



The Global Language of Business

How suppliers can drive profits by addressing problems with product data





Executive Summary

It is easy to take our complete obsession with data and quite how pervasive it is in our daily lives for granted. But take a step back to consider it and the results (more data) are quite something. No-one just goes for a run anymore; they want to know how far they ran, at what pace, how many calories they burned and what their heart rate was. No-one glibly picks up a lunchtime sandwich anymore; they're scanning the wrapper for calorie counts, nutritional information and fat percentages. And no-one just watches football anymore; they want possession stats, kilometres ran and chances created to inform their viewing pleasure. We have the technology to mine for this information and if it's data people want, it's data they are going to get.

Nowhere is this fixation with figures more apparent than with the regular food shop. Not so long ago, consumer choice was limited to the point where they drove to the only supermarket within a reasonable distance and dutifully bought what they had to offer. Now, they might not even get in the car – online grocery retailing in the UK was forecast to reach £11 billion in 2017, up from less than £10 billion in 2016. With the market growing by 12% a year, the value of virtual shopping baskets is growing at a faster rate than physical ones. In 2016, sales in the online grocery market rose by 15%, while total food retail sales grew by just 1.5%¹.

Even the consumers who are still driving down to the shops will have been besieged with email offers from one of five supermarkets in the area (not even counting convenience-sized versions) before they've put the key in the ignition. And they're running checks on comparison sites to see where they'll get the most bang for your buck.

But it's once you've unlocked your trolley and set foot inside that the real number-crunching begins. Leaving aside the price matching, there are a whole selection of stats that we not only demand, but have come to accept as completely standard.

You might not need to scour the label of your usual staples, but when you're buying something for the first time, chances are you'll scour the ingredients and nutritional information. Or if you want to compare

between different brand versions of the same item. Or if you're hosting a dinner party and have guests with allergies or religious beliefs that preclude certain ingredients. Provenance is also increasingly important to British consumers – they want to know where their food comes from, when it was picked or made, and how long it's been sitting on the shelf. The onus didn't used to be on food manufacturers to provide detailed information, but a groundswell of consumer demand and tighter regulations mean it is now common practice.

But while it may not seem too onerous for manufacturers to include this information on a single product, contemplate the hundreds or even thousands of items some make, and it soon becomes a considerable undertaking. And that's before you factor in the lack of agreed format and standardisation across the board which creates something of a minefield. So what if there was a way that transformed the way companies capture and share product information, that improved efficiencies (and therefore profits) and have consumers exactly what they want? That would be quite something. In a nutshell, it's exactly what we think we've created with **productDNA:hub**; a process that will eradicate inconsistencies, create an industry standard and bring suppliers and retailers together for a greater good. All while scratching the consumer itch for ever-more detailed data.

¹ <http://www.mintel.com/press-centre/retail-press-centre/online-grocery-clicks-in-the-uk>

The problem with product data

They are hardly alone in this in the era of Big Data (65% of companies fear that they risk becoming irrelevant or uncompetitive if they don't embrace it²²), but the UK's grocery suppliers have a problem with data. GS1 UK's research has found that 80% of product content is inconsistent. Either the data is missing or it's unreliable – and there isn't an industry-wide mechanism for sharing it accurately or in a standardised format.

Problems arise because the benefits of sorting out product data lie across both sides of the supplier and retailer divide. And to compound that difficulty, the problems lie across different divisions and functions within supplier organisations – rather than within a single department that can lobby more effectively for the funds to implement changes. Commercial directors and customer directors, heads of master data and supply chain directors – all could feel the benefits of better product data. But operating in their own fiefdoms, the bigger picture (and the enormous benefits a best-in-breed solution might offer) may not be clear.

The problem is compounded because the alternatives that have been rolled out in other countries recently have, in many cases, proved prohibitively expensive to implement – despite their apparent technical elegance.

This has meant that, despite the scale of the problem, despite the scale of the opportunity – suppliers in the UK have been forced to stick with the status quo. That means data is of poor quality and that processes are inefficient with hidden costs being built into new product introduction (NPI), transport, and warehousing in particular. In short, product data is failing the industry.

