Where did your profitability go?

Managing the apparel omnichannel cost-to-serve

GS1 UK

GS1 UK is a community of over 30,000 members working in retail, foodservice, healthcare and more. GS1 UK is one of 112 independent, not-for-profit GS1 organisations operating across 150 countries worldwide. GS1 UK helps everyone involved in making, moving and trading goods, automate and standardise their supply chain processes using the common language of GS1 global standards.

Cranfield School of Management

Cranfield has been a world leader in management education and research for 50 years, helping individuals and organisations learn and succeed by transforming knowledge into action. We are dedicated to creating responsible management thinking, improving business performance and inspiring the next generation of business leaders. We work to change the lives of our students and executives by encouraging innovation and creative thinking, as well as the drive to succeed and make a real impact on their organisations.

LCP Consulting

LCP Consulting is an award-winning customer-driven supply chain and business operations consultancy. We help leading retailers and brands operate more profitably and compete more effectively by taking an end-to-end customer-driven view of supply chains and operations. With over 20 years consulting experience, we have a deep understanding of how supply chains can make major contributions to overall business success. LCP have developed a proprietary Cost-to-Serve® methodology to support retailers in understanding the net profitability of their customers, their products and the service promises that they make.

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1 Executive summary

Online is the fastest growing retail market in the UK and Europe with apparel accounting for 20% of total online sales – and it's predicted to grow even more. But this growth in sales is leading to lower margins as apparel retailers grapple with the added costs of serving the omnichannel shopper.

As apparel retailers strive to increase sales and market share, understanding how costs build up at every functional link along the supply chain – the cost-to-serve – is fundamental for securing sustainable growth in omnichannel retail. Unlike the traditional average cost route, this demands a granular, end-to-end approach to reveal the total cost of servicing each individual customer with a specific SKU, at the designated level of service – reflecting the true cost of handling.

Working with LCP Consulting and Cranfield School of Management, GS1 UK has analysed the cost data of apparel retailers and brands to identify how the industry can sustainably manage the cost-to-serve.

Unpicking the complexities of managing the apparel cost-to-serve

Modern retail operations have largely been developed with each new channel being tacked on to the existing business. Yet, as customers expect to interact across many different channels, the supply chain needs to become more interconnected. It's also now common for retailers to rely on the services of third parties. But this comes at a cost – reducing the visibility and control retailers have over their supply chain activities and overheads.

The "anytime, anywhere" culture of omnichannel shoppers has increased the sales opportunities for retailers, but has led to fierce competition as the market becomes increasingly volatile, particularly around peak trading events.

Knowing where expenditure is building

This paper shows how most expenditure occurs downstream, from the warehouse to the customer. But these costs are largely driven by a retailer's service proposition – a necessary investment in securing retail customers and considered a value added cost area, although if mismanaged, it can lose businesses money.

Additionally, any mistakes made upstream, in the planning, development and sourcing processes can significantly impact work load and expense further downstream, creating non-value added costs.

Controlling the cost-to-serve to maximise profitability

Retailers can better manage their cost-to-serve by improving information flows to support the seamless movement of product throughout their supply chain and by adjusting their value proposition.

By improving the flow of information, retailers can reduce errors at functional links and product handover points. And by improving product information and connectivity of data across partners, retailers can reduce errors and delays along the supply chain, support more accurate planning and understand their cost-to-serve.

With this clear understanding of their true cost-to-serve, retailers can ensure their value proposition is properly balanced – aligning their service offer to what the customer truly wants while ensuring sustainability of their margins.

Standards that deliver impact

In our research, we've also identified the impact of GS1 standards on resolving the issues retailers face while managing their cost-to-serve. Using GS1 standards brings quantifiable cost and time savings along the entire supply chain, helping businesses achieve an estimated reduction of 20-30% across total operational costs.

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Ever wonder where your margin went?

Rapid globalisation and the rise of omnichannel have transformed the retail landscape. While the industry continues to shift and adjust, retail sales' growth is becoming increasingly dominated by online shopping through a growing number of channels and fulfilment models. According to the Centre for Retail Research, online continues to be the fastest growing retail market in the UK and Europe with apparel[1] accounting for 20% of total online sales.

Looking forward, the majority of apparel retail growth will continue to come from online channels. Forecasts from Mintel (see appendix 1) suggest online will grow at an average of 13% year on year until 2021, outpacing the total market average of 4%. But is it all good news for retailers?

Before multichannel and omnichannel, ecommerce largely functioned as a separate entity to the core retail business, siloed with its own resourcing, stock pools and KPIs. But, as the channels and touch points along the supply chain have now increased, and the lines between stores and online have blurred, ecommerce has become ingrained into business as usual. While omnichannel is just shopping in the customer's eyes, the retail back-end is still adjusting its systems, processes and operations to cater to the new normal.

By opening up borders and improving the customer experience, online represents a huge growth opportunity for retailers. But it can also represent an increase in costs, capital investment and overall structure, while requiring significant changes in the way businesses measure success and understand their profitability.

Managing the costs of growth and maintaining profitability

In today's increasingly competitive market, retailers are striving to increase sales and market share – but to ensure longevity, this must be done both profitably and sustainably. The key to achieving this, is understanding where and how profit is made, and the costs that build up at each step of the supply chain – or in other words, understanding the cost-to-serve.

Because cost-to-serve encompasses all functional areas in the supply chain, it requires a new approach – one that gives a shared understanding of revenue, cost and profitability across the business. Understanding the cost-to-serve involves comprehending all the end-to-end processes needed in completing a customer delivery, including the management of returns and collecting a product's revenue. **Essentially, it's determining the total cost of servicing each individual customer a specific SKU, at the designated level of service to reflect the true cost of handling.** This is in contrast to the more frequently used average cost approach, which doesn't distinguish the different product and customer characteristics.

Once there's a clear understanding of how costs build up, retailers can make effective trade-offs in their commercial and operational decisions – based on the real business value and profit impact.

By identifying the main drivers of cost across channels, customers, products and business operations, retailers can address key retail questions:

"How do promotions impact my profit and why?"

"How does profitability vary across my channels?"

"How much are my delivery service and customer proposition really costing me?"

"How does the way I buy and flow products affect my profit?"

"How much do non-value added tasks cost me operationally?"

"If my channel mix changes, how does my cost profile change?"

[1] References to apparel within this report cover the clothing, footwear and accessories industry.

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What did we do?

We've identified how apparel retailers and brands can manage or reduce the total cost-to-serve in omnichannel supply chains through:

- Establishing the key challenges in understanding and managing the cost-to-serve in apparel retail

- Recognising the key cost areas and levers at each stage of the value chain

- Identifying the benefits of GS1 standards on the cost-to-serve

From our research, we've discovered that as new channels are emerging, many retailers are struggling to measure their cost-to-serve. The service offer has evolved but the financial cost structures and systems that now measure the business as a whole, are still playing catch up. This applies across retail as a whole as recent research from the IGD supports – 54% of retailers don't know or understand their true cost-to-serve – but for the purposes of this paper we'll focus on the apparel sector.

