brother
at your side

Small label.

Big innovation.

How smarter labelling is central to the next-generation warehouse

Small label.

Big innovation.

1 The only constant is change

Retail businesses and logistics ecosystems require dynamic technology solutions.

For example, automation, robotics, and artificial intelligence tools are now being used to help mitigate warehouse operational and productivity gaps and ensure accurate supply chain visibility from manufacturing to despatch point.

This is due to multiple factors continuing to increase pressure on warehouse and shipping operations, meaning businesses like yours need fast and accurate solutions to keep productivity high while reducing your margin for error.

But what is causing this increase in pressure?

Factors causing pressure on warehouse operations:

The rise in online orders

According to McKinsey, by 2030 the e-commerce market will have expanded five times faster than the retail market. As a result, the number of digital buyers keeps climbing every year.

Nice to know:

In 2020, over two billion people purchased goods or services online and ecommerce sales surpassed 4.2 trillion U.S. dollars worldwide.

2 billion
people shopped online in 2020

Warehouse labour shortages

Pre-pandemic, research showed half of companies had a staff turnover of less than 10%, with between two and five applicants per job in 2018. Post-pandemic, numbers suggest there are now multiple warehouse jobs per applicant.

Nice to know:

Pay for advertised warehouse worker jobs has gone up 29% year-on-year, compared to a 5.3% average weekly earnings increase across all UK jobs.

29%
YOY wage increase for warehouse workers

Shorter fulfilment turnarounds

Consumers are becoming more and more accustomed to getting what they want, when they want it, meaning warehouses are now expected to turn around deliveries in ever shorter amounts of time.

Nice to know:

56% of UK online shoppers think same day delivery options are "important" – rising from 33% in 2020.

56%
of people want same day delivery

1 The only constant is change

Labelling in industry 4.0

The need for unique (and accurate) product identification and serialisation is greater than ever before.

So, it's time to move past the challenges that were presented as part of the new normal and the accommodations businesses had to make to continue to thrive. It's time for innovation. It's time for industry 4.0: the fourth industrial revolution.

Linked to ideas of IIoT (Industrial Internet of Things) or smart manufacturing, industry 4.0 represents the evolution from the mass adoption of computers and automation to a next generation of smart and autonomous systems, designed to meet the demands of a more connected world.

When it comes to labelling, industry 4.0 is drawing together existing physical production and smart, new digital technology, including big data and machine learning, to help manufacturing and supply chain management professionals embrace a more holistic and interconnected ecosystem. While labels themselves aren't a new technical innovation, done right they can deliver huge efficiencies to warehouse operations.

Of course, this rapid rate of change is leaving many businesses scrambling to catch up. That's why, from label automation to sustainability and smart labels, we'll be taking you through all the ways you can use labelling to bring your operations into the future of industry, for a next-generation warehouse experience.

2 Integrated labelling and the IoT

When it comes to keeping warehouse and logistics operations running smoothly, labelling is paramount to keeping track of items moving in and out of the facility, as well as item storage locations, and managing inventory.

Automating these documentation processes is the easiest and most efficient way of embracing the rate of change in the industry. **But why is this?**

It saves time

In a recent survey analysing the leading business warehouse initiatives to augment warehouse efficiency, 41.9% stated improving on-time shipment. Plus, research has found time savings increased 40-50% when auto labelling was implemented rather than manual labelling.

However, when investing in industrial label printing hardware, it's important to find the right balance between performance and cost. Different types of software produce different results, so it's important to consider your organisation's application requirements to determine which print technology and class of printer fits best.

Time savings increased
40%-50%
When auto labelling was implemented

It speeds up order processing

Some industrial label printers can produce thousands of labels a day, speeding up manual labelling significantly and enabling you to easily scale up production without a labelling bottleneck.

The ease with which an integrated labelling solution enables companies to create, manage, and print labels can streamline processes from templates to updates, enabling you to see a significant ROI before you even take an increase in production into account.

For example, Battaglio, an Italian fruit and veg importer and distributor, handles nearly 60 million kilos of fresh produce a year through its warehouses. So selecting an integrated labelling system, incorporating an easy to use, touchscreen interface, template design, a range of label options, and the ability to print dozens of labels in seconds, enabled the business to ensure faster, better product management across its large warehouses – essential, when dealing with fresh produce with a limited shelf life.

