigma and Promethee Multicriteria Method to Select the Product System

**Lotfi AZZABI**

Institut Supérieur de Gestion de Gabes, Tunisie

**Dorra AYADI**

Institut Supérieur de Gestion Industrielle de Sfax Tunisie

**Abdessamad KOBI\*, Christian ROBLEDO**

LASQUO/ISTIA Angers-France

**Younes BOUJELBENE**

Faculté des Sciences Economiques et Gestions de Sfax Tunisie

## Abstract

*The present competitive market is focusing industrial efforts on producing high-quality products with the lowest possible cost. Currently and for a long time, quality is the centred of the concerns of the industrial organizations, which provide products intended to satisfy the customer requirements. The total performance of the process and the quality of its production depend on the one hand, of the characteristics of the intermediate products, and on the other hand, of the operation parameters of the manufacturing. To help accomplish this objective, various quality improvement philosophies have been put forward in recent years and of these Six Sigma has emerged as perhaps the most viable and efficient technique for process quality improvement. The objective of this paper is to propose a method that puts in obviousness the enforcement performances improvement Six Sigma to assure high level quality products and to make firm a level of improvement of the long-term performance. The application of the Six Sigma methods enforced with multicriteria approach especially the Promethee methods to permit classification the better's choices of a Tunisian industry in order to visualize his importance level.*

**Keywords:** Quality, Six Sigma, Performance, Multicriteria approach, Product system.