By recognising the key cost areas and levers, we've identified the areas with the greatest opportunity to improve processes and reduce omnichannel operational costs. Successful omnichannel retailing requires increased interoperability across systems, channels and trading partners. With increased interoperability there's also a greater demand for standards across supply chain functions. Supply chain standards provide a common means of communicating products and activities in the supply chain enabling internal and external partners to work together more efficiently.

The research output

Beyond the cost of the garment itself, as an apparel product undergoes the development process from raw materials through to a garment in the hands of a customer, at each stage of the supply chain it will accrue certain costs. By conducting retailer interviews and analysing their cost data, our research has identified the cost build-up along the retail supply chain and the challenges that retailers face in harnessing these costs.

So what does the apparel supply chain look like? By mapping out the key steps across a number of retail models, including department stores, vertical brands, fast fashion brands and pure play online retailers, we've developed a view of the typical apparel supply chain.
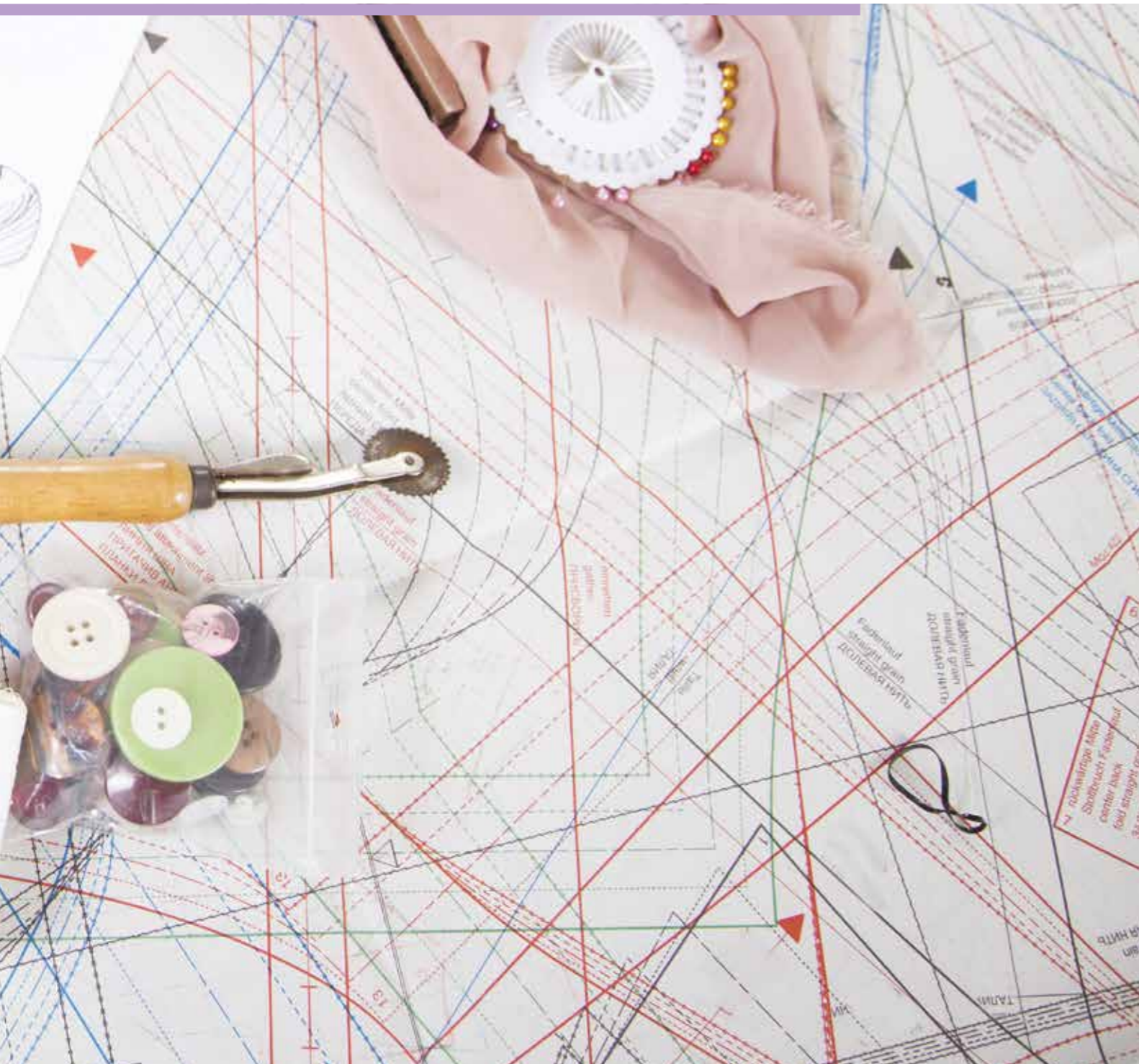
The cost-to-serve elements in a typical apparel supply chain

- Primary source
- Plan
- Design
- Sample
- Select
- Source
- Produce
- Inbound
- Warehouse
- Outbound
- Store/customer
- Reverse

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Why don't we understand the cost-to-serve?

All retailers and brands we interviewed, struggled to provide a complete view of their operational costs. In response to this challenge, more than half of them are currently reviewing their systems, processes and KPIs to establish this end-to-end view.

In understanding the challenges businesses face in managing their cost-to-serve, three key elements emerged:

Network complexity

Market volatility

Lack of visibility
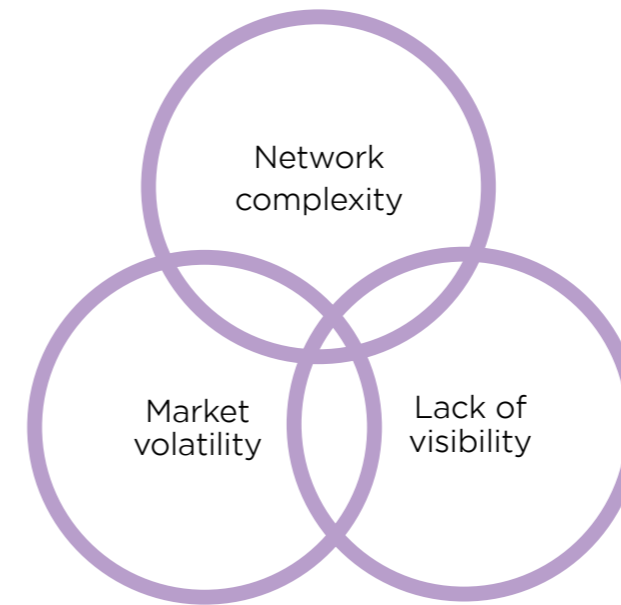
Network complexity

Since the development of online shopping and rapid onset of globalisation, the number of touch points along the retail value chain has grown exponentially. Retailers need to manage operations across an increasingly complex network. Upstream apparel retailers and brands are developing wider ranges with a larger number of suppliers located across multiple continents. Further downstream they're responding to an increasingly demanding set of customer expectations and distributing through a growing network that involves new channels, business models and markets.