Integrated labelling and the IoT

It reduces errors

When it comes to manual labelling, human error is the most significant cause of mistakes. And while checks can be implemented to reduce errors such as inputting the wrong information, or sticking the wrong label to the wrong product, the easiest solution is to remove humans from the process as much as possible. For example, before EuroTech found its automated solution, a member of staff had to do the work manually, resulting in human error.

But errors have a double whammy effect because they don't just result in product waste, but also in a waste of time. Mistakes require correcting, which means doing a job twice that should have been done once. Not to mention the impact that receiving the wrong product (or not receiving it at all) will have on customer experience.

An industrial labelling system, however, can maintain production rates until it needs a new label reel and make adjustments seamlessly, as one machine can be used for different configurations with several types and sizes of products.

It promotes health and safety

As far as a worker's physical health is concerned, repeating the same movements over a long period of time can lead to conditions such as tendonitis, and carpal tunnel. While manual handling training can help with some aspects of this, tasks that involve repetition and localised pressure are well known to cause workplace injuries and accidents.

Yet, accidents in the workplace don't just cause a loss of productivity, but they can impact sales, staff morale, reputation. Plus, workers are entitled to claim workers' compensation if they suffer an injury during their employment. Clearly then, automation makes work safer for everyone.

The role of IoT in automated labelling

The Internet of Things (IoT) brings internet connectivity to everyday electronic devices to improve their functionality and efficiency. In fact, it's predicted that by 2025 over 27 billion devices will be connected to the IoT.

But how does device connectivity add up to operational gains? Well, in short, when all sorts of devices can be connected to the internet, your employees can print labels on the go, resulting in:

- **Increased productivity**
- **Saved time**
- **Lowered business costs**

Not only this, but IoT connected devices can provide greater visibility over the labelling process, allowing employees to track labels and assets and detect bottlenecks, all in real time.

With the IoT, you can...

Keep tabs on every item in your warehouse, even when it's on the move – reducing the risk of theft or loss and protecting profit margins.

5 key factors when looking to invest

For those interested in investing in IoT-connected labelling technology, what are some of the key considerations?

1 The total cost of ownership (TCO) of an industrial label printer is an important investment evaluation metric to consider, from the price of media and consumables to initial hardware purchasing price, associated software licensing costs, and ongoing maintenance services.

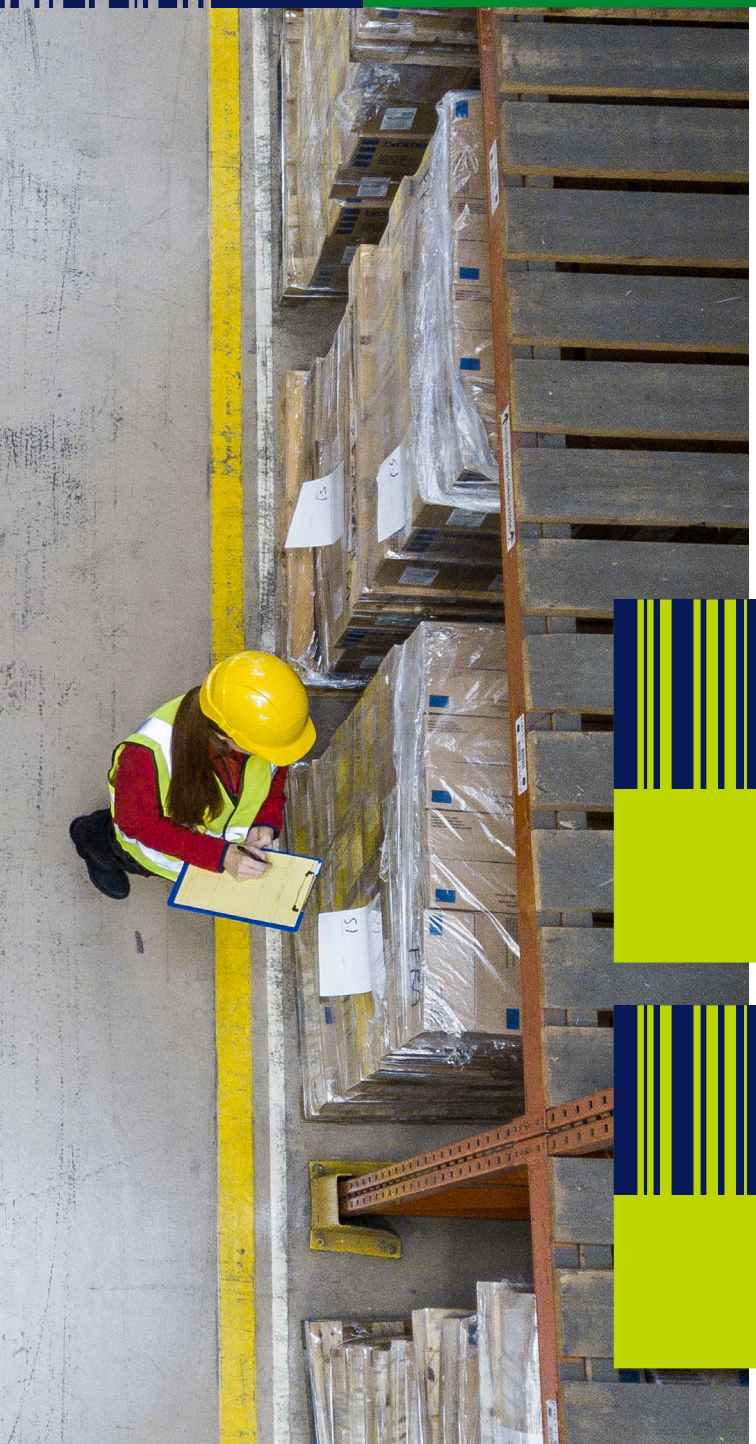
2 Finding the right balance between investment spend and printer performance in terms of print speed, resolution, durability, ergonomics, and automated features sets (auto-cutter, peelers, re-winders, etc.).

