OLIVER WYMAN

FMI THE VOICE OF FOOD RETAIL

Feeding Families Enriching Lives

BOARDROOM

Volume 2

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FOREWORD

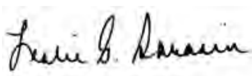
Welcome to the second edition of *Boardroom*, an annual journal from the Food Marketing Institute (FMI) and Oliver Wyman. This collection of articles offers unique and timely insights to help senior food retail executives shape strategies and improve performance throughout their organizations.

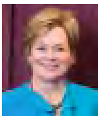
In today's marketplace, food retailers are undergoing significant changes – new entrants, new formats, and new risks are increasing competition at every point along the value chain. It is important to anticipate and understand these changes, and to respond to them with new strategies. In order to survive and prosper, retailers must defend their current positions with better, more modern tools, while also going on the offensive with innovative concepts for the future. The theme of our current market climate could be characterized as one of discontinuity and disruption; and we believe reinvention is critical to continued success.

This volume of *Boardroom* serves as a blueprint for senior food retail executives to address today's most pressing challenges and opportunities. Rather than simply responding to these market shifts and dynamics, we recommend techniques to get ahead of the curve with transformations that will improve on your existing format(s) and provide a path forward to fundamentally change how your business operates – for the better.

Our leading experts combine deep industry experience with cutting-edge perspectives to help you respond to today's challenges, from the microscopic bacteria that have spoiled food and reputations, to online technologies that have redrawn the boundaries of customer experience capabilities. We also advise about strategies for retailers to reinvent their processes, from using big data to create better assortments, to imagining a next-generation rewards program, with the goal of becoming a market leader.

FMI and Oliver Wyman created *Boardroom* for those senior executives responsible for guiding their companies in what may be the most challenging period in the industry's history. We hope this edition of *Boardroom* becomes one of the most versatile and powerful tools in your arsenal – and that it helps you to reaffirm, revitalize, and reinvent for the future.





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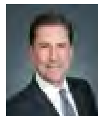

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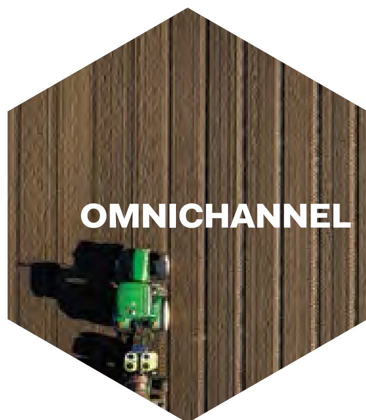

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RETAIL STRATEGY

How to survive in the retail wilderness

A TALE OF BEARS, SHARKS, AND SALMON

Frederic Thomas-Dupuis

Paul Beswick

KEY TAKEAWAYS

Thinking about the history of retail, there is a group of characters engaged in a drawn-out struggle for survival. Just as animals compete for food and water, retailers compete for customers and the money they spend. This article reveals how retailers win, how they evolve, and what can be done to survive in the long term.

HOW RETAILERS EVOLVE

All successful concepts begin with design and innovation: These companies are format innovators learning to survive in the retail wilderness. If successful, they first conquer new territory by adding stores and driving rollout growth. Eventually, once all new markets are conquered, they become mature retailers who must survive by constantly driving like-for-like sales gains. At some point, even this growth is not enough, and these sharks must start new innovations themselves, finding new concepts to drive growth outside of the core business.

We call these shifts "life stage transitions," where retailers need to change their business model to survive, and a significant focus of this article is examining what it takes to successfully navigate such changes.

HOW INCUMBENTS CAN SURVIVE

Surviving and thriving in the ever-changing retail wilderness comes down to four key themes:

- Anticipating the next competitive threat
- Understanding the reality of your starting position across your store estate
- Investing in capabilities to win
- Making bets on reinvention

Changing from a bear to a shark in the animal kingdom is impossible. Changing business models for a retailer is difficult, but doable. Much of this document focuses on these transitions.

FORMAT INNOVATORS	GROWING INCUMBENTS	LAGGARDS
Disruptive entrants with a new format that steals significant share from incumbents. They grow by adding more stores and disrupting new markets.	Constantly making small improvements to drive consistent like-for-like sales gains in the markets where they operate.	Low or negative-growth retailers who are under pressure from format innovators and growing incumbents.
Surviving their arrival does not require outrunning them – only outrunning the other incumbent retailers.	They must constantly swim forward to survive.	The slowest-moving laggards will become prey to both sharks and bears.

PART 1: THE TWO WINNING MODELS

In the long run, retailers are only able to raise prices in line with inflation, whereas wages (and often input costs from suppliers) grow at a faster rate. This creates a headwind that must be confronted every year to maintain profit levels. In the US, this headwind equates to approximately 40 basis points (bps) per year. This is why retailers must grow to survive, and there are two fundamentally different approaches to that challenge.