Stores are no longer the end point of the supply chain – on the contrary, today, stores function as mini distribution centres and receiving depots. Returns are now often the biggest supplier, presenting both significant processing costs and inventory displacement issues.

The key drivers of network complexity include:

Third party and supplier management

Managing third parties and supplier relationships has long been a challenge for retailers, both in guaranteeing inbound compliance and ensuring effective information flows to support sales and availability. However, as more activities along the supply chain are outsourced to external partners, how retailers work with third parties becomes critical in managing operational costs.

Suppliers are increasingly asked to deliver directly to customers, effectively representing the face of the brand for online orders. Upstream, the basic issues of compliance have not gone away and nor has the lack of inbound visibility that presents so many issues for supply chain planning and logistics operations. Downstream, delivery traceability and service performance measurement are essential to the delivery of the proposition and customer experience.

Internal organisational structures

It's not just connectivity between retailers and their associated third parties that drives complexity and potential cost into supply chains. Often the siloed internal structure of retail organisations presents its own issues.

By definition, supply chains are made up of component parts and it's the effectiveness of communicating and aligning the objectives between those links that can make or break supply chain efficiency. All the interviews highlighted opportunities for more collaboration, while aligning departmental KPIs as a means of driving all parties towards one common omnichannel goal.

Aside from aligning the roles of head office buying, merchandising and supply chain, the store also has a critical role in the supply chain. No longer solely the outpost for sales – stores now play a role in delivering the omnichannel proposition. To factor this into the cost-to-serve calculations, new store processes must be reflected in store KPIs, tracked and properly accounted for.

For example, a conflict can occur on a click-and-collect order, when a customer orders an item on the web for collection at a store – but who gets credit for the sale and who rewards the sales assistant for serving the customer?

	Buying and merchandising	Warehouse	Marketing, stores and online
Typical KPIs/targets	• Intake margin • Store availability • Markdown reduction	• Logistics cost as % of sales • Pick and pack rate • Labour cost reduction	• Customer satisfaction • Individual channel/store sales
May detract from focus on	• Operational cost of holding and handling excess inventory • Cross channel full price sell-through potential • Store overstocks	• Service level quality/delivery • Store friendly deliveries • Pick and pack accuracy	• Omnichannel sales opportunities • Inventory integrity • Net margin maximisation

Retailer KPIs and their impact on omnichannel goals.

As illustrated in the table above, the KPIs can often detract from the retailers' understanding of the cost-to-serve by being insular in their focus and may not align to omnichannel goals.

"Previously we only looked at intake margin as that was considered the key driver. Now each channel has a different level of profitability; selling an item off the shelf floor has a vastly different return to click-and-collect through one of our partners."

Cost-to-serve interviewee

Service proposition

Retailers are providing increasingly complex offers to their customers, from *same day* and *name day* to *free delivery* and *click-and-don't-collect*. But when establishing their omnichannel service offerings, retailers need to ensure they balance their desire to match competitor activity and customer wants with what they can sustainably deliver.

Ten years ago there was one main route to market. Now with access to product growing exponentially there are multiple routes – and the options are growing. According to research from Barclays, in 2016 the average retailer offers 7.2 delivery and collection options but by 2019 this will increase to 10.1. But, while retailers are selling through more channels, the growth in distribution options hasn't always been met with a corresponding increase in sales. This has fragmented distribution channels while making it challenging for retailers to create cost efficiencies and drive volume through any channel in their network.

Network and infrastructure

When executing the business plans and service proposition, it's the network and logistics operations that come under scrutiny. In many ways the logistics operations have to bear the brunt of potentially poor upfront planning, inbound visibility and supplier compliance.

To add to that mix, retailers are often also hindered by single channel legacy systems, which now face lengthy overhaul programmes to bring them up to speed. In an ideal world, online sales growth would be purely incremental business growth,

from new customers discovering the retailer through a new channel, and the operation would be able to bolt on services priced at a premium to serve those customers. The reality though is usually very different. Shoppers who previously only had the option of stores and catalogues are now making the most of multiple channels and choose the most convenient shopping journey with a significant impact on net margin, given the higher online fulfilment costs.

While retailers cannot control the path to purchase that shoppers choose, they can balance the service level promises they make, to manage the impact on network and infrastructure. The outcome of this trade-off is retailer specific, and visibility of the way costs build through different stages of the operation is crucial in understanding the decisions to be made.

Market volatility

The omnichannel apparel landscape is not only complex but subject to increasing market volatility. Expanding their networks to include more suppliers, third parties and customers have opened up new sales opportunities for retailers. But this has also led to greater variation in product flows, customer demand and competitor activity, by affecting the level of control retailers have over the activities and costs within their supply chain.

"Volatility is our highest cost area due to the increases it requires on capacity and resourcing."

Cost-to-serve interviewee

The key drivers of volatility are:

Customer behaviour

Omnichannel has empowered the customer with the choice and flexibility to shop "anywhere, anytime" and placing greater pressure on price, service and speed of the retail offering. As the customer becomes more demanding, this increases competitor activity – influencing retailers to be more reactionary in their activities and raising the bar on their service offer. All of which comes at a potential cost to the bottom line.

Changing product life cycles

Since the rise of omnichannel, all retailers interviewed, discussed the challenge in accurately forecasting their sales. In addition to the growth of new channels, the apparel sector is moving towards increasingly shorter product life cycles and more ranges per year, meaning companies cannot rely on sales history alone to accurately forecast demand.

Increase in peaks and sale events

Black Friday and other extreme sales driven events lead to volatility in product flows, particularly where price matching occurs. For those who engage in price matching, competitor sale activity creates unplanned spikes in their sale and fulfilment operations.

At these times the demands placed on the infrastructure often exceed capacity, and the operational cost of the required workarounds impacts heavily on the profitability of sales driving events.

"We need an additional 400 people to cover Black Friday, so we have to stagger the HR increase over a few months. A counter cyclical peak just doesn't exist. We only use our full capacity for four days of the year."

Cost-to-serve interviewee

Supplier performance

Upstream, managing supply flows can be just as complex as trying to harness volatile customer demand patterns. Not all suppliers can guarantee consistent availability of their products. As a result, where inbound flows are unpredictable, retailers drive up safety stocks to meet their own customer demand. The additional cost of inventory holding is felt throughout the supply chain, due to the costs of handling, storing and maintaining inventory, or potentially through markdowns.

