

# The Coding and Classification of Goods

When and where does the need arise to code and classify goods and what does it mean anyway?

**In the business world, there are millions of different items used by businesses and organisations. Using plain language to communicate requirements would result in misinterpretation and wasted time trying to verify exact requirements. It therefore becomes a necessity to devise a coding system. Jessop and Morrisson (ref; Storage and Supply of Materials by Jessop and Morrison) identify 11 advantages of a coding system:**

- **Avoids repeated use of long descriptive titles**
- **Accurately identifies all items**
- **Prevents duplication of items**
- **Assists standardisation and the reduction of varieties**
- **Provides a foundation for an efficient purchasing organisation**
- **Forms a convenient basis for the sorting and recording of documents**
- **Simplifies mechanical recording**
- **Is convenient for central analysis of unit storehouse records**
- **Can be employed as a basis for stock-control accounts**
- **Simplifies pricing and costing**
- **May be used as a storehouse location system**

Many organisations have direct experience of coding and classification already. For example, bar codes are widely used for identification and distribution purposes and accounting systems have account codes to support the financial management of the organisation.

## **What is coding and classification?**

Broadly speaking, coding and classification is about using a number or set of alphanumeric characters to:

- Identify a specific thing; or
- Group similar things together.

For example, a bar code number on a can of fizzy drink identifies what the drink is, who manufactures the drink and the unit and pack size of the fizzy drink. This particular code is known as an identification code as it has no relation to other codes and wouldn't be used to group products together for analysis. It is important to distinguish between coding and classification as they support totally different business roles. Adopting the wrong approach can present significant challenges by distorting the information available to the point that it cannot support the business requirement for which it was intended.

## **Coding for identification**

**Identification codes** are used for recording and tracking items and are used for inventory management, point of sale transactions or historical record keeping. An identification code can also identify other information such as:

- Address/Location identifiers
- Language identifiers
- Unit of measures or issue
- Currency identifiers
- Country identifiers
- Price/cost identifiers

## **Classification for analysis**

A classification structure logically groups similar things together into classes or families for the purpose of analysis. Hierarchical classifications allow analysis to be done at macro or micro levels, depending on business need. The need may be overall financial reporting, budgetary control, project reporting, product costing or purchasing performance review. For example, the purchase of a computer mouse may need to be analysed at macro level under "IT spend" or micro level under "computer peripherals spend".

**Classifications** are used for analysing, searching and decision-making. Classifications can be used for expenditure analysis, contracts registers and product searches in electronic catalogues. For the purposes of this paper, the term "coding" means a value that unambiguously identifies a specific thing. "Classification" means a value that groups related things together for analysis.

## **Bar Codes**

Bar coding technology has allowed numerical codes to be portrayed pictorially on stock items in the form of blocks and bars. Bar codes have been utilized in retailing for a number of years and have provided a number of business benefits for example, within a warehouse. Goods arriving at the warehouse can be issued with a bar code label; an operative with a mobile bar code reader can 'swipe' the product into the information system. From that point the computerized system will know exactly where the product is located. When demand for the product arises, the information system can pick the item automatically, or direct an operative equipped with a mobile terminal to the

exact location of the product within the stores, to pick the required goods. The operative will 'swipe' the bar-coded goods off the warehouse data processing system. The use of bar codes ensures the 'real time' information is available on inventory levels, as well as on current usage and demand. A similar system is used in shops and supermarkets, where customers pick their choice of goods and the cashier scans the goods using an EPOS (Electronic Point of Sale) Scanner. In addition to improving speed and availability of information within the organization, the use of universally recognized bar codes allows information to be transmitted up and down the supply chain.

## Where to code and classify

Some businesses have used coding and classification for many years. It is well used in the manufacturing and retail sectors for example. The need to stock parts, support assembly production and measure demand for and movement of lines has given rise to well documented identification codes. Bar codes are now used across the world and meet all the main business requirements for which they were designed.

The use of classifications to manage groups or hierarchies of products and services is a more recent development. Many organisations struggle to provide strategic and operational purchasing analysis by using codes derived from the chart of accounts or trying to use the identification codes provided by their suppliers. In almost all cases, this approach is flawed. The codes used in the chart of accounts are finance facing and rarely give the in-depth analysis required to support corporate purchasing activity. Similarly, using supplier identification codes is fine, but if similar products are purchased from other suppliers they will be coded differently.

The truth is that corporate and strategic purchasing operations will struggle to gain accurate and meaningful information to manage and support collaborative and improved contractual arrangements without a purchasing facing classification being in place. This message was underlined in the Efficiency in Civil Government Procurement (1998) Report (ISBN 0947819592) that said, "to be effective, collaboration and joint procurement needs full and reliable information about who is buying what, from whom, and through what means. This will entail using a common classification system".

## No blank sheet of paper

The first message is do not start designing new codes and classifications from a blank sheet of paper and without examining the suitability of an existing structure. Many have done the work already; so don't try to reinvent the wheel! The second message is do not start to replace existing coding and classification structures. They may have been designed to meet a specific business need other than for purchasing.

Coding and classification structures have been around for a long time. Many businesses and government organisations have worked together to develop means of identifying, describing and classifying every aspect of business transactions. Think of any part of your organisation, any product, any process, in any country for any reason and someone will have developed a code or classification to handle it.

Coding and classification is most commonly used to support activities such as the automation of business transactions, supplier rationalisation and the collation of accurate and meaningful spend data. The most common types in use are:

- **Product/service classification** – used to group similar products/services into logical, searchable categories. Hierarchical categories enable "drill down" during product searches or sourcing and "roll-up" of purchases for supply analysis and rationalisation
- **Product description and attributes** – used to comprehensively describe every facet of a product or service, including Units of Measure, Packing Quantities, Fabrication, and Colour. This kind of information is needed for inventory management, or product searches in electronic catalogues
- **Business/Supplier Identifier** – used to identify unique business entities and to resolve issues of supplier family hierarchies. A unique identifier simplifies supplier/customer management by avoiding common errors, abbreviations or inconsistency in name and address records (e.g. British Telecom, BT, B.Telecom, B.T.) It can support corresponding address/location management and enables supply base analysis prior to a rationalisation review

However, most of the existing structures were used to serve one or several aspects of business. Bringing them together to generate information in support of corporate requirements, such as business wide Key Performance Indicators (KPIs), has already presented innumerable problems for most private and public sector bodies.

# The Coding and Classification of Goods

The effect of e-Business on Coding and Classification  
The emergence of e-Business as a medium of trade has introduced a further requirement for purchasing coding and classification to support automated trading between buyers and sellers or across supply chains. Adopting the right codes and classifications is a critical success factor in achieving the benefits and savings promised by e-Business. Other benefits that can accrue in a wider business sense, include:

- Supporting the automation of business transactions, particularly low value high volume ones
- Providing accurate and meaningful information to support informed and timely management decisions
- Allowing managers to seek opportunities for cost reduction, supplier rationalisation and streamlined contractual arrangements
- Facilitating closer cooperation with trading partners and critical suppliers
- Identifying areas where scarce corporate purchasing and commercial resources should be used
- Generating the building blocks to support a new generation of measures and indicators required in the adoption and achievement of strategic Procurement
- Providing the opportunity to identify where collaborative working or shared service arrangements would be beneficial, particularly in the UK public sector

The baseline is that decisions made on coding and classification will directly affect the quality, accuracy and relevance of the information that can be extracted to support both operational and strategic business decision-making and performance measurement.

*Adapted from 'Maximising returns from purchasing data' by Ken Cole FCIPS and Liz Watkins-Young*

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