Most retailers grow at first with a new winning format, which makes them a disruptive new entrant. Growth comes from opening new locations that take share from incumbents. These retailers are bears. You don't have to outrun the bear if you are an incumbent – you just have to make sure that the other incumbents get eaten first.

Incumbent retailers who successfully drive growth are like sharks. If they stop swimming forward, they die. These retailers grow by driving more sales from their existing footprint.

If you are neither shark nor bear, you are salmon, the prey of the successful models. Exhibit 1 shows the sharks, bears, and salmon of the US market in 2014. It is worth noting that the sharks and salmon of today were bears at some point in the past.

Walmart, for example, was a bear during the 1980s and 1990s; Walgreens was a bear until about 2008; Home Depot was a bear until the late 1990s; and Kmart was a bear into the 1990s.

The most recent bear to arrive on the scene is Amazon. Amazon has driven phenomenal growth, beginning with category dominance in books and expanding to one adjacent category after another. With still more room for growth, food, apparel, and business supplies are among the categories being targeted next.

Exhibit 1: The evolving retail ecosystem in the US

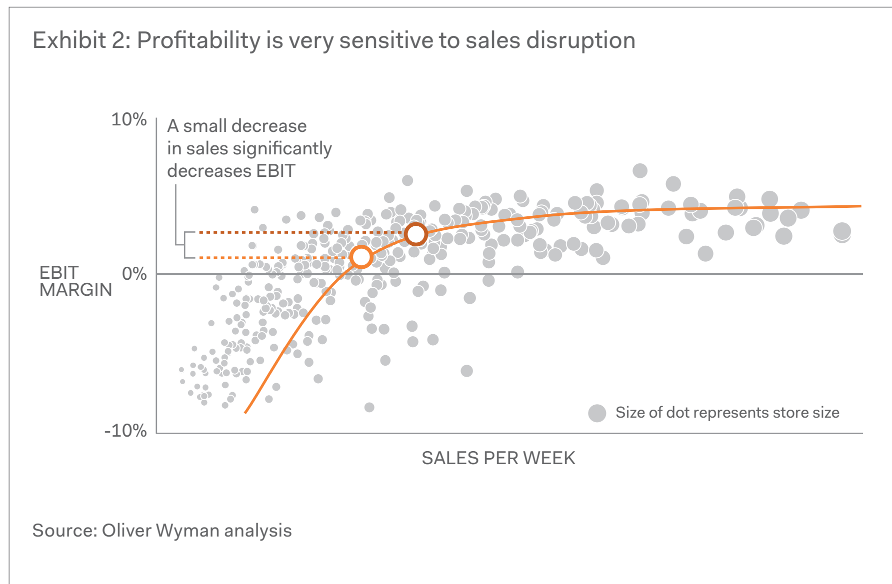
	RETAILER	1980	1990	1999	2008	2014
LAGGARDS	Kmart	3	2 ↑	6 ↓	x	x
	A&P	7	9 ↓	26 ↓	49 ↓	x
GROWING INCUMBENTS	Kroger	5	5 ↔	2 ↑	2 ↔	3 ↔
	Walmart	15	3 ↑	1 ↑	1 ↔	1 ↔
	Home Depot	x	43 ↑	4 ↑	4 ↔	4 ↔
	Costco	x	39 ↑	10 ↑	3 ↑	2 ↑
	Walgreen Co.	x	20 ↑	15 ↑	6 ↑	7 ↓
FORMAT INNOVATORS	Amazon.com	x	x	x	25	5 ↑

INNOVATORS ARE DISRUPTIVE BECAUSE INCREMENTAL LOSSES AND GAINS MAKE A DIFFERENCE

Retail is a high fixed-cost business. For any format and physical location, there is a minimum sales level required to break even, and near that limit, profitability is very sensitive. For stores that are just over the threshold, a small decrease in sales dramatically reduces profitability, as illustrated in Exhibit 2.

This is why innovators are so disruptive. They take small amounts of share rapidly, tipping many stores below the break-even point. Most of today's large retailers have many stores on the steep part of the curve. A small decline in sales will push many of their stores into loss-making territory; an even smaller decline will make many stores sink assets, incapable of delivering enough return on capital to justify investment. For this reason, it is critical for incumbents to find a way to keep growing; however, this continued growth often comes at the expense of a direct competitor who slides down the curve.

Exhibit 2: Profitability is very sensitive to sales disruption



Source: Oliver Wyman analysis

CASE STUDY 1:
STAPLES AND THE US OFFICE SUPPLIES MARKET

Outside of food retail, Amazon is already the disruptor in many segments, and the US office supplies market provides a good illustration of how the ecosystem has evolved.

In the office supplies business, macro trends such as declining printing plus the threat from Amazon have created extremely challenging market conditions. Despite this, Staples has performed well, becoming the shark that has consistently been able to swim faster than the competition. By contrast, Office Depot and Office Max have become Staples' prey.