Poor supplier performance can also lead to delays in getting stock to the shop floor and takes up resources on unnecessary tasks that add to the retailers' cost-to-serve. Inbound compliance was identified as a big challenge, yet one that is critical for ensuring speed in the flow of product.

"Almost a quarter of inbound deliveries fail quality control checks, which can lead to a two-week delay in processing the delivery and product just sitting on the warehouse floor."

Cost-to-serve interviewee

Lack of visibility

Visibility is a common issue in all the cost-to-serve challenges. At a macro level, the complexity and scale of the omnichannel network disguise activities and their corresponding costs within the retail value chain.

This happens for two reasons:

1. Many activities in the value chain are now conducted by external suppliers or third parties

2. Retailers are still acquiring systems and processes to support a single view of their customer, inventory and estate across all channels

In working with third parties or external stakeholders, all interviewees identified "black holes" where they had little to no visibility of entire processes along the supply chain. These included production, third party distribution activity, concession partner sales and inventory levels, and customer returns. This makes it a challenge to accurately manage inventory, plan capacity and resourcing to avoid unexpected costs and, ultimately, provide the promised level of service.

It was also highlighted that inbound logistics and customer returns are key areas where visibility is impaired. Return levels in apparel are particularly high in comparison to other categories due to the personal nature of the purchase and challenge of fit in securing a sale.

Vertically integrated retailers were able to effectively monitor sourcing processes – up until the purchase order was placed. From there, they had little knowledge of the goods' status until they were ready to ship. And also lack the connectivity between retailer track and trace systems and third party freight forwarder systems to support effective inbound planning. Additionally, many retailers are estimating what stock they actually receive based on a loose calculation of the orders' value converted into volume based on average cost price – further complicated as it becomes spread across many weeks.

"Logistics are totally dependent on inbound forecasts, but they are always wrong!"

Cost-to-serve interviewee

Down the far end of the chain in reverse logistics, retailers are typically unaware of a customer return until it turns up on their door step. By not having visibility of returns, retailers are unable to track the number of times an item is bought and returned before it finally stays sold.

No retailers interviewed had the granular cost insight to account for the journey a product can make back and forth from customer to retailer, and were relying on intake margin rather than exit margin to inform their decision making.
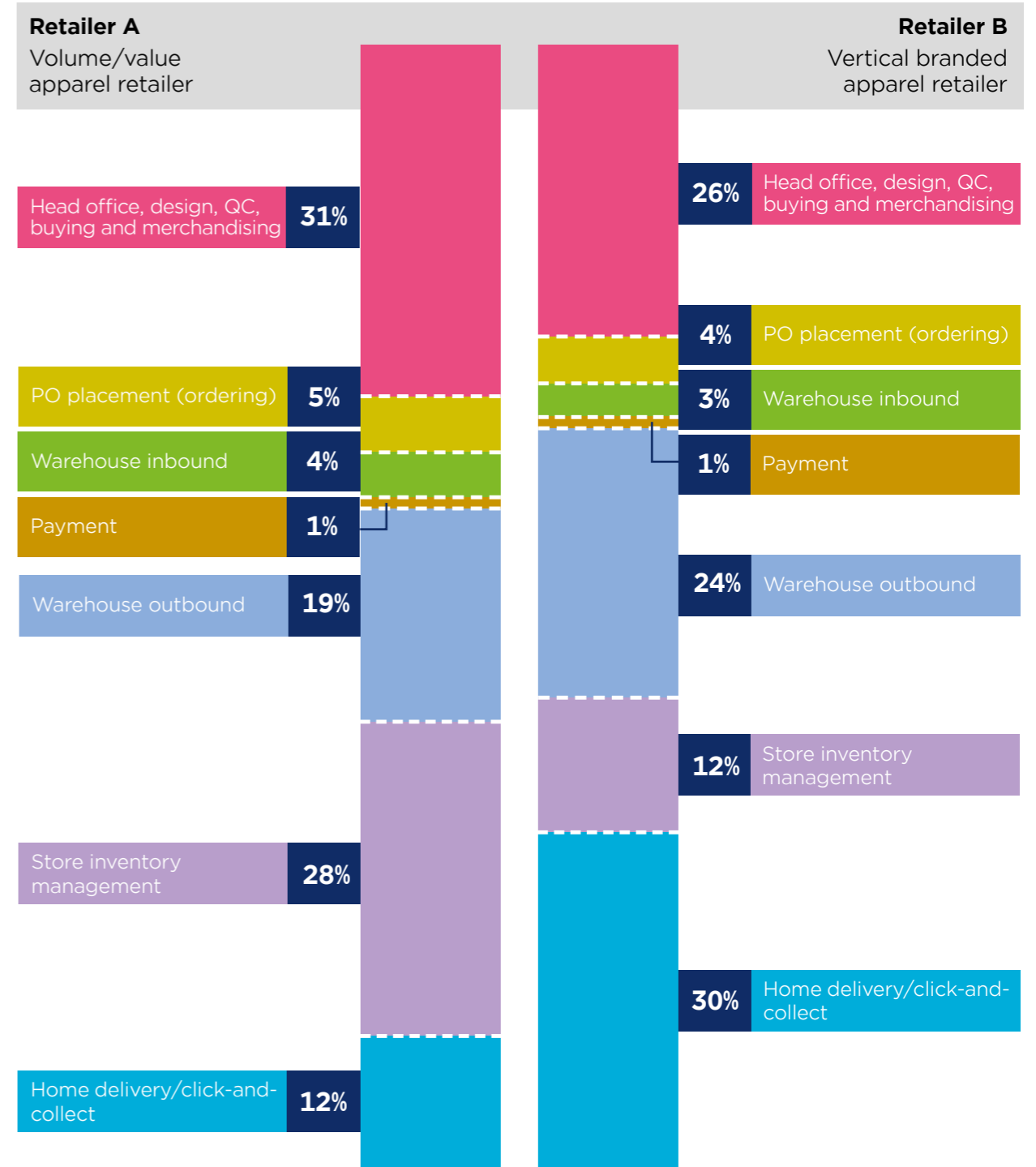
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Where does the money go?

To identify the areas that drive the biggest costs for retailers, a cost-to-serve ready reckoner tool was created to understand the cost build-up along the supply chain. Taking into account the volumes and business mix of various retailers, we've analysed the functional areas to determine the processes that incur the greatest cost and opportunity for the business.

Operational costs

The mix of costs incurred by different retailer types:

Retailer A
Volume/value
apparel retailer

Retailer B
Vertical branded
apparel retailer

Retailer A		Retailer B
Head office, design, QC, buying and merchandising	31%	26% Head office, design, QC, buying and merchandising
		4% PO placement (ordering)
PO placement (ordering)	5%	3% Warehouse inbound
Warehouse inbound	4%	1% Payment
Payment	1%	
Warehouse outbound	19%	24% Warehouse outbound
		12% Store inventory management
Store inventory management	28%	
		30% Home delivery/click-and-collect
Home delivery/click-and-collect	12%	

Retailer A is a high volume retailer with more stores than Retailer B and higher costs in store inventory management.

