e2open®

SOLUTION BRIEF

Product Classification Simplified and Automated

Accurately classifying products is essential because it determines duty costs, tariffs, trade restrictions and more. It is a sophisticated, time-consuming process that uses a complex coding system developed by the World Customs Organization (WCO). This international taxonomy, known as the Harmonized System (HS), includes over 5,000 commodity groups, each identified by a six-digit code. Specific countries often add up to four more digits to provide deeper levels of specificity within their jurisdiction. E2open® provides capabilities to automatically identify the correct HS code based on the description input by the classifier, saving time and improving accuracy.

Quick, Easy Product Classifications

Since a product's HS code is what determines customs and trade procedures, it is essential for companies to accurately classify every product. Inaccurate classification can lead to customs clearance delays, incorrect and incomplete landed costs, heavy fines and penalties and higher duties. E2open provides intuitive capabilities that leverage artificial intelligence (AI) to enable non-experts to quickly and easily classify goods with confidence. The system uses machine learning and natural language processing to guide users to the most precise classification, shielding them from the underlying complex terminology and hierarchy which would otherwise require deep expertise.

Supported by Complete Trade Content

Companies draw on e2open's Global Knowledge® application, which contains the industry's most comprehensive database of government regulations and international business rules, tightly integrated within a full suite of applications that help streamline and automate global trade. Updated daily by internal global trade specialists, the proprietary database contains entire customs tariff schedules and nomenclatures from more than 220 countries, territories and islands. All the necessary data to classify goods is provided, including tariff codes and associated section and chapter notes, footnotes, appendices, binding rulings and WCO General Rules of Interpretation and Explanatory Notes.

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Key Features

- Recommends product classifications based on keywords submitted by the user
- Integrates directly into web pages or other external systems
- Guides users to results with intuitive prompts
- Dynamically searches for HS numbers based on product, category or brand name
- Performs advanced searches based upon HS Common Customs Tariff or Legal Tariff descriptions
- Provides an audit trail and maintains a historical activity record

Key Benefits

- Lower overhead through faster product classification with less need for internal expertise
- Lower costs through reduced international returns
- Faster time-to-market through improved customs clearance times
- Increased revenues through international e-commerce and other channels
- Improved customer service through faster order and delivery cycle times

Machine Learning to Optimize Outcomes

The classification system analyzes the descriptive product characteristics contained in the bill of materials (BOM), plus to-and-from country pairs. It then builds upon decision tree automation, using reinforcement machine learning to repeatedly simulate thousands of possible classifications and assess the strength of each one. It also factors in prior classifications of identical or similar products before delivering the suggested HS code. This process establishes the best product classification for each scenario with minimal effort or expertise required.

Leverage AI and automation to correctly classify products of all types and buffer against fines and delays using the strongest trade content for accuracy and completeness.

Integration to External Systems

Companies routinely use homegrown or third-party platforms to manage sales orders, customer data and other processes. This classification system includes an application programming interface (API) — a software intermediary that allows two applications to talk to each other — to accurately classify products by drawing data from external systems. This capability enables a much wider range of uses than simply for a company to classify its own products. For example, with accurate product classifications, e-commerce merchants can charge accurate duties and taxes to their international customers at checkout. Shippers and logistics providers can determine the required customs documents and licenses or duty payments. The API can be easily embedded into a shipping company's proprietary shipment acceptance platform so that users can locate the most appropriate HS number for the customer shipment. They can also deploy it to effectively manage batch classifications of bulk orders in an order fulfillment system. If necessary, companies can leverage full classification capabilities — including the generation of required documents — by using e2open's Export Management application.

Accurate Export Transactions

Many countries are adding new taxes and fees to capitalize on changing trends, such as increased cross-border e-commerce transactions. For example, it is important for retailers and postal carriers to accurately account for newly introduced value-added taxes (VAT) when fulfilling orders that are shipping to a specific region.

Similarly, avoiding any export violations brought about by new sanctions resulting from government policy actions is essential. In cases like this, and for all export-related compliance concerns, a product's HS number is the key that helps keep companies compliant at all times. Since e2open updates trade content daily, risk is minimized and customers are happy even when the customs rules change quickly.

End-to-End Supply Chain Management Platform

Once an organization implements any e2open platform application, it is easy to add more capabilities in the future for better visibility, coordination and control over the end-to-end supply chain. The e2open platform creates a digital representation of the internal — and optionally external — network, connects internal enterprise resource planning (ERP) and financial systems using SAP and Oracle certified adapters for timely data feeds, and normalizes and cleanses the data to make it decision-grade. Using machine learning-enabled algorithms and supply chain management applications, the platform processes the data and provides bi-directional, closed-loop communications back to ERP systems for execution. This facilitates the evolution of supply chain processes towards true convergence of end-to-end planning and execution.