When the market started getting tougher, Staples was already operating from an advantaged position with a better real estate portfolio, a better brand, better price perception, a stronger online presence, more efficient operations, and a structurally advantaged portfolio of B2B customers. These advantages meant that Staples' stores were much further away from negative profitability than those of their competitors, as illustrated in Exhibit 3.

Exhibit 3: Starting from an advantaged position

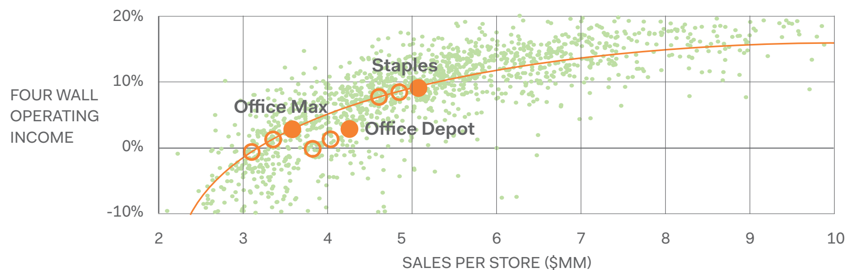
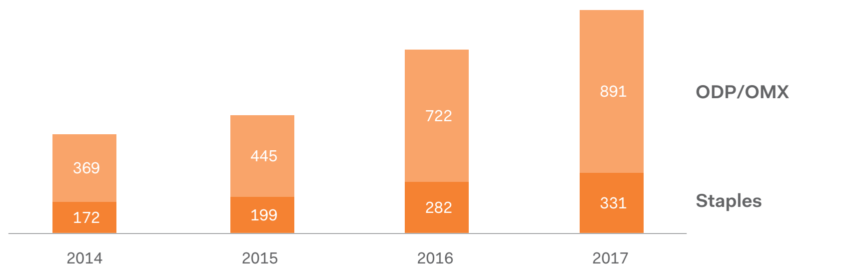


Exhibit 4 shows a projection we made in 2013 about store closures through 2017. We saw the beginning of this trend in the lead-up to the announcement of Staples' planned acquisition of Office Depot. Though the acquisition was blocked in an antitrust lawsuit, Staples still clearly holds the lead in the race to survive – for now at least.

Exhibit 4: Cumulative store closures for Office Supply



However, as Best Buy learned in the years after Circuit City went bust, such a win does not guarantee success for long. (See Exhibit 5.) Staples will need to continue to look for new sources of growth so it can keep swimming to survive.

Exhibit 5: Best-Buy stock performance, 2006–2013

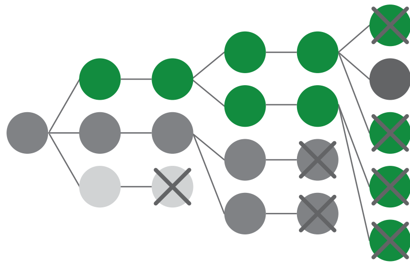
PART 2: HOW RETAILERS EVOLVE

Staples has not always been an incumbent shark and Office Depot has not always been a salmon. If you look back in time, both pioneered new formats and were stealing share from other market segments. Indeed, retailers transition roles frequently, and retail formats evolve through a clear set of life stages as they mature.

Each life stage requires a different set of capabilities, and managing the transition from one stage to another is challenging. We will focus on two areas:

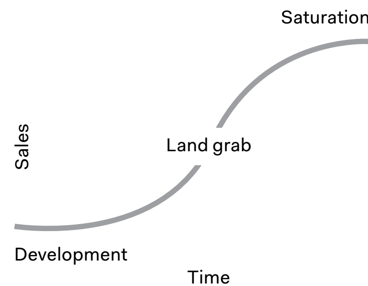
1. Challenges faced by retailers reaching maturity
2. Challenges faced by retailers who need to turn to reinvention

1. Design and innovation



The first stage is design and innovation. In the beginning, young firms nurture and cultivate a winning format with strong customer appeal and favorable economics. These formats might be physical stores, online properties, or a combination of the two. The aim is to come up with a business that is new, different, and profitable.

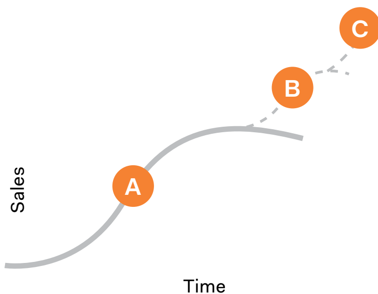
2. Rollout growth



Next comes rollout growth, where the goal is to grow in scale as quickly as possible. For bricks-and-mortar and online players alike, economic value is created through greater volume, not from tinkering with the proposition. Efficient, rapid expansion is paramount.

These are the innovative players, the bears, creating havoc in their marketplace.

3. Maturity



Third is maturity, where the primary challenge – usually a difficult one – is to grow sales based upon the same geographic footprint. The best retailers make massive improvements in both delivering their core proposition and deriving value from it, reaping large rewards in the process. These retailers are consistently moving forward, like sharks who will die if they stop swimming.