And that might have remained the status quo were it not for two further complications that mean the UK grocery industry can no longer bury its head in the sand.

First, the amount of data required per product is growing. Consumer use of technology has changed dramatically,

meaning consumers expect comprehensive information about products. They are demanding more detailed and accurate product data than ever before as part of their lifestyles, whether this relates to fitness and wellbeing or managing health conditions. And they expect to be able to find this level of data quickly, easily and reliably online and through mobile apps: think calorie counters like MyFitnessPal and Nutracheck. Increasingly, suppliers need to respond by providing the correct information to inform product choices based on lifestyle. The lack of – or poor quality of – information available frustrates consumers and affects their perception of brands. We are living in the information age where what we might previously have thought of as exhaustive levels of data, have become the new norm.



Second, regulatory pressure (such as the **Soft Drinks Industry Levy** or “sugar tax”) and the healthy eating agenda (with its focus on saturated fats) is increasingly driving brands to reformulate products, making this level of data more important. Product information is governed by increasingly tough and wide-ranging regulations, adding costs and complexity to businesses that need to comply with these.

²² Rombaut, V., “Top 5 Problems with Big Data (and how to solve them)”, business2community, January 2018 <https://www.business2community.com/big-data/top-5-problems-big-data-solve-01597918>



The solution to so many supplier problems

productDNA:hub is the industry's single source of trusted data. It is a best in breed solution to the grocery sector's data problems. It is based around three components: it provides a single catalogue of product data (and images); the independent auditing of product data to ensure its accuracy; and the sharing of product data and images with retailers in one consistent format.

It will offer cost and time savings to suppliers of all sizes who have long been battling a product data management headache. A standardised system will mean that rather than being bogged down dealing with different retailers' data requirements, suppliers will instead be able to focus on growing their businesses, delivering more consistent brand messaging, and innovating.

The NPI Cycle

Procter & Gamble describes its business model as relying "on the continued growth and success of existing brands and products, as well as the creation of new products"³.

"We believe we must continue to provide new, innovative products and branding to the consumer in order to grow our



As previously alluded to, areas where **productDNA:hub** will make a particularly significant difference to suppliers will be in the NPI cycle, logistics (including transport & warehousing), and fees for listing digital content (especially to smaller suppliers). But there are other benefits, too, albeit ones where it's harder to measure the potential impact - including to intellectual property, and, of course, catering to customer demand.

business... Innovation has always been, and continues to be, P&G's lifeblood"⁴ ... The market continues to be challenging... The best response is innovation."⁵

Nestlé knows that its performance depends on its product innovation, too.

"The success of Nestlé Group depends on its ability to anticipate consumer preferences and to offer high-quality, competitive, relevant and innovative products."⁶

³ P&G 2017 Annual Report

⁴ P&G 2017 Annual Report

⁵ P&G 2017 Annual Report

⁶ Nestle 2016 Annual Report



It's not all talk. Large suppliers put their money where their mouths are. Mondelez, for instance, has more than 1,900 scientists and engineers primarily focused on research and development with major technology centres located in Bournville and Reading here in the UK as well as East Hanover and Whippany, New Jersey (US); Curitiba (Brazil); Paris, (France); Melbourne (Australia); Mexico City (Mexico); Munich (Germany); Thane (India); and Suzhou (China). Their research and development expenses amounted to \$376m in 2016⁷.

More than 6,000 R&D professionals work at Unilever, "building their brands through innovation". Unilever invests around €1bn in R&D each year, and holds a portfolio of more than 20,000 patents and patent applications⁸.

The point is that large FMCG manufacturers must innovate; achieving business results depends, in part, on successfully developing, introducing and marketing new products. They must also successfully respond to technological advances made by – and intellectual property rights granted to – competitors. Failure to continually innovate, improve and respond to competitor moves and changing consumer habits could compromise their competitive position and adversely impact their results⁹.