Retailer B has a much higher proportion of online sales and so incurs the cost of home delivery and click-and-collect.

The mix of operational costs we collected shows downstream costs make up the vast majority of operational expenditure. But, this doesn't definitively indicate a problem area. There's a sharp increase in cost from warehouse outbound where supply chain processes become more detailed and therefore more expensive. For example, downstream shipping takes place in packs or single units while upstream retailers ship containers. As we get closer to the customer in the supply chain, the expectations on service levels increase, which also drives up costs.

Through assessing the retailers' cost data and interviews, it became clear that to manage downstream costs, retailers need to look not only at their downstream processes but at the implications of activity upstream – adding to the workload and cost further down the chain.

The research identified two cost types that drive up expenditure along the supply chain:

- Non-value added costs that result from errors or process inefficiencies along the end-to-end chain

- Value added costs relating to how a retailer manages their service proposition

Non-value added costs

Poor supplier compliance, operational process inefficiencies and data inaccuracy create avoidable costs by delaying the process of product moving through the supply chain. Receiving non-compliant deliveries can also lead to additional tasks like addressing disputes, relabelling and repackaging product, correcting invoices and shipping mismatches or even product recalls – all of which drive up the operational cost of processing stock in and out of the warehouse.

Poor data management upstream can impact the accuracy of labour and resource planning downstream – under or over estimating supply will add to a retailer's costs either through wastage or a missed opportunity.

Examples of non-value added costs:

5%-25% – range of disputes on inbound receiving orders

Source: Cost-to-serve interviews

2 hours – average time spent to manage each inbound dispute

Source: GS1/Cranfield EDI calculator

£0.30 – average cost per unit to relabel product

Source: Cost-to-serve interviews

£0.40 – average cost per unit to hang product in store

Source: Cost-to-serve interviews

3-4 days – average time per delivery spent relabelling inbound product

Source: Cost-to-serve interviews

Value added costs

Retailers compete through product ranges, service offer – particularly around delivery and returns – and through promotional activity. Investment is often part and parcel with satisfying a retail customer – and, certain costs are necessary to fulfil the retail service offer. But, how a retailer manages or mismanages these can determine profitability. We identified three key choices that can affect cost:

- Width of range
- Last mile promise
- Peak management

Width of range

Offering a broad range and delivering consistent newness can be a source of competitive advantage for a retailer. But, it also drives up costs. Arguably, the operational costs to develop a style in 100,000 units are not too dissimilar from one with only 1,000 units. But, when the range broadens while total volumes remain unchanged, economies of scale are affected. The resource requirements also increase significantly due to the higher product development and sampling demands. In addition to this, sourcing a broader spectrum of product generally means more suppliers to manage. This can lead to poor point of origin consolidation and greater complexity in inventory management and moving product through the chain – all of which impact margins.

Last mile promise

Further to product range, service level is another value added cost area – particularly when considering returns. The process of fulfilling an item for free only to have it returned, also for free, is essentially a sunk cost to retain customers and encourage online sales. However, with returns on the rise there's a greater need for retailers to manage the costs related to delivery proposition, such as a free returns offer and processing returned stock.

Examples of value added cost areas:

Brands used to offer an average of two collections per year, nowadays this is 18

Source: Priscila Queiroz Guimarães Wiegandt Ceglio, 2013

Returns cost the UK industry £690 million per year

Source: JDA CEO Viewpoint 2016

Average returns rate for apparel is 38%

Source: Cost-to-serve interviews

Each year Black Friday sets new records as the biggest UK shopping day of the year

Number of delivery vans used on Black Friday compared to the rest of the year – 4:1

Source: Cost-to-serve interviews

Peak management

The popularity of peak sale events, like Black Friday, places pressure on retailers to participate or miss out on sales. Meeting the demands of these extreme peaks requires retailers to scale up operations for a limited period. To do this, they need to have flexibility in terms of internal capacity – which is costly to maintain outside of peak – or they need to work with third parties or other partners to meet the increase in demand. This involves connectivity of planning between internal functions, such as marketing and logistics, external couriers, drop ship vendors and suppliers – impacting on infrastructure investment requirements and labour planning.

Key cost drivers

Primary source

Plan

Design

Sample

Select

Source

Produce

Inbound

Warehouse

Outbound

Store/customer

Reverse

UPSTREAM

- Supplier integration
- Range breadth/SKU proliferation
- Product development and sourcing hit rates
- Accuracy of production planning
- Point of origin consolidation
- Resource and labour planning

DOWNSTREAM

- Poor supplier compliance
- Operational process inefficiencies
- Courier and other fulfilment
- Peak promotions
- Returns processing
- Master data integrity

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How do you influence your cost-to-serve?

Identifying the supply chain areas where costs build up is important. But understanding the levers to control that build-up can be the difference between making profit or not. The levers can be summarised under two key themes:

1. Levers that improve the flow of information leading to accurate planning, efficient use of resources and minimising non-value added tasks:

   - Supplier relationship management and collaboration
   - Inventory management and centralisation
   - Data integrity management
   - System integration
   - Internal structure

2. Levers that relate to a retailer's proposition strategy and how they choose to compete or differentiate themselves in the market:

   - Service promise and proposition management
   - Peak management
   - Investment in infrastructure

Like reducing service promise or peak sale proposition, the tactics to influence proposition strategy can be actioned fairly swiftly. A company can change their minimum order spend for home delivery, charge for more expensive fulfilment options or choose not to participate in Black Friday. These can represent quick wins for a company in managing the cost-to-serve. However, these tactics will ultimately detract from the service offer which – if they're no longer meeting the needs of their customer – could come at a cost to sales. The levers to manage the operational costs and influence information flows are more long term in their implementation – but, as they focus on improving processes and removing inefficiencies, will add rather than detract from the service offer and ensure that what is promised to the customer can be sustainably delivered.

"Rather than having sophistication only in our supply chain, we also need sophistication in the customer ordering process. 65% of click-and-collect is delivered the next day, although only 50% pick it up on the first day. We don't have the systems to offer choice so everyone just gets it tomorrow. Instead of investing to increase capacity, we'd be better off investing in dynamic fulfilment and name day click-and-collect to better align capacity and demand with customer behaviour."

