Assessing the Impact of RFID in a Supply Chain: An Overview of the Auto-ID Calculator

Abstract

The Auto-ID Calculator is an easy to use web-based tool created by the Auto-ID Center. It enables users to quickly estimate the impact of applying Auto-ID technologies in their company. Potential users are executives and analysts who work in the areas of supply chain management and operations. The tool focuses on applications of Auto-ID technologies in a supply chain.

Although the Auto-ID Calculator is a beneficial tool that can estimate the impact of Auto-ID, each supply chain is unique, and the tool itself cannot replace a more in-depth analysis of the impact that Auto-ID technologies will have on an organization. However, there are common benefits and cost drivers by application as described in the calculator. The Auto-ID Calculator provides a framework for calculating the financial benefit of individual applications and the associated costs. In order to have more accurate results, users can enter their own company and supply chain data. The results are then calculated using this information. In the case that data is not available, default values based on various industry sources are provided. Cost assumptions have been validated with Auto-ID Center technology sponsors.
The calculator assumes a supply chain that consists of a retailer, a distributor, and a manufacturer. There are three different levels of tracking that can be selected: item-, case-, or pallet-level tracking. The benefits are calculated individually for each supply chain partner as companies are likely to invest in the technology only if there is a net benefit for each of them. The tag cost may also be shared within the supply chain.

This report gives a short overview of the Auto-ID Calculator. It explains the general logic of the calculator and the flow of screens. The actual use of the calculator is illustrated with a scenario of a retailer considering item-level tracking. This report illustrates how benefits can be calculated with a positive net present value. In some cases, the calculator may result in a negative present value. The report then further proposes measures on how to deal with situations where a positive net present value may not be calculated. Furthermore, the report provides some background information on the data sources used to derive the underlying assumptions and default values.

The Auto-ID Calculator is available under the URL http://www.autoidcenter.com/calculator/calculator.asp on the public section of the Auto-ID Center website.