That means they are bringing an enormous number of new (or reformulated) products to the market every year. In 2016, for instance, Nestlé overhauled 8,856 products for nutrition and health considerations alone¹⁰, an undertaking that is bound to become more widespread as the sugar levy and wider healthy eating agenda continues to take hold.

⁷ Mondelez 2016 Annual Report

⁸ <https://www.unilever.co.uk/about/innovation/innovation-in-unilever/>

⁹ P&G 2017 Annual Report

¹⁰ Nestle 2016 Annual Report

And, as a result, the NPI cycle is a huge concern for suppliers constantly launching and relaunching a vast number of new products. Inefficiencies in the NPI cycle represent a huge cost to suppliers and an obvious place to take people out of the process and redeploy them elsewhere.

When GS1 UK interviewed representatives from the largest manufacturers, we found that, on average, they were introducing between 900 and 1,000 new SKUs every year each – with some introducing thousands a year.

But according to manufacturers and suppliers, the current NPI cycle is unnecessarily complex and unwieldy – it is too costly and too time consuming. GS1 UK has interviewed representatives from a sample of the largest 55 multinational suppliers to the UK grocery trade in the run up to the launch of **productDNA:hub**. Roughly three quarters of our sample described the current NPI cycle as either “far too costly & time consuming” or “too costly & time consuming”. Only a quarter were prepared to say it was satisfactory and none of the suppliers GS1 UK spoke to thought it was particularly efficient.

If nothing else, currently, every new product requires up to six samples to be sent to each retailer or wholesaler.

Reviewing product samples is a standard step in the product discovery process for retailers but with different parties within retail organisations needing to check different information and data, the requests for samples soon add up. Given multiple samples are being sent to approximately 55 retailers and wholesalers by each supplier – this is costing manufacturers in the UK’s grocery industry a small fortune. **productDNA:hub** however, will deliver consistent, audited data from a single source meaning fewer samples being sent from suppliers to their for retail and wholesaler customers – with less of the associated manual to-ing and fro-ing as a result of an improved and more efficient process.

The problem is compounded as retailers and wholesalers demand product data sooner than ever. Their desire for speed is driving inaccurate or incomplete data.

While big suppliers can throw resource at the problem to ensure that they keep retailers happy and hit deadlines, some smaller suppliers are missing those new product data deadlines – leading to friction with retailers and, on occasion, fines.

Now suppliers will be able to sign up to an agreed process and retailers will get data they can trust, earlier.



