

# Assessment of Transportation Management System Implementation

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## Abstract

The Transportation Management System (TMS) has helped many organizations to stand out and consolidate themselves in the market through a review of their processes and better optimization in the dynamics and distribution of internal activities. TMS has been a resource increasingly used by companies that seek a competitive differential in the market, such as: cost reduction, increase customer service, response time, process reliability, less information lost across processes, requirements fulfillment, product traceability, faster and more efficient management of human resources and equipment. A complete assessment of TMS implementation should involve multiple criteria. Analytic Hierarchy Process (AHP) is worldwide multi-criteria analysis method. The purpose of this paper is analyzing the weaknesses in the logistics processes of a company in the educational field that has not yet adopted a computerized system for planning, scheduling and controlling the execution of transportation. The main contribution of this paper is to provide a proposal to obtaining an efficient management of the whole logistic process of transportation of confidential materials through TMS and identify their main logistics processes and qualify them to improve it with AHP application.

## Keywords

Analytic Hierarchy Process, Logistics, Transportation Management System.

## Biographies

**Goreth C. Gonçalves** received her Bachelor in Logistics from Radial Technology Faculty in 2006, the lato sensu postgraduate degree in Business Logistics from Mackenzie Presbyterian University in 2011 and currently is MSc student at the Sao Paulo State University. Since 2001, she is working as a Logistics Technician at Fundação VUNESP. She has professional experience in management, planning, storage, distribution and reverse logistics of classified material.

**Claudemir L. Tramarico** received his MSc in Production Engineering from Sao Paulo State University in 2012. He obtained his PhD in Production Engineering from Sao Paulo State University in 2016 and developed a post-doctoral research at Sao Paulo State University in 2017-2018. His works have appeared in International Journal of Analytic Hierarchy Process, Journal of Cleaner Production, Procedia Computer Science and several Brazilian journals on industrial engineering. He is Master CPIM Recognized Instructor at APICS. Currently, he is working as a Professor at the Sao Paulo State University and a Supply Chain Education Consultant. He is member of Association for Supply Chain Management (ASCM).

**Fernando A. S. Marins** received his Bachelor from UNESP in 1976, the MSc in Operations Research from Technological Institute of Aeronautics in 1981, his PhD in Operations Research from University of Campinas in 1987 and developed a post-doctoral research at the Brunel University-London in 1994-1995. Currently, he is working as a Full Professor at the Department of Production at the Sao Paulo State University. His works have appeared in several international journals related to the areas of operations research, supply chain management and logistics, analytic hierarchy process, and production research, among others.