



PRODUCT LABELLING SOLUTION



About Intellident



Intellident are Europe's leading provider of control systems based on the use of Radio Frequency IDentification (RFID) and barcode-technologies, with experience that extends across multiple vertical markets and solutions.

We specialise in supplying complete systems, which provide our customers with immediate benefit and rapid pay-back on their investment.

Together with our supply chain solutions, Intellident also provide a specialised barcode print, apply and verification package; a sophisticated document management solution, and are the UK's leading provider of RFID-based self-service solutions to public, academic and private library sectors.

Our philosophy is to offer our customers a complete end-to-end service, which is why we have dedicated and qualified staff capable of assisting at every step, from pre-sales advice all the way through to project management and after-sales support.

In October 2003, the company joined the LINPAC Allibert group, a global organisation with core business interests in the provision of returnable plastic packaging and material handling equipment to the retail and automotive sectors - a perfect fit for Intellident. LINPAC Allibert has an annual turnover of over €1.7 billion, manufacturers in all five continents, has over 11,000 employees and sells products in almost every single country in the world.

www.intellident.co.uk/labelling

CONTENTS

What is the product labelling solution?	1-2
The benefits of accurate product labelling	3-4
Case study : Faurecia	5-6
The Total Supply Chain	7-8
Utilising the latest technologies	9-10
About Intellident	11



What is the product labelling solution?

If you are involved in the shipping of goods then the chances are you need to label your product, case, pallet or carrier in some way. Compliant product labelling is a critical element of any supply chain process. Ensuring that products are labelled correctly and associated with the correct containers can be a huge challenge for suppliers - especially when dealing with thousands of items daily. What happens when products are labelled incorrectly and how can this be resolved?

Below are examples of common issues that have been highlighted by our customers before the implementation of our solution:



Misprinted labels

A printed label is only as accurate as the information that is provided from the host system. Inaccurate source data will therefore lead to labels that are printed incorrectly. This could be wrong date-life information on fresh food, a mistaken description or UPC on an automotive part.



Scratched or damaged labels

Even the most accurate suppliers can be faced with problems of label reliability and robustness. Damaged labels can present your customers with problems when it comes to product identification. An unreadable label could potentially slow production and ultimately affect products in transit.



Poor quality materials

From extremes of cold and heat to varying degrees of moisture and chemical content, selecting the correct materials for the job is extremely important when ensuring that the label will remain adhered and readable throughout its supply chain life.



Label association

For many suppliers it is not a problem with the printing or robustness of labels, but with the association. In a scenario where a supplier has many thousands of uniquely labelled products to ship, they may wish to place or group these into a container. What happens if that supplier assigns the wrong labelled products to the wrong container?

These situations are amongst many that, in essence, mean either the supplier or receiving party cannot identify the products that were expected - the severity of which can vary enormously.

The product labelling solution simply aims to correct these weaknesses and not only stop them from happening, but also provide an accurate and verifiable process.

Who can benefit from product labelling?

Essentially any part of the supply chain, that is tasked with labelling something, can benefit from implementation of the solution. Ultimately it is utilised to ensure that what is in a facility is characterised and labelled correctly.

Who is using product labelling today?

Intellident have over 2,500 installations live around the UK today, providing evidence that product labelling is indeed one of the most important operations in any supply chain, spanning multiple industries.

These companies range from fresh food suppliers to chemical producers, automotive part manufacturers and book suppliers. In each case the benefits have been realised immediately and solution pay-back has occurred in less than six months.

label, verb
to mark with a label

label, noun
a descriptive marker



"The software was everything we were promised and the technical support and training was second to none. Etiquette has been our label printing software of choice for the last 10 years and will continue to be."

Paul Cresswell
Well-Pict European



Utilising the latest technologies

Many suppliers that implement Intellident's product labelling solution later consider other technological systems. Radio Frequency IDentification (RFID) is now a common place technology that is revolutionising many areas of business, from supply chains to public libraries. Some of the significant benefits that RFID can provide include:

Wireless identification of objects

The real power and versatility of all solutions can be maximised when utilising the extensive capabilities that RFID offers. As the name suggests, RFID uses invisible radio waves to communicate with 'intelligent labels' applied to items in order to determine what the item is, where it has come from and where it is going - amongst other things. This wireless method of communication means that the label does not need to be seen to be read, therefore allowing complete pallet stacks of items to be detected and integrated.

Ultra-fast read speeds

Unlike barcodes, hundreds of RFID labels can be read simultaneously and within a fraction of a second, which can provide significant benefits in terms of volume of throughput and capacity of a supply chain. Companies using RFID have demonstrated up to 400 per cent improvements in dispatch and intake time compared to those using barcode technologies.