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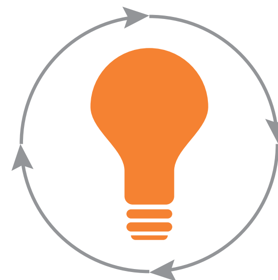
4. Complete reinvention



Finally, retailers reach the stage where reinvention is needed. This life stage shares many of the characteristics of the retailer's early years: new formats are spawned, new channels opened, new services offered, new value capture mechanisms engineered, new acquisitions made, and new alliances are forged. Success in this life stage requires a higher tolerance for risk than the culture of most mature organizations will allow for.

1. CHALLENGES FACED BY RETAILERS REACHING MATURITY

In the rollout stage of life, the innovative bears succeed by driving economies of scale. This requires speed, standardization, and operational excellence. In contrast, the mature sharks succeed by developing superior skills and capabilities, incrementally improving the proposition using superior insight to tailor the offer to each store or each customer, and squeezing operational improvements out of the business year in, year out.

So, to successfully transition, the balance of power, capability, and culture of the organization need to shift – from operations and property, to marketing and merchandising; from people who can execute, to people who can analyze; and from standardization, to flexibility and experimentation. Delivering this change is really difficult.

The first sign that a retailer is approaching the transition is that new store openings begin to drive diminishing returns. As a result, sales per store start to flatten or decline. Many retailers falter at this point, sometimes continuing to expand store count beyond what the market will bear. Those who recognize these new pressures early and react quickly have the best chance of making the transition successfully.

2. CHALLENGES FACED BY RETAILERS WHO NEED TO TURN TO REINVENTION

At some point, even the most effective businesses find continued growth challenging.

Earlier, we used Staples as an example of an incumbent shark "eating" its competitors. Eventually, Staples will need to find other sources of growth beyond its current core business, such as new channels, formats, product lines, or services. This marks the transition to the reinvention life stage. The challenge, though, is that these new sources of growth can be hard to find for a mature retailer.

Reinvention requires retailers to take risks and innovate in the way they did years back in the design and innovation life stage, while still driving the core business forward with the same discipline and focus of recent years.

CASE STUDY 2:
STARBUCKS: FROM RAPID GROWTH, TO MATURITY

Starbucks faced the end of rollout growth in 2008. Overexpansion, combined with pressure from the financial crisis, had caused same-store sales to decline. They had also moved away from some of their core values, losing focus on service, quality, and value for money. Many initiatives focused on efficiency, compromising customer experience at a time when lower-priced competitors such as McDonald's were improving quality.

When CEO Howard Schultz returned, he drove a multi-year plan to return Starbucks to growth, recognizing they were now in the maturity life stage. He began the turnaround by reversing some of the mistakes made toward the end of rollout growth – closing 600 stores and taking some distracting food items off the menu.

Next, Schultz laid out an agenda of initiatives to enable Starbucks to grow sales without adding stores; he focused on service, quality, experience, and customer loyalty. Many of these initiatives exploited better data and an ability to test and learn, and they aimed to harness the creativity of the whole organization.

The result (shown in Exhibit 6) was a return to sustainable growth in sales per store – and an engine for innovation that may help as Starbucks enters the reinvention life stage.