3 Deploying the right thermal print technology for application requirements and the best media and consumable materials for labelling use cases.

4 Compatibility with existing software infrastructure, including integration with ERP, WMS, and other multiple device management (MDM) platforms, and scalability support.

5 Ease-of-use and plug-and-play readiness – plus, ongoing support from the manufacturer, for peace of mind if things go wrong.

3 Labels with longevity: sustainability



Of course, these days, alongside achieving their business objectives, businesses are also looking to make changes that contribute to sustainability and reduce their carbon footprint.

This drive for long-term sustainability has been fuelled largely by consumer awareness, with consumers now choosing brands that have sustainability credentials such as recyclability and carbon neutrality.

There are several ways for distribution businesses to achieve this, with packaging being a common priority, but label printing is often overlooked in this process. The fact is, however, selecting the right label printing process for your business could achieve significant savings in two key areas:

Energy

Durable label printers offer rapid print speeds, large ribbon capacity and in-built durability, meaning they can provide huge energy savings in industrial settings. Plus, a quality label printer provider should help you create a maintenance plan for your hardware and provide quick and easy repairs so you can keep your hardware running, efficiently, for as long as possible.

Waste

Recent research estimated that up to 11% of label materials from label stock to final application are wasted, due to causes such as errors or stock obsolescence. However, switching to on demand thermal label printers can eliminate waste like this by only printing labels as they are needed, meaning label printing is more responsive, saving money and time as well as materials.

Recycling labels

Of course, many businesses are aware of the impact recyclability of packing materials can have, but label materials are also crucial to this process.

For example, if the label on a plastic bottle is not recyclable, the whole bottle can become unrecyclable. The plastic bottle's recyclability then relies on consumers' willingness to remove the label as much as possible before recycling it.

One fix to this issue is to switch to water-based, fully recyclable adhesives to make the label recyclable. And to use sustainable materials, such as recycled and biodegradable materials, sugar cane bagasse, and grass-based materials.

Another alternative is to make use of Smart Labels, which can reduce material waste while, at the same time, providing significantly more information and functionality.

Clearly, it's best to check with your supplier about the sustainability credentials of your labels, as there are so many variables involved.

What are smart labels?

Smart labels use technology to provide more information or functionality than a traditional barcode. These include QR codes, data embedded barcodes, and RFID. To expand their purpose, smart labels are generally used alongside other innovative applications.

For instance, a QR code reduces the amount of label space required by taking a user who scans it to a webpage where they can find further information.

It might do this via a GS1 digital link, which connects data carriers such as QR codes to online sources of real-time information that brands can control.

Of course, this has manifold benefits for retailers, suppliers, packagers etc., giving them the opportunity to track purchases, develop loyalty, and connect to consumers across the omnichannel spectrum.

The **GS1 Digital Link** standard extends the power and flexibility of GS1 identifiers by making them part of the web.

This means that GS1 identifiers, such as the GTIN, are now a gateway to consumer informtion that strengthens brand loyalty, improves supply chain traceability information, business partner APIs, and more.

What is smart label tracking?

Smart label tracking sometimes uses labels that use passive radio-frequency identification (RFID) to emit a frequency with product identifying information that then enables suppliers to track inventory from warehouses to stores. However, other paper-based smart labels use printed barcodes to serve a similar function, including QR codes.

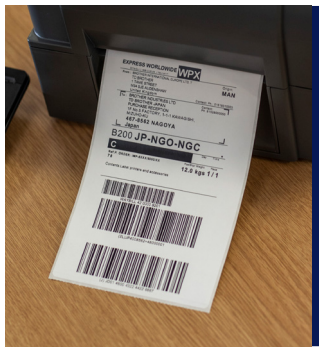
But what are some of the most common smart label types and how can they benefit distributors?

> By combining the two greatest inventions of all time, the internet and the barcode, GS1 Digital Link in a QR code can connect businesses instantly with unlimited digital content specific to that product.
>
> Tell brand stories, communicate sustainability information and comply with increasing legislative requirements to meet increasingly diverse business KPIs, drive revenue and futureproof the way you connect to consumers.
>
> **Kerry Morrison, Head of Retail at GS1 UK**

QR codes

Quick Response (QR) codes are a machine readable code that can store vast quantities of information available to be read by a variety of devices.

They can be used to track products in a supply chain, identify items, provide information, and take users to a designated URL for a marketing experience, to view a menu, provide information on sustainability, or any other number of things you can think of.



Data embedded barcodes

Data embedded barcodes are barcodes that do more than just provide simple product information, as they're embedded with extra functionality and information. For example, the global trade item number, expiration or best before date and batch number, and other attributes.

RFID smart labels

Radio-frequency identification (RFID) labels can automatically track products through the supply chain by using electromagnetic fields, meaning they can be used to do all sorts of things including tracing goods and preventing theft.

Smart labels and sustainability

As smart labels can provide far more information than traditional labels, not only can they reduce the material waste of labels themselves, but they can promote sustainability by:

1. Helping consumers make informed decisions about the environmental impact of the products they choose. For example, Flora has introduced on-pack carbon labelling across its plant-based margarines, butters, and spreads to encourage consumers to make more sustainable choices.

2. Providing mobile alerts to inform consumers when food or drink they've purchased is about to go past its use by date. Innoscentia, for example, is piloting interactive labels that provide real-time monitoring of their meat which tells consumers, via a smartphone alert, when the meat is about to go off.

3. Providing further information about how to store food and drink products to prolong their lifespan and prevent wastage. For instance, by changing colour and price as the expiration date grows nearer.

Living for the label

We know label printing is an important part of any logistics operation – but not something you want to spend too much time and energy on.

That's why at Brother, we live for the label. So you don't have to.

But what does that mean, exactly?

It means we live for reliability

We know consumers want everything delivered 'now', for low cost. That's why Brother label printers are built specifically for high-volume label printing with high print speeds, large ribbon capacity of up to 600m, and industrial-grade durability.

It means we live for quality

We know one tiny misprint can make all the difference. That's why our printing devices produce clear, accurate labels and receipts up to four inches in width, with thermal print technology, and a top quality user experience.

It means we live for performance

We know ecommerce never sleeps. And when you can reliably print thousands of labels per day, with lightning-quick loading and longer-lasting ribbons, your productivity won't slow down either.

It means we live for support

We know you've not got time for things to go wrong. That's why we've got you covered with best-in-class warranty options and dedicated UK call centres "At your side" to get things sorted.

Let's talk

Want to find out more about how we can help keep your business moving? Talk to Brother's printing experts today to find out which of our products are right for you or request a free trial to find out how they can be tailored to your business needs.

brother.co.uk/lets-talk-labels

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