Secure, mobile content

Each label contains a number that can be used as a unique identifier. In addition, information can also be stored directly on the label itself, which allows intelligent systems to query the information directly and without the need to interface to other systems in the supply chain. For example, using nothing more than a hand-held scanner, a box or tray can be read and the operator will know immediately the details relating to the content.



Accuracy of information

Information pertinent to the item or asset is stored on the RFID label in digital format at the point of attachment or filling. This information is then retrieved at various points across the supply chain, again in digital format, and fed directly to a range of systems. Importantly, at no point does any human intervention prevent this secure data from being mis read or mis represented in any way - providing the ultimate in supply chain accuracy.

Packaging the tag

The enormous benefits that RFID can offer are only tangible if the label is capable of being read. In its raw form a label can be designed of sufficient robustness to last a single trip (on cardboard for example). Alternatively, the label can be packaged to a much more durable degree and attached to a returnable asset for the life of the container. Being part of the LINPAC Allibert group of companies, and having deployed over 8 million RFID-enabled returnable assets, gives Intellident unparalleled experience in this area.

What technology choice to make?

If you need to ask yourself which technology to purchase then you are either in the business of buying technology, or you are not working with the right solution provider. The intricacies of the technology and how it is configured is largely irrelevant to the application and the benefits that can be derived from it. The important questions to ask should therefore be "does the technology conform with global industry standards?" and "does it deliver benefit in areas where I currently have problems?".

Global adoption and support

RFID is now being adopted around the world in a range of industries and, not surprisingly, has warranted the development of international standards to ensure global compliancy and consistency of data. For many industries EPCglobal is the most convenient and logical numbering system, which is an extension of the widely adopted and utilised EAN barcode system.

EPCglobal is coordinated by the GS1 organisation, and provides member organisations with the confidence that RFID tags can be not only be read, but also understood by supply chain partners regardless of geography.

As part of our commitment to standards and industry adoption, Intellident are long-serving members of both GS1-UK and EPCglobal, allowing us to deliver 100% EPC-compliant solutions to our customers.



The Total Supply Chain

The product labelling solution is part of a suite of application systems available from Intellident that are designed to improve operations at various points within the supply chain. Each module has been developed individually to provide maximum benefits at each stage, however, many customers are also able to benefit from combining multiple 'point solutions' within their supply chain.

To help understand where each point solution is capable of delivering benefit, we have developed the model to the right, which illustrates at each point within the supply chain the range of solutions that can be applied to increase efficiency and ultimately improve bottom-line performance.

Production

The initial point in the supply chain where products and components are made, packed or assembled ready for direct sale or further processing down the line.

Transit

The movement of product from Production to Distribution Centre. Typically product will be shipped in large quantities and potentially over long distances at this point.

Distribution Centre

The initial receipt and consolidation of product from the supplier. At this point bulk product is usually broken-down into smaller units suitable for picking and delivery.

