Application of Analytic Hierarchy Process for Supply Chain Design Project

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Abstract

Selection of best alternative among multiple alternatives is a tough task for decision makers in many industrial situations. This paper explores the applicability and capability of an outranking method known as Analytical Hierarchy Process (AHP) for selection of right alternative. The novelty of the proposed methodology is its capability of dealing with both ordinal and cardinal information. The integrated approach is a effective tool of the decision-making process in industrial environments. Five examples are illustrated to show the effectiveness of method. The term "LAST-MILE" came from telecommunication industry and refers to final leg of the network. Last-mile delivery has become a critical source for market differentiation, encouraging retailers to invest in a myriad of consumer delivery innovations, such as buy-online-pickup-in-store, autonomous delivery solutions, lockers, and free delivery upon minimum purchase levels. Consumers care about last-mile delivery because it offers convenience and flexibility. For these reasons, same-day and on-demand delivery services are gaining traction for groceries. To meet customer needs, parcel carriers are increasing investments into urban and automated distribution hub. However, there is a lack of understanding as to how best to design last-mile delivery models with retailers turning to experimentations that, at times, attract scepticism from industry observers.

Keywords
Stakeholder Management, Feasibility study, Project Management Knowledge areas.