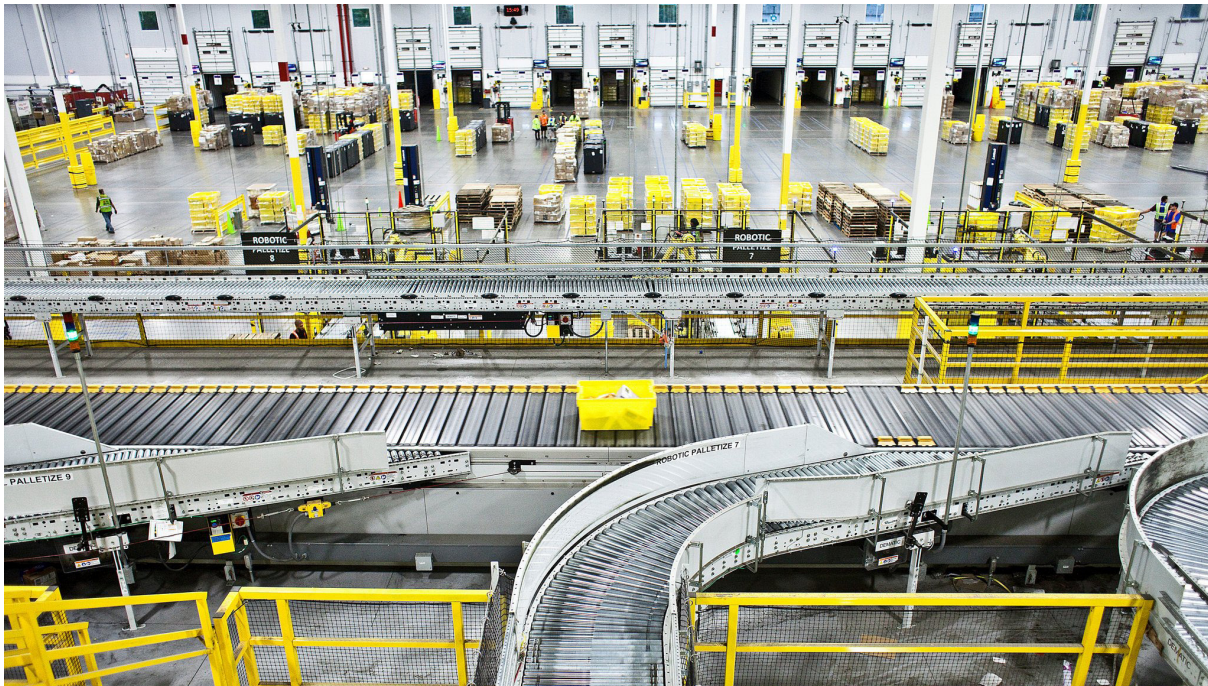


The two main processes related to product development (new product design) and launch (new product introduction) strongly benefit from a data-sharing solution. A single source of trusted product data facilitates access to the most recent and accurate information. Internally, improved interdepartmental communication accelerates the new product design process. Externally, timely sharing of recent data improves the efficiency of new product introduction process as well as improving collaboration between suppliers and retailers. These improvements increase speed-to-market (both in store and online), leading to increased shelf availability and therefore reduced lost sales. While this is a very category specific measure, a key US supplier increased speed to shelf from 4-8 weeks to 2 weeks (67% improvement) with the introduction of superior data management.

Logistics – transport & warehousing

It's not all about new products, however. It's also about moving the existing ones.

For all the effort and ingenuity that FMCG suppliers are putting into streamlining sales and operations planning, forecasting, inventory management and logistics, major opportunities remain in the outbound supply chain, from packaging to final delivery. There may be further cost savings to be made in terms of logistics and warehousing – an important achievement in the light of current industry cost and performance pressures. Up to half the cost of many supply chains lurks ignored and unmanaged in outbound logistics and behind the closed doors of distribution centres. Much of that cost can be eliminated by improving product data management.



FMCG logistics represent about 7.5% of sales (2.5% in warehousing, and 3.5% in transport with another 1.5% elsewhere in the chain), much more than what we find in other industries such as pharma (2%) or high-tech (5.5%)¹¹.

In transport, accurate information on the size and weight of products means vehicles can be loaded more efficiently, which helps shrink the total number of lorries in transit at any one time. Shipment size is one of three real drivers that have a disproportionate effect on transportation costs.

Case sizes can change by 20% each year – often shrinking to meet the needs of the convenience market – and yet, often, the data isn't updated in the systems. Load planning therefore becomes less accurate. Poor quality 'cage filling' or 'cube filling' essentially means a lot of air is getting shipped across the UK.

As a workaround, fill calculations allowing 110% oversize are often used within the industry. Of course, sometimes that leads to there being no space for all the products. When there is, inevitably, not enough space for a delivery, the extra goods have to be put on expensive 'milk runs' at great cost.

Accurate information minimises the need for additional data checks and data corrections, which in turn positively affects the speed of product flows within the network.

The vast majority of shipments weigh less than five kilos, but these small shipments cost around six times as much per kilogram as larger shipments. Even where companies do manage to consolidate deliveries into larger shipments, it usually fails to capture all the available savings; by weight, a quarter of product is shipped in the lowest cost bracket, but nearly half fell into the next price bracket up¹².

And inaccurate weight information increases the risk of truck load overweight, which can lead to fines.

In the UK, 40% of invoices do not match with deliveries causing delivery rejection, manual investigations and repeat journeys and wasted effort on behalf of suppliers (and their customers). Accurate invoice information improves order accuracy (e.g. pack/case quantity data), limiting the risk of shipment rejection. And shipping rejection can lead to special delivery services to fix the problem – express shipping guaranteed by 10 AM the next day can cost two to five times more than conventional 24-hour delivery¹³.

¹¹ Lean and mean: How does your supply chain shape up? McKinsey

¹² Lean and mean: How does your supply chain shape up? McKinsey

¹³ Lean and mean: How does your supply chain shape up? McKinsey

Further benefits could be achieved by increasing productivity and by lowering “out-of-stock” levels. Accurate data and labelling eliminate the necessity for additional checks and re-measuring of products, leading to higher productivity among warehouse staff.

Many warehousing operations are not working as efficiently as they could – not because the warehouses lack technology or suffer from the structural disadvantages of the goods it handles. It is the cumulative effect of dozens of slightly sub-optimal processes. A few fundamental changes in the way they make use of better product data could immediately close large gaps between current performance and the benchmark

The solution to these transport and warehousing woes is better product data and information.

There are real and achievable efficiencies to be made here. In the US, suppliers using an improved data solution achieved 2-8% annual cost savings in terms of inbound and outbound operations. An IBM report investigating global impact of data sharing solutions reported a 3% increase in on-time deliveries between 2006 and 2010 and indicated a drop of 6% in distribution costs between 2006 and 2010.

Of course, inefficient or unreliable warehouse operations and transportation cost more than money—delivery delays can do quick and lasting damage to a company’s reputation with customers.

And companies that have excellent product data not only save money in warehouse operations but enjoy more flexibility and much better service, without significant capital investment. With margins under pressure, developing utilising product data within warehouse operations can dramatically reduce costs. Even more important, it serves as a powerful value proposition to customers in a market where providers can struggle to differentiate their offerings.



Specific benefit for SME suppliers

productDNA:hub will also make it easier for smaller suppliers to list with new retailers. Where SMEs don't have systems in place themselves, **productDNA:hub** could be used to manage their product data, providing for easy access and sharing with their customers.

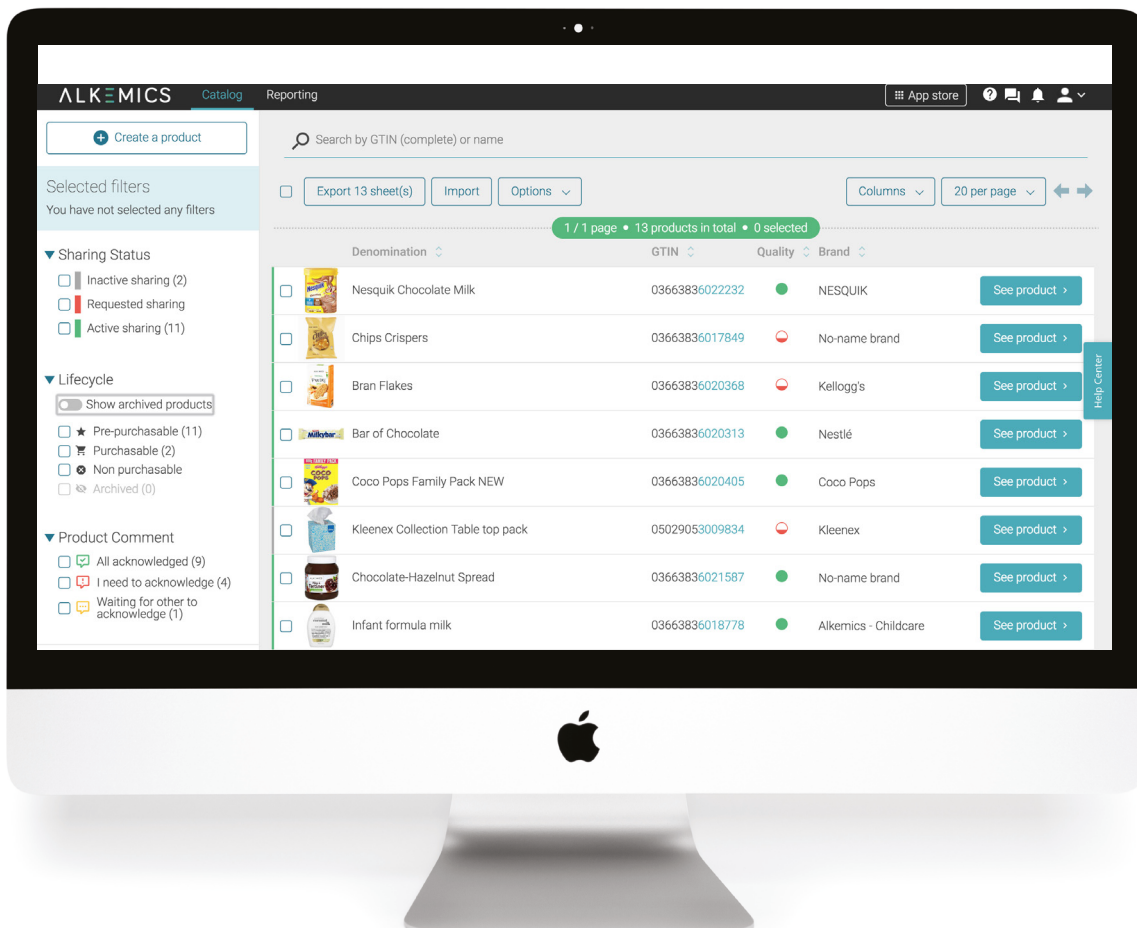
SMEs often list outside the major range changes and are therefore asked to manage the listing within eight weeks (structured range changes usually allow 16 weeks). That's a tight window and a systemised approach to data management will help hit tricky deadlines, improving service and compliance.

Fees for publishing digital content

One area that really sets **productDNA:hub** apart from the existing platforms used to capture, manage, and publish digital content is the fees attached to its use. Approximately two-third (60-70%) of suppliers who subscribe will not pay for **productDNA:hub** in the first three years. Small suppliers stand to benefit the most.

Suppliers are currently paying approximately £100 for 6 images to be taken of every product (plus back of pack information) and its listing. Typically, a small supplier will introduce 50 products per year meaning a total cost of £5,000 per year. But they will pay no subscription fee in the first three years of using **productDNA:hub**. After that? It looks as though the fees will be something like £300 per year.

Suppliers will have to take their own product pictures at a cost of £50 per product and that will cost them something like £2,500 a year.



So in the first three years, in total, a small supplier will be saving around 50%.

That might not sound like a great deal to Unilever or P&G but not every grocery supplier is a multinational. 85% of the supplier community is small. Tesco alone has more than 5,000 members in its supplier network¹⁴. The Food and Drink Federation, the voice of the UK food and drink industry, represents 6,815 supplier businesses¹⁵. For an SME, a 50% discount on their digital content fees is not an inconsiderable saving.

There will also be cost savings for larger suppliers, too, given they won't need to pay for their own imagery to be hosted. Large suppliers like P&G and Nestlé already have their own photographers in-house – they are currently paying twice just to have photos hosted and published by content providers. Given a large supplier launching 750 new products per year is spending between £80,000 and £90,000 per year currently, they will save even more than small suppliers.

Part of the reason is that **productDNA:hub** is not funded by suppliers alone. It is owned and managed by the industry, through an industry governance group and industry agreed funding model. The primary mission of the service is not to yield commercial returns to shareholders.

One of the reasons **productDNA:hub** will cut costs is that the market for images will open up to other content providers or brands managing their own images; at the moment for large suppliers have to send their images via existing providers even though they don't need to.

Another is that the **productDNA:hub** model does not seek to take advantage of suppliers. Existing models are priced free of charge to retailers (thus securing a mandate from them). With **productDNA:hub**, different parties will share the load. That will make for a much fairer system. That's a function of retailers and suppliers sitting around a table to specify a solution and process that works for everyone. This mutual agreement is key to unlocking cost benefits across the whole industry.

Intellectual property

Suppliers have large portfolios of patents and trademarks¹⁶. They are fully aware of the importance of their intellectual property and the importance of their ability to protect their intellectual property and intangible assets¹⁷. 100% of the suppliers we interviewed as part of our market research ahead of the launch of **productDNA:hub** said they would prefer to own the IP of their product imagery and data.

Match fit for the future

The most important change that **productDNA:hub** can bring about, however, is not an immediate one. The truth is that even the very best of the multinationals operating in the sector know that they can't thrive in the brave new world of smart integrated ecommerce in the grocery sector without better product data. Data – reliable data – has become a fundamental element for the sector. For suppliers. But also for retailers and consumers. **productDNA:hub** is the first step on that path – a step that could unlock the future. A journey of a thousand miles begins with a single step. Without **productDNA:hub**, there can be no first step.

¹⁴ https://www.tescopl.com/media/392373/68336_tesco_ar_digital_interactive_250417.pdf

¹⁵ https://www.fdf.org.uk/about_fdf.aspx

¹⁶ Unilever Annual Report And Accounts 2016

¹⁷ Mondelez Annual Report for the period ending 12/31/16

The total loss to the grocery industry

Altogether, these benefits deliver tangible monetary results. For instance, when suppliers and retailers in Sweden worked together to create a common platform to share high quality data across the supply chain, their collaboration improved data quality, enabled timely exchange of information, and supported the elimination of non-value-added activity. It has been estimated that suppliers using these data sharing services were able to increase their sales figures by 1-3%. Their cost of sales decreased by 5%. A total financial benefit across the grocery market equivalent to over £3bn was achieved. Given the comparative size of the UK's GDP and population, this could represent a benefit of between £17bn and £21bn if the retail grocery industry has the energy, interest and impetus to work together to create a common platform to share high quality data across the supply chain.

Conclusion

productDNA:hub – a groundbreaking collaboration between suppliers and retailers – looks set to transform the grocery industry. The introduction of a universal format of high-quality, independently verified product data could be as revolutionary for the UK retail sector as a number of different milestones have been down the years.

When you've come so far it's easy to forget where you've been, but many things we now take for granted were considered truly groundbreaking at the time. Take the very existence of supermarkets themselves. Before the London Co-Operative Society opened its doors to the unsuspecting public of Manor Park in East London 70 years ago, food shopping was a far more laborious process that involved visiting a number of shops to get what you needed or, in a best-case scenario, having to dictate what you wanted to a shopkeeper who would have to scurry back and forward to complete your order. Being trusted enough to handle the goods before you'd paid for them represented a step change for grocery retail and one that has taken its latest leap forward with the introduction of self-checkouts.

Another transformative landmark – and one without which there would be no GS1 UK – was the introduction of barcodes themselves. First imagined in the late 1940s, they were introduced in the US in 1974 when a humble pack of chewing gum was scanned in an Ohio supermarket. At the time it may have seemed like little more than a nifty time-saving invention; now almost half a century on and it's still playing a key role in streamlining retail, healthcare and an infinite number of other industries.

Online shopping is another significant signpost in the evolution of retail and it so ubiquitous now that it is easy to forget the first transactions only occurred in the 1990s, with it taking considerably

longer before consumers concerns were sufficiently allayed for it to become widespread. But just because something doesn't need to be scanned by a cashier, it doesn't mean it doesn't need a barcode and product data is just as vital for those selling through websites and online marketplaces.

We like to think that the implementation of **productDNA:hub** is the latest in this illustrious list and that in years to come people simply won't believe that suppliers and retailers didn't have a standardised system – and paid over the odds for clumsy, inelegant solutions which barely did their job – in much the same way as smartphone-addicted teenagers can't comprehend a life pre-internet. It may not happen overnight, but we're confident that **productDNA:hub** represents a bright new day for suppliers, for retailers and customers.



Want to know more?

Find out more and register to receive updates about productDNA:hub at www.gs1uk.org/productdnahub

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