Cost-to-serve interviewee

Key theme	Lever	Supply chain cost impact areas									Description and tactics
		Supplier compliance management	Operational process management	Master data management	Product development and sampling	Origin consolidation	Range and inventory management	Fulfilment management	Returns processing	Third party management	
Improved information flows	Supplier relationship management and collaboration	✓	✓	✓		✓				✓	Retailers are more dependent on third parties and suppliers to meet customer demands, creating a greater need for collaboration to ensure both parties are working towards compatible goals. Key tactics include: - Joint management of performance measures - Benefit sharing models - Collaboration through vendor managed inventory - Co-opetition – where retailers form strategic alliances
	Inventory management and centralisation		✓	✓	✓	✓	✓		✓	✓	How retailers manage and distribute their stock can create cost efficiencies by improving stock allocation, sell through and optimising logistics routes: - Centralising inventory holding or using systems to enable a single view, allow retailers to maximise their existing stock holdings to fulfil all channels - Improving stock record accuracy minimises the resource required to manage and locate stock within store, improves the accuracy of stock ordering and reduces overall working capital - Consolidating and warehousing stock, relative to where their customers and stores are located, to reduce logistics costs
	Data integrity management	✓	✓	✓			✓			✓	Improved data quality reduces errors or delays in the supply chain and supports management accurate decision making: - Reduces relabelling and repackaging on inbound deliveries - Fewer invoice and shipping discrepancies - Improved resource planning for warehouses and stores
	System integration	✓	✓	✓			✓	✓		✓	System integration reduces silos and enables retailers to: - Eliminate unexpected deliveries at inbound - Effectively plan for peak - Manage stock outages - Measure end-to-end performance
	Internal structure		✓	✓						✓	By understanding the impact of their decisions on the efficiency of other areas of the business, different departments can ensure their activities support a strong net margin. This can be achieved through: - Increasing cross functional collaboration - Establishing common KPIs that align to achieve consistent goals
Proposition strategy	Service promise and proposition management				✓		✓	✓		✓	To what extent do you follow the competition? Understanding where your customers' priorities lie in terms of range, price, speed and convenience and aligning your offer to their needs can reduce excessive costs that arise from trying to be all things to all customers.
	Peak management		✓	✓			✓	✓		✓	Linked to proposition management, by having sight of the cost and net margin implications, and a clear end goal for participating in peak events, retailers can assess the ROI of peak sale activity and make more informed decisions on their offer. By improving information flows with external stakeholders, retailers can also reduce the costs of working with third parties during peak periods.
	Investment in infrastructure	✓	✓	✓	✓		✓		✓	✓	Retailers can reduce costs by investing in systems and processes to create process efficiencies and optimise transport and logistics routes. This includes investing in consolidation centres, offshore warehouses, automation or RFID. These require capital investment, however with a clear understanding of the volumes and service levels a retailer needs to deliver and their associated costs, retailers are equipped to assess the service payback.

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What's the impact of GS1 standards?

As UK retailers and brands are embracing globalisation and omnichannel retailing, there's an increased uptake of supply chain standards from the apparel market. This is demonstrated by the continuous growth in membership of GS1 UK and the growing number of retailers who state GS1 standards are a requirement of trade, as well as the growth of standards-based supply chain technologies.

GS1 standards help businesses identify items in their supply chain, capture this information in a machine readable format and share data automatically with trading partners.

IDENTIFY

How a product, location or asset is identified is a basic building block for any supply chain. And, as an increasing number of internal and external systems now rely on how items are identified in the supply chain, an internal number is no longer a suitable solution. To ensure interoperability, businesses need a system of unique identification that can work across their global network – whether this is for use with third party logistics partners, selling in concession or franchise arrangements or online marketplaces.

The GS1 system of standards enables the unique identification through the provision of a global company prefix. This company number then enables the creation of Global Trade Item Numbers (GTINs) for each product line and Global Location Numbers (GLNs) for stores, warehouses or even shelves in the distribution centre. With these unique numbers businesses can avoid issues of data conflict, increase their system compatibility and improve their stock visibility.
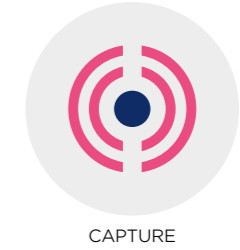
CAPTURE

To improve the efficiency in tracking items as they arrive at different locations, there are different methods of automating how systems can capture identifiers in the supply chain.

GS1 standards provide a consistent method for the application of barcode imagery, ensuring businesses use one way of labelling their products to trade with various partners all over the world. While barcoding is commonplace in retail, further efficiency savings can be achieved through the use of Electronic Product Code (EPC) enabled RFID (Radio Frequency Identification) technology.

RFID refers to the use of radio waves to read and capture information stored on a tag attached to an object. Because the technology does not require line of sight of the item, it enables the automation of inventory management processes. RFID tags are also able to store more information on each tag – enabling the tracking of each and every product in the supply chain.
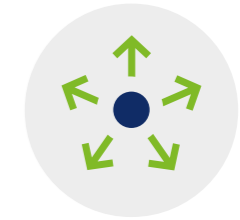
SHARE

With the use of consistent data sets, this information can then be shared with trading partners using technology that automates this exchange of data.

The GS1 standard for communicating transactional data is Electronic Data Interchange (EDI). EDI refers to the sending of electronic messages between two computer applications – commonly used within the industry for invoices, orders and advanced shipping notifications (ASNs). As these messages are sent in a structured format they can be composed and understood by two trading partners' systems without the need for manual intervention or re-keying information.

The impact of GS1 standards on the challenges and levers

Having identified the challenges in understanding the cost-to-serve and the levers to minimise these, we applied GS1 standards to the key operational areas, to assess the potential benefits that standards have on the cost-to-serve. Adoption of GS1 standards supports the key levers of data integrity, system integration and investment in infrastructure. From this foundation, retailers are then able to improve supplier relationships, better manage their inventory and have the data necessary to inform their service proposition and manage peak trade.
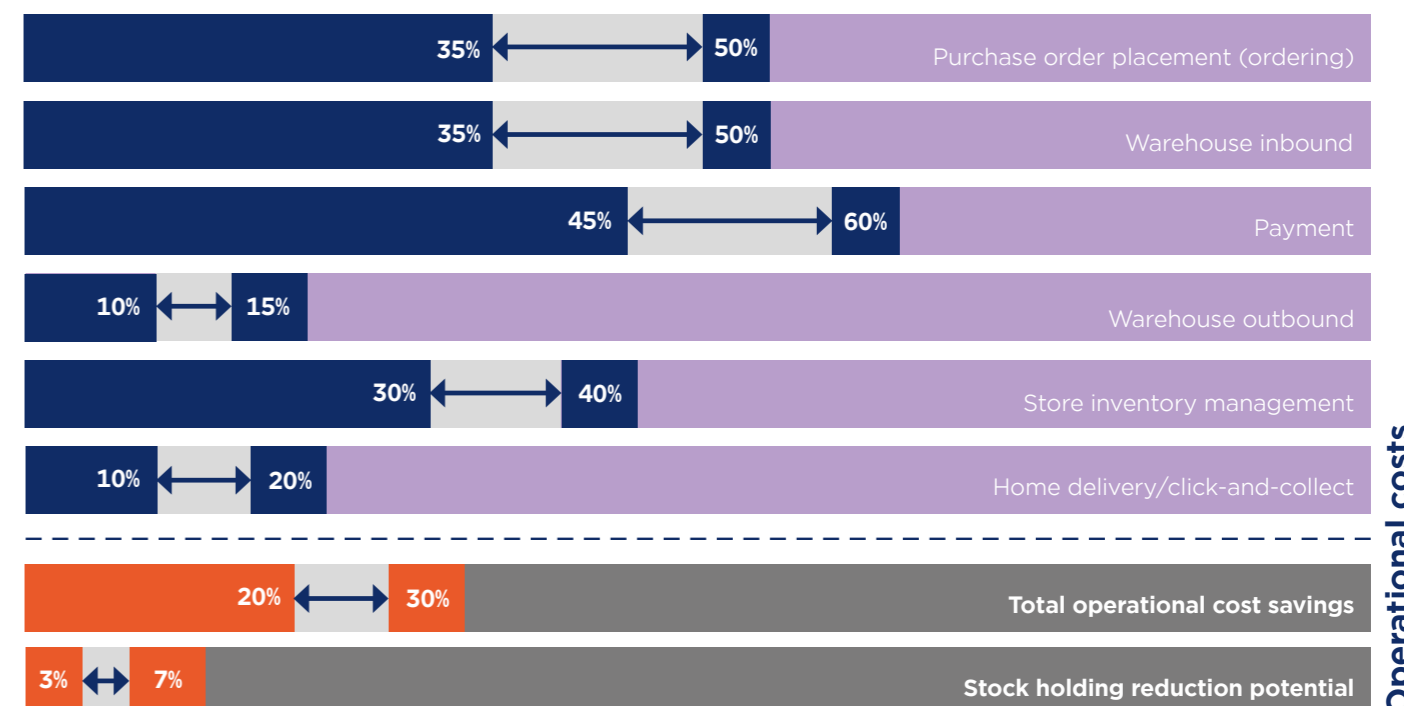
Network complexity	Standards mitigate complexity by providing a common business language and consistent ways of working. They help reduce network complexity by: • Supporting **systems' integration** • Making it easier to **work with third parties** by reducing the burden of dealing with different requirements of multiple trading partners • Future proofing **investment in infrastructure** by adopting standards-based technologies
Market volatility	Standards give retailers the data and tools to react to market changes with flexibility and agility – specifically, GS1 standards help **reduce volatility** through management of peaks and supplier performance. In order to scale up a business to meet the **demands of peak on peak**, retailers must have the basics in place in terms of data quality and systems to support the efficient movement of products. This is supported through unique identification and EDI to automate and speed up the order-to-cash cycle. **Supplier collaboration** is critical to minimising the impact of macro factors on supply and demand. The use of GS1 EDI standards enables greater and more accurate **information sharing** between suppliers and retailers, allowing product flow to more closely align with changes in the market.
Lack of visiblity	A common language of standards uncovers critical data across the supply chain – improving **data quality**, helping retailers better manage inventory and enabling them to meet their service promises in a sustainable way. Adoption of standards based technologies, like EDI and RFID, help trading partners understand the flow of activities occurring outside their own business and obtain a more granular view of the activities within their organisation supporting overall data integrity. The use of RFID can improve **inventory management** by increasing visibility and accuracy of stock files through enabling weekly or even perpetual stocktakes. Having visibility of the key activities and costs in their operations gives retailers the data necessary to make informed decisions on the value and impact of their **service promise**. Serialisation, using RFID, allows the product journey to be tracked from supply to customer and return, measuring the impact of their omnichannel fulfilment processes.

Cost savings from applying GS1 standards

Using GS1 standards has quantifiable cost and time savings across the supply chain. Using industry cost data, operational costs have been analysed through the ready reckoner tool to assess the quantifiable benefits of GS1 standards. Working from a baseline of 0% use of EDI and RFID, we've calculated the cost saving ranges that can be achieved through 100% adoption.

By applying GS1 standards of EDI and RFID, companies can reduce operational costs by 20-30%. Furthermore, there is an overall reduction in working capital through more accurate planning and distribution of product – ensuring the right product is in the right place at the right time.

Range of cost savings from applying GS1 standards

35% — 50%	Purchase order placement (ordering)
35% — 50%	Warehouse inbound
45% — 60%	Payment
10% — 15%	Warehouse outbound
30% — 40%	Store inventory management
10% — 20%	Home delivery/click-and-collect
20% — 30%	**Total operational cost savings**
3% — 7%	**Stock holding reduction potential**

Operational costs

Disclaimer: These costs and savings are indicative only. Every organisation has their own specific measures to consider.

Purchase order placement and ordering
- **£14** per order saved through EDI
- Reduced time spent managing supplier interactions
- Reduced time spent re-keying order information
- Highest cost saving opportunity for retailers with broad ranges and separate purchase orders per channel

Warehouse inbound
- **£12** per order saved through ASNs
- Improved inbound planning accuracy
- **70%** time saving on receiving pallets labelled with RFID
- Level of inbound volume determines the potential cost saving

Payment
- **£8.50** per invoice saved
- Reduced disputes

Warehouse outbound (including warehouse inventory management)
- **80%** time saving in warehouse inventory count time through RFID

Store inventory management
- Reduces inventory count time in store by **90%**
- Achieves stock file accuracy of **95%**
- Gives retailers confidence to reduce safety stock levels, reducing overall inventory holding by **3-7%**

Home delivery/click-and-collect
- Supports interaction with third party carriers to reduce parcel management related costs
- RFID helps speed up the cash-to-cash cycle and the processing time for returns management

8

Where to now?

The apparel retail market is a fast moving and competitive environment. The complexity of products, in terms of the variety of sizes, fits and colours offered, drives specific challenges for online channels and for managing inventory in order to ensure maximum full price sales across channels and the greatest returns on inventory.

Understanding the cost-to-serve is now critical to the success of apparel retailers. Margins are increasingly under pressure and particularly sensitive to changes in delivery channels, customer demand and competitor activity. It's an essential requirement for organisations to reflect carefully on the cost-to-serve, and consider how future changes can influence operational costs across the end-to-end value chain, including suppliers and third party partners.
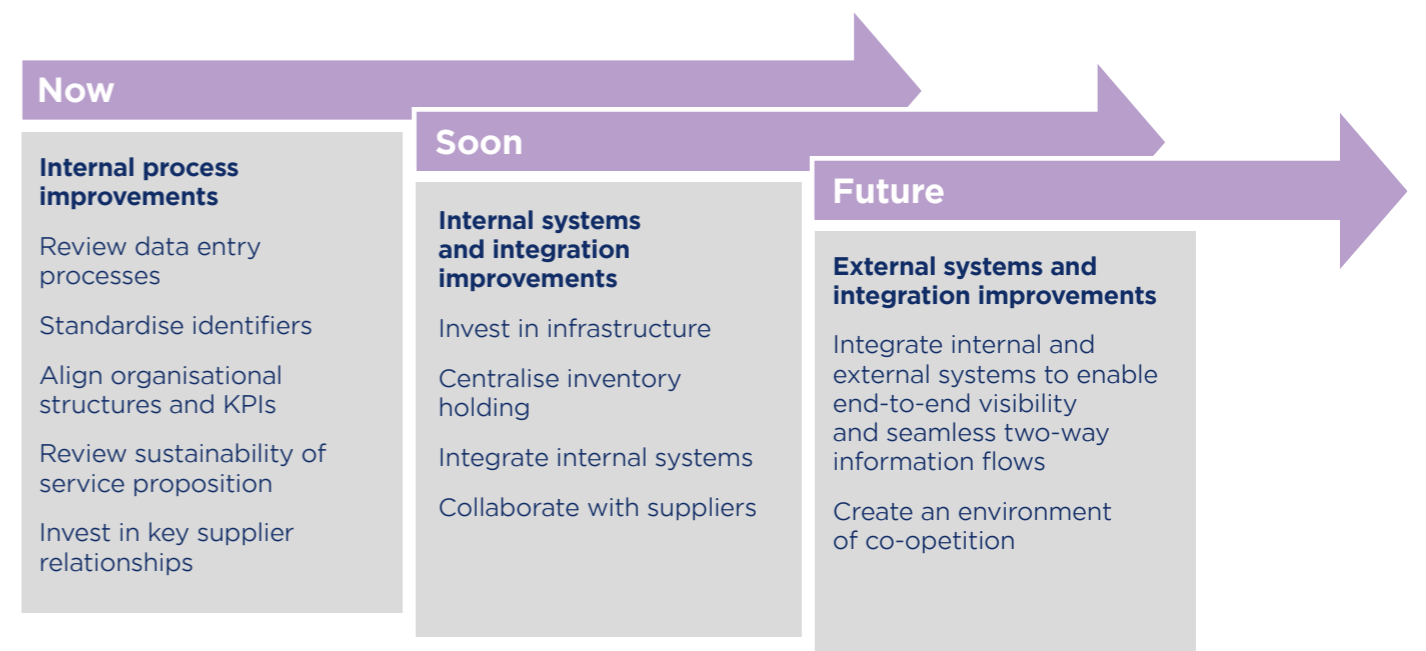
So how do we get there?

One of the virtues of the ever changing UK apparel retail landscape, and the dawn of customer driven supply chains, is the pace and impetus for change that this drives. Looking forward to the future provides a perspective on what the build towards an aspirational supply chain world might look like, underpinned by foundational requirements to guarantee sustainability and scalability, while allowing businesses to manage their cost-to-serve.

At a foundational level, retailers should consider the levers that can support internal process improvements to increase efficiencies and reduce costs before looking to external systems and integration improvements. Aside from establishing efficient foundational processes it's not until the internal organisation and KPIs are aligned across functions that a single effective conversation can take place within a retail organisation to steer towards any possible reduction in the cost-to-serve.

Looking to the future, as retailers rely more and more on suppliers and other third parties to fulfil a transaction, the need for seamless communication flows and external collaboration increases. The trend for co-opetition – where retailers form strategic alliances – will increase as retailers realise they can cooperate with the competition to create economies of scale. Already, brands within the FMCG market have successfully collaborated on transport to enable cheaper and more frequent deliveries. And in apparel, emerging services like Asda's "To You", are helping other retailers widen their parcel distribution network while driving footfall into Asda's own stores.

One thing is certain – in a world of disruptive competition, it's those retailers who understand their cost-to-serve and the impact of different products, propositional and business decisions on their bottom line, who are best placed to reap the benefits and drive profitable growth.

Now

Internal process improvements

Review data entry processes

Standardise identifiers

Align organisational structures and KPIs

Review sustainability of service proposition

Invest in key supplier relationships

Soon

Internal systems and integration improvements

Invest in infrastructure

Centralise inventory holding

Integrate internal systems

Collaborate with suppliers

Future

External systems and integration improvements

Integrate internal and external systems to enable end-to-end visibility and seamless two-way information flows

Create an environment of co-opetition

9 Appendices

Appendix 1. Apparel sales forecast

Year	Apparel online sales		Apparel offline sales		Apparel total sales		% share of online sales/ total sales
	£m sales	% change	£m sales	% change	£m sales	% change	
2010			£49,434		£49,434		
2011			£53,144	8%	£53,144	8%	
2012	£8,072		£46,512	-12%	£54,584	3%	
2013	£9,337	16%	£48,531	4%	£57,868	6%	16.1%
2014	£10,691	15%	£50,349	4%	£61,040	5%	17.5%
2015	£10,647	0%	£53,062	5%	£63,709	4%	16.7%
2016 (est)	£11,072	4%	£55,530	5%	£66,602	5%	16.6%
2017 (fore)	£13,194	19%	£56,146	1%	£69,340	4%	19.0%
2018 (fore)	£14,781	12%	£57,524	2%	£72,305	4%	20.4%
2019 (fore)	£16,572	12%	£58,569	2%	£75,151	4%	22.1%
2020 (fore)	£18,488	12%	£58,969	1%	£77,456	3%	23.9%
2021 (fore)	£20,485	11%					

Source: Mintel, the purple boxes are calculated based on available data.

Appendix 2. The research process

The research sample

To ensure the findings of the research were sufficiently representative, we approached a cross section of apparel retailers, including:

- Vertically integrated own brand apparel retailers
- Traditional department stores
- Value end, fast fashion apparel retailers
- Pure-play online retailers

Cost-to-serve interviews

A series of interviews were carried out across this cross section of apparel retailers exploring:

- The shape and structure of each of their supply chains
- The cost drivers within each supply chain process step and the associated levers
- The organisational owners and related KPIs across the different supply chain processes
- The main supply chain challenges they face over the next three to five years
- The use of GS1 standards or equivalents today

Additionally, the interviews provided insight into the levels of supply chain complexity, as well as the broader strategic challenges currently faced by retailers. The insight received has supported the development of the point of view presented in this paper as to the causes of difficulty in understanding and subsequently managing the apparel cost-to-serve in the omnichannel environment.

Appendix 3. Ready reckoner tool inputs

Cost drivers

- Number of orders/ number of order lines
- Number of shipment notices
- Number of invoices
- Inbound logistics
  – Receiving items
  – Proof of deliveries
- Warehouse management
- Outbound logistics
- Store delivery
- Store inventory management
- Customer deliveries
- Returns management

Calculations

www.gs1uk.org/ readyreckoner

Outputs

- Costs breakdown
  – Order delivery
  – Invoicing
  – Logistics
  – Warehousing
  – Store inventory
  – Returns

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