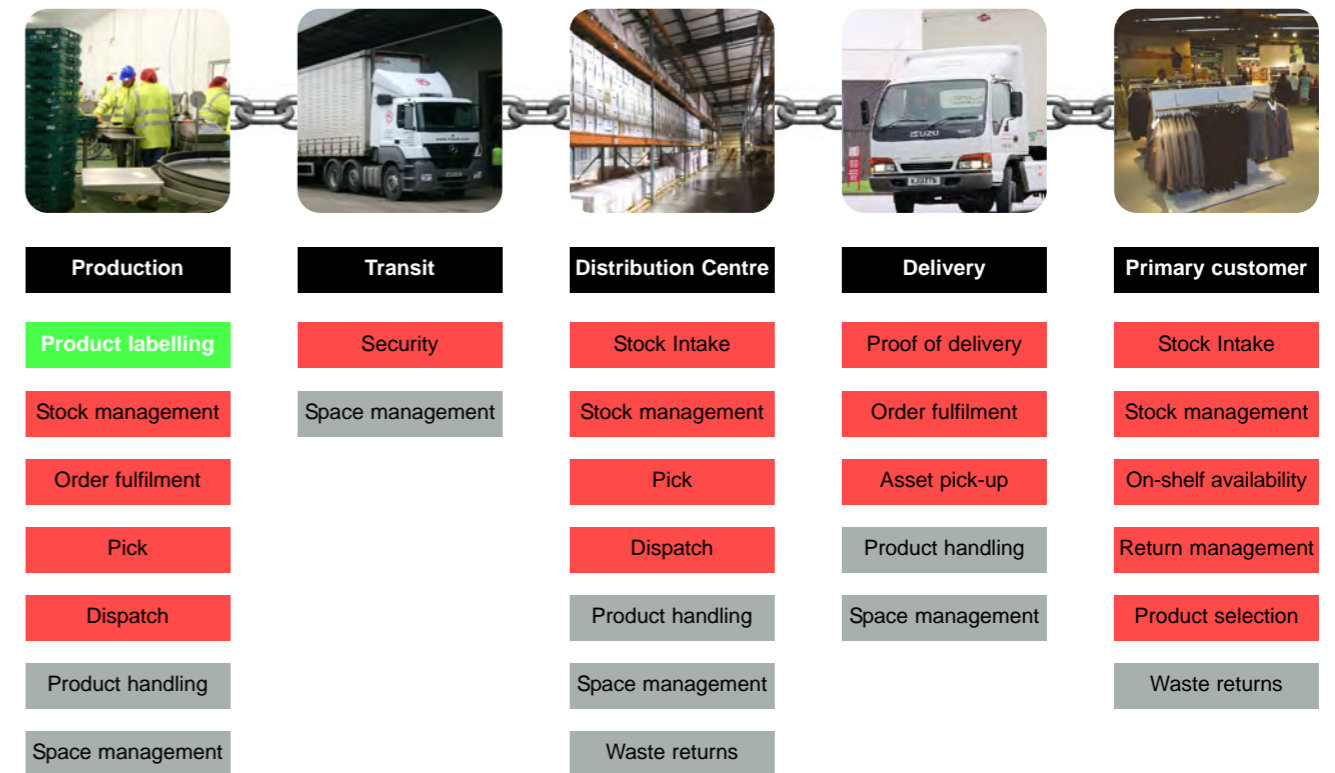
Delivery

The movement of product in smaller and more defined orders from the Distribution Centre to the primary customer. This is usually the last movement of goods and is typically over much shorter distances, certainly within the same geography.

Primary customer

The recipient of the finished product from the primary supply chain. With fresh food this will be the retail outlet, where product is distributed direct to shelf. For the automotive supply chain this will be the manufacturing line.

Importantly the solutions can be adopted in many areas across this supply chain, but deliver very different benefits. In this case, product labelling is utilised at Production, however, the product manufacture and delivery specifics will likely be different at each stage.



The point solutions provided by Intellident form part of the Total Supply Chain offered by LINPAC Allibert. The model above highlights those solutions provided by Intellident (in red and green) and those complimentary products that are available from within the group (gray).

Offering a different and unique approach to asset and item tracking...

Through offering a range of point solutions that accurately control the movement of objects at unique stages within the supply chain, we can therefore effectively monitor the movement of the items across the entire supply chain - but not in the traditional sense of asset tracking. For example, if we know what has accurately been produced and dispatched from a supplier and what has been received at DC intake, we can build up a powerful set of information relating to the movement of items.

The benefits of each point solution are discussed in detail in the individual solution brochures, which are available in hard copy or PDF from the Intellident website. For more information please visit www.intellident.co.uk/totalsupplychain

The benefits of accurate product labelling

The product labelling solution has been designed to offer a generic range of functional benefits and some that are very specific to particular industries. This design philosophy allows the system to be deployed across a range of vertical sectors.

With each option being adaptable in its design, our customers are able to pick and choose the specific areas of functionality that apply and add most value to their business. For some applications this may only include one or two areas, whereas other customers may benefit from the whole suite of options available. Some of the key benefits include:



Accurate printing of labels

The information printed on a label is shared across the entire supply chain and the accuracy of the data is therefore paramount. The product labelling solution ensures that all information is accurate and matches pre-defined rules and controls, such as barcode types, date life checks, UPC and label matching. Each of these controls ensure that the item will be read correctly further down the chain.

Matching labels to the environment

We specialise in providing labels, ribbons, printers and barcode reading equipment that is matched to the environment in which it is to be used. Selecting the correct mix of each of these ensures that the label will remain adhered and readable through the entire supply chain. Choosing the correct material and ribbon can also have a major impact on the reliability and longevity of the hardware used in the application.



Verification

The product labelling solution has the ability to apply logic to verification of the barcode data. By comparing the original entered information with what has been selected and outputted for print it can certify that the labels have printed exactly as planned. Additionally, multiple barcoded labels can be scanned, either at the print stage or with a scanner, to ensure all associated data is correct.

The benefits that can be derived are often very specific to the individual installation, however, a broad range of solution benefits are illustrated in the table to the right, which highlights the specific benefits available to a range of industries.