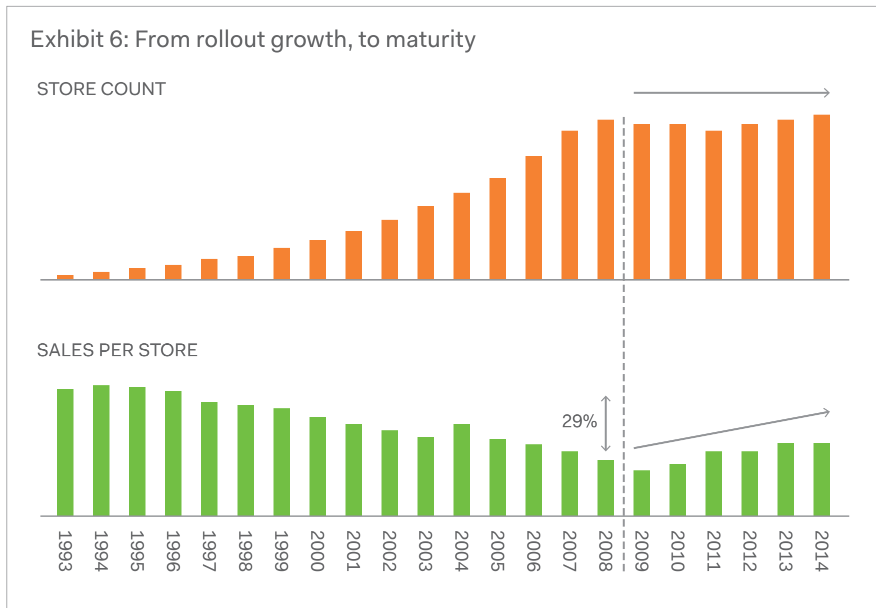


Exhibit 6: From rollout growth, to maturity

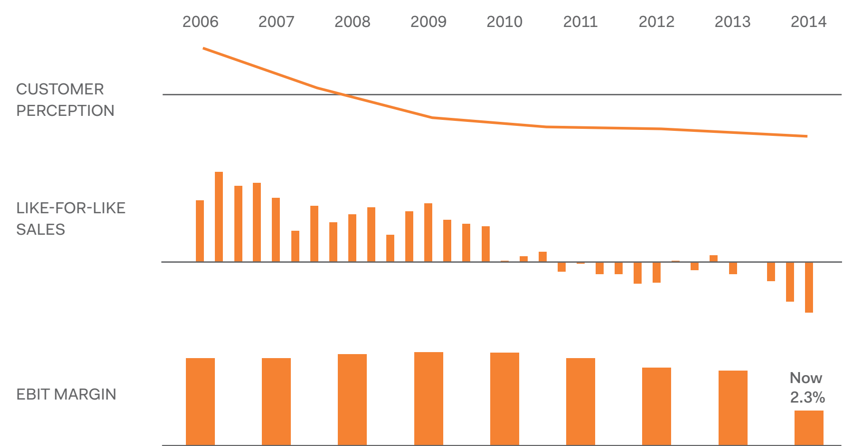
CASE STUDY 3:
TESCO'S REINVENTION

Tesco was long viewed in the UK as a customer's champion on both brand and value. To deliver, they had built a highly efficient operation, producing steady sales growth and taking share from the rest of the market.

Things started to go wrong when the innovative bears Aldi and Lidl entered the marketplace and began to take share. Rather than respond aggressively, Tesco's management was too strongly focused on financial performance, which led them to allow prices to drift up and increase supplier-led promotions.

The effects showed up first in customer perceptions, which started to decline in 2007. By 2010, like-for-like sales turned negative. Even then, Tesco squeezed hard to maintain EBIT until being forced to accept a slight decline in 2012 and a massive decline by 2014. (See Exhibit 7.)

Exhibit 7: Tesco's decline, 2006–2014



One of Tesco's earlier plays had been to bet on new formats and international expansion. This worked well in some countries. However, one of their biggest bets was on Fresh & Easy in the US.

Fresh & Easy was a reinvention bet that failed to deliver, largely because the network density was too high for a format that had niche customer appeal. What went wrong with Fresh & Easy is characteristic of one of the key challenges facing retailers in this life stage: Tesco bet big, making the cost of failure high and making it difficult to rapidly change course. This was a classic "big company" way of doing things. A true entrepreneur would have opened one store at a time, learning when density was reaching saturation. Indeed, a lack of capital would have forced them to expand in this way.

Major retailers trying to innovate can learn from this example – making sure that individual bets are designed to fail fast – reducing the costs of the inevitable risks of innovation, and by making more bets overall, thus maximizing the chance that one succeeds.

CASE STUDY 4:
STARBUCKS' ITALIAN SODA AND VIA

Developing a viable growth vector in the reinvention life stage requires a lot of time, energy, and often many rounds of failure. Therefore, starting to place reinvention bets when you are still growing is important; if you wait until growth has stopped, then it may be too late.

Starbucks is an example of a company that got this right, making a number of reinvention bets at about the same time they began their transition to maturity. Tellingly, they made not one, but a series of bets, and monitored the progress of each, allowing for earlier course correction if required.

For example, one of CEO Schultz's passion projects was Italian Soda. However, relatively soon into the rollout, it was clear that the project wasn't delivering, and even though it was driven by the CEO, Starbucks made a rapid yet painful decision to stop the initiative.

Another bet was on instant coffee, an underserved segment in the US and a big part of the international coffee market. Starbucks first invested in significant R&D to make sure the product was better than alternatives and really could change deep-seated consumer skepticism about instant coffee. When it was ready, they fully supported the launch with a major in-store effort, and the result was an extremely successful product called Via and a new stream of growth that did not cannibalize the core business. Via also gave Starbucks a product that they could sell in other channels outside their stores, expanding the business' reach without expanding the footprint.

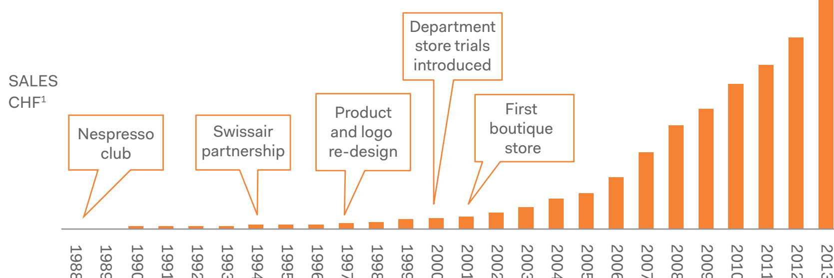
CASE STUDY 5:
NESPRESSO

Food manufacturers frequently face the same challenge: how to innovate while still running the core business. Nestlé is a good example of a manufacturer that tackled this challenge in an interesting way, creating Nespresso in the late 1980s.