	Aerospace and defence	Automotive OEM	Beverage	Chemical and offshore	Fresh food supply chain	Leisure industry	Pharmaceutical	Retail and apparel	White goods wholesale
Accuracy	•	•	•	•	•	•	•	•	•
Conformity		•	•	•	•		•	•	•
Cost Savings	•	•	•	•	•	•	•	•	•
Date life verification		•	•	•	•		•		
Error reductions	•	•	•	•	•	•	•	•	•
Internal data sharing	•	•	•	•	•	•	•	•	•
Inventory control	•	•	•	•	•	•	•	•	•
Multi-language support	•	•	•	•	•	•	•	•	•
ODETTE compliancy		•		•	•			•	
Operator verification	•	•	•	•	•	•	•	•	•
Product labelling	•	•	•	•	•	•	•	•	•
Retailer compliancy					•			•	
Supplier verification	•	•	•	•	•		•	•	•
Traceability	•	•	•	•	•	•	•	•	•
Transaction monitoring & reporting	•	•	•	•	•	•	•	•	•
Uniformity	•	•	•	•	•		•	•	•
Unique Product Code (UPC)	•	•	•	•	•	•	•	•	•

Barcode and RFID association

For many suppliers it is also worth considering the use of Radio Frequency Identification (RFID) along side your product labelling solution. RFID systems provide a robust method of identifying hundreds of products without the need to physically 'see' the label, and can be embedded within the label, or packaged as a robust addition to a container. Pages 9 and 10 contain an overview of the additional benefits that can be gained through RFID.

The range of benefits that are highlighted in the above table can be realised upon implementation of the product labelling solution. For more information please visit www.intellident.co.uk/labelling

Case study : Faurecia

Faurecia is a global supplier to the automotive industry, operating in the design and production of vehicle seats, cockpits, door panels, carpets, acoustic packages, front ends and exhaust systems. The Washington, UK plant specialises in the production of high quality carpet panels.

The Problem - Faurecia had two major problems that they needed to address - firstly, to ensure accurate labelling of carpet products so they could be traced throughout the supply chain. Secondly, to guarantee each item was placed in the right stillage and in the correct quantity for dispatch.

The Solution - Intellident delivered a unique labelling solution, which provided a variety of benefits around product labelling and association - with the ultimate aim of utilising a simple FIFO (First-In-First-Out) system.

The process involves affixing a label to each carpet product as it leaves the production line. Each carpet type has its own programme code and so only the correct part number label can be produced. The label is taken directly from the printer and placed immediately on the carpet, ensuring no mislabelling and allowing for accurate identification of the unique part and information relating to when it was manufactured. At the point of loading, each carpet is uniquely scanned and associated with a stillage - at this point it is possible to identify the stillage which has the 'oldest' carpets. When the next dispatch is due to leave the operator is then guided to the appropriate stillage to load - making sure that the FIFO principal is enforced.

For Faurecia the key benefits of the solution include:

Fool proof labelling - each label is verified as correct and readable as it leaves the printer, ensuring that there will be no problems with reading the data further down the line. In addition, data is confirmed against customer orders and kanban systems to ensure supplier compliancy.

Increased traceability - every carpet is uniquely serialised and provided with a batch number to allow for full visibility and traceability of each individual item. Additionally, associating the carpets with the RFID tag ensures every time the tag is scanned the carpets are traceable.

High-volume printing - the solution is capable of producing up to 4,000 unique labels every hour, which far exceeds the rate at which a carpet can be produced.

Dispatch accuracy - once the product and label are associated, the numbers can be matched on the system to ensure that the dispatch conforms to the customer order request. The RFID tags are scanned once the goods are placed in the stillages and the scan time and date is used to produce a FIFO list.

Automated error alert - once loaded into the stillage, each product label is scanned using a hand-held device and cross referenced on the database. If any of the details are incorrect the system immediately alerts the user.

The results - Implementing the product labelling solution has meant that Faurecia can now uniquely identify every carpet product from point of production through to dispatch, providing a complete audit trail of each stage in the process. This identification allows them to be sure that they are loading and dispatching the right type and quantity of product.

Overall the solution has guaranteed the customer receives what is required from Faurecia, which has the potential to secure the future of the business. The system has reduced risk and ultimately time in the production process. Products are now associated and labelled correctly to allow for traceability throughout the supply chain.



"Using Intellident's product labelling solution means we can now track each individual item...all items are labelled 100% accurately, eliminating labelling inaccuracies."

Chris Hawkes
Faurecia



Project summary	
Primary benefit	Product level ID
Secondary benefit	Asset & vehicle fill
Equipment	ETQ SM + handheld
System accuracy	100%
Pay-back period	< 3 months