In order to foster the spirit of innovation at Nespresso, the new business was established in a separate headquarters away from Nestlé's main facilities, and an outsider was brought in to run it.

Nestlé was patient with its new innovation, enduring 10 years of unremarkable sales before seeing any significant success (see Exhibit 8). Throughout this early period, they kept the spirit of experimentation alive, constantly testing new ideas until they hit on an approach that worked. Getting consumers to try the product turned out to be the key to overcoming skepticism about single-serve coffee. A partnership with Swissair – who served Nespresso coffee in first class – was an early win.
From that partnership, Nestlé added trials in department stores and eventually their own boutique outlets. The result today is more than 10 years of over 30 percent annual growth.

Exhibit 8: Nespresso growth trajectory, 1988-2013



1. At constant exchange rate
Source: Nestlé investor seminar 2014

PART 3: WHAT YOU CAN DO TO WIN?

To survive and thrive, we suggest incumbent retailers take four key steps: anticipate the next competitive threat; understand your starting position across your store estate; invest in capabilities to win; and make bets on reinvention.

STEP 1: ANTICIPATE THE NEXT COMPETITIVE THREAT

Innovative bears, both big and small, pose a threat. Depending on the EBIT of your sector, it doesn't take much to erode profitability. For example, a typical food retailer would start to lose money with as little as a 10 percent share loss.

We see three types of innovative bears on the horizon.

Online formats. If an online format hasn't already begun to steal share in your sector or market, you can bet there is one coming. In some retail sectors, an online business model makes these disruptors cheaper from the start. They also have other advantages, such as more customer data, different shareholder expectations, and (in some ways) increased customer convenience.

Leaders on customer experience and offer. We see customer experience and offer leaders – such as Apple, Kiehl's, and Wegmans – driving growth in a range of retail sectors. Many of these are niche rather than mass-market businesses. However, they can still damage incumbents by taking enough share to tip them into negative profitability.

Low-cost operators. Highly efficient value-focused operators continue to take market share, especially in markets where the economic recovery is weak or non-existent. Examples include the hard discounters in food (particularly Aldi and Lidl) and fast fashion discount retailers in apparel (such as Primark). These formats have a fundamental cost advantage that incumbents can't match. See Exhibit 9 for an example from food retail.

STEP 2: UNDERSTAND YOUR STARTING POSITION ACROSS YOUR STORE ESTATE

If your business is under threat, it is worth being realistic about what you can defend. There are some store locations where you are unlikely to win, no matter what you can invest. For those stores, you should manage exits in a way that reduces costs. There are other stores where you already have an advantage. For these stores, you want to invest just enough to maintain that advantage, but not throw money at them. The rest of the stores are where the risks and opportunities lie; these are the stores that merit the most investment dollars, because they are where investment can make the difference between success and failure. Segmenting your estate in this way will give you an advantage against other incumbent players who take a more averaged approach.

Exhibit 9: Cost advantage of grocery hard discounters

	TRADITIONAL SUPERMARKET	TRADITIONAL HYPERMARKET	LOW-COST HYPERMARKET	DISCOUNTER
Sales	100.0%	100.0%	100.0%	100.0%
Cost of goods sold and shrink	-69.0%	-73.5%	-76.0%	-81.0%
Gross margin	31.0%	26.5%	24.0%	19.0%
Store labor costs	-13.5%	-12.5%	-8.0%	-4.0%
Central costs	-14.0%	-12.5%	-10.0%	-8.0%
EBITA*	3.5%	1.5%	6.0%	7.0%

* EBITA: earnings before interest, taxes, and amortization

STEP 3: INVEST IN CAPABILITIES TO WIN

The fundamental difference between the incumbent, surviving sharks, and the at-risk salmon is that the former have developed more sophisticated management capabilities, enabling them to drive greater returns from every store and every aspect of the business.

One of the most important levers is usually improving the efficiency of merchandising decisions. Where a simple pricing strategy may have sufficed in the past, you now need a different strategy in every store. Where a single range used to be enough, you now need a different one for each customer segment and store cluster. Where you used to count on increasing scale to drive improved supplier terms, you now need to learn how to drive money from big suppliers while working with a wider range of smaller suppliers.

Similarly, in operations, running stores on gut-feel and instinct is no longer good enough. Store staff members need new tools to improve forecasting and ordering and drive gains from shrink and availability. Store labor needs to be planned more accurately to match service to customer needs. And, in retail sectors where consultative sales add value, sales assistants need customer intelligence at their fingertips.

STEP 4: MAKE BETS ON REINVENTION

To grow long term, innovation is needed. Either launch your own initiatives, or become an investor in the next bear. Remember, the odds of success are low, so you need to place more than one bet, innovating and adapting rapidly. One way to make this happen is by creating a separate part of the business where an innovation culture can thrive. In this new startup unit, insist on incremental progress to force concepts to fail fast and help you recognize promising early stage innovations. You can also invest in other innovations, scanning the landscape to turn would-be competitors into your own future source of profits.

PART 4: GETTING STARTED

To honestly review their current position and plan for future changes, we advise retailers to start thinking about these questions:

CONCLUDING REMARKS

Whether you think about retailers as bears, format innovators, sharks or growing incumbents, to be a successful leader it may be necessary to transition back and forth between these 'states' – sometimes over years or decades. To survive, it is important to recognize where you and your competitors are in this cycle, identifying where vulnerabilities and opportunities lie. Those who do not innovate will become the prey of more successful and agile companies in the future.

OMNICHANNEL

Going on offense

BUILDING YOUR OWN CLICK & COLLECT OFFERING

Chris Baker
Martin Mumford

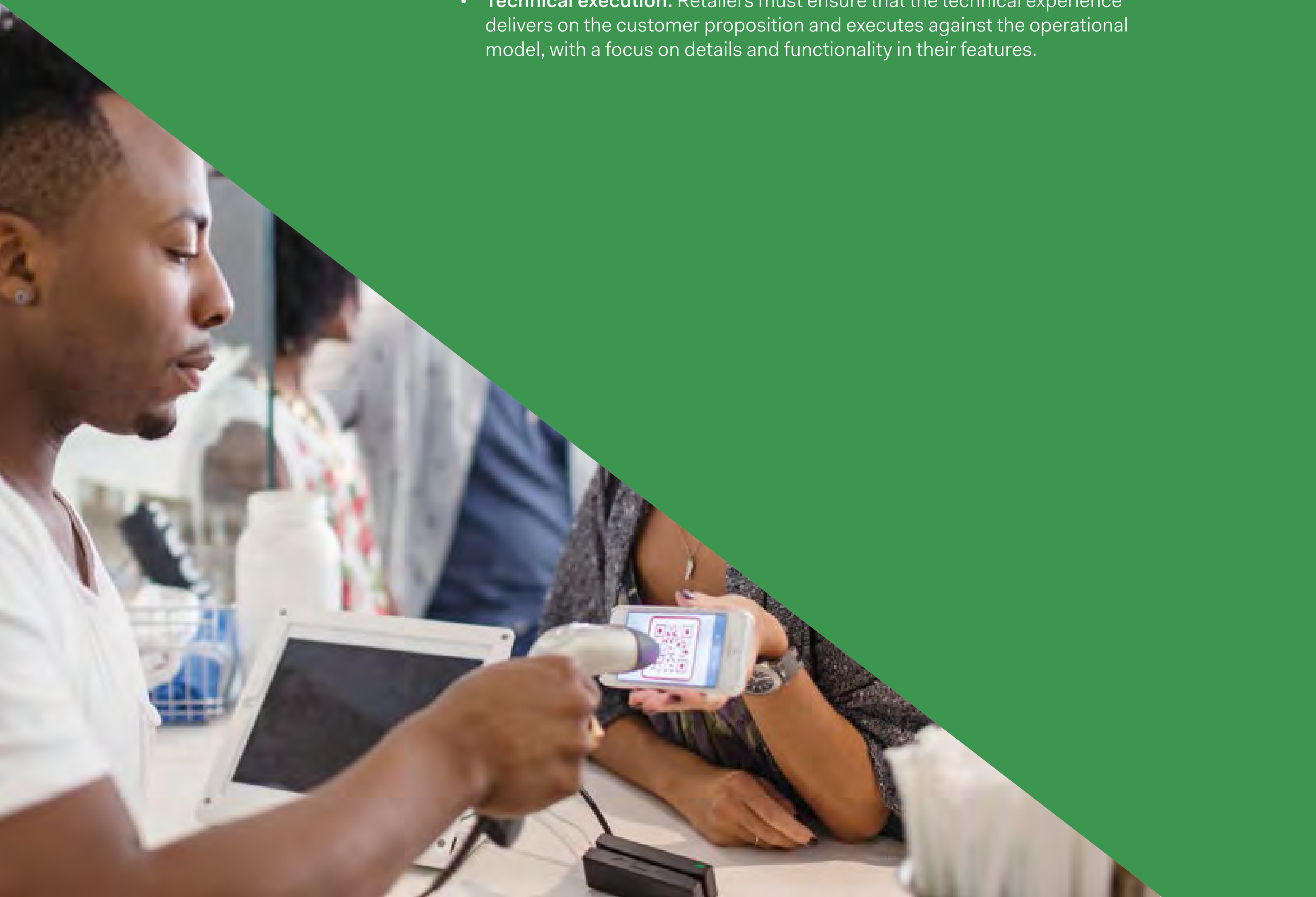
KEY TAKEAWAYS

Many food retailers are struggling with the day-to-day challenges of driving same-store sales growth, building new stores, and driving efficient operations. With all of those challenges, it is tempting to ignore big challenges like launching an online business.

However, driving sustainable growth will require food retailers to make a number of different growth investments. Acting quickly with investments in "click & collect" can allow food retailers to capture substantial first-mover benefits; initial forays into this technology have been well-received by customers, while capturing business from competitors.

Successful click & collect implementation hinges on three key principles:

- **Customer proposition.** In order to be attractive to customers, retailers must tailor pricing strategies and product options to their audience. Historically, we've seen younger and larger households as a highly receptive demographic.
- **Operational model.** Implementation should foster profitability by facilitating and encouraging bigger baskets, generating margin from other sources, and increasing the cost efficiency of fulfillment operations.
- **Technical execution.** Retailers must ensure that the technical experience delivers on the customer proposition and executes against the operational model, with a focus on details and functionality in their features.



WHY CLICK & COLLECT? WHY NOW?

When talking about options for moving online in grocery, much of the debate has been about click & collect vs. home delivery. As we have watched both formats evolve in Europe, click & collect has demonstrated the greatest growth potential in markets with moderate population density, like most of the larger US cities. For brick and mortar retailers, it also takes advantage of fixed assets making it a low capex way to get started online. Both home delivery and click & collect will play a role in the future of online grocery, but most US brick-and-mortar grocers are better off focusing on click & collect for now.

Being a first adopter gives a substantial advantage. Experience abroad has shown that those who move first in this arena reap significant competitive benefits above those who are slower to adopt. In the UK, 48 percent of online traffic at Tesco.com, a first mover, consisted of customers cannibalized from competitors, while traffic at second and third movers reached cannibalization rates of only 26 percent and 18 percent, respectively.

Market leaders have recognized this fact and are already moving quickly, as shown below in Exhibit 1, with initial positive feedback from customers and the press.

HOW TO DELIVER CLICK & COLLECT SUCCESSFULLY

A successful implementation relies on the interaction between the strategy's customer proposition, operating model, and technical execution. With thoughtful design, each of these levers can serve to reinforce the success of its counterparts and contribute to the overall success of the strategy.

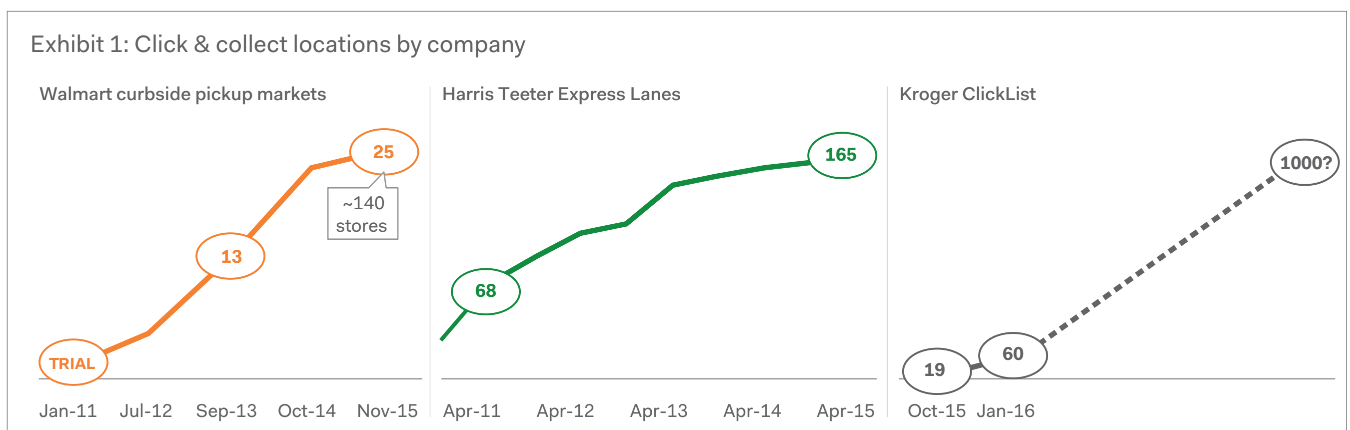
1. Customer proposition

The customer proposition must make the channel attractive to customers by tailoring the experience to those who are most likely to use this service. In order to capture this customer base, the initial strategy must consider how to appropriately value the channel as well as what components of the offer will drive uptake.

The current trend in North America shows that customers today are willing to pay an incremental fee for click & collect service, although experience in Europe indicates that in the long term, customers will eventually expect the service free of charge. Retailers in the UK and France offer click & collect for no additional service fee, offering prices and promotions comparable to those seen in-store. These retailers subsidize the service as a means of remaining competitive. With the benefit of knowledge from the European market, savvy US retailers should look to ensure that the channel will be sustainable in the long run, even as incremental fees are driven down.

Different methods for collecting these fees are available, each of which will affect the consumer's value perceptions. One option is to increase the mark-up on products offered through click & collect; however, for brick-and-mortar stores, experience has shown that this approach erodes customer trust and is likely not sustainable. Fee-for-use pricing is more transparent to customers, although this visibility means that it is also the most susceptible to downward competitive pressure over time. Potentially the most appealing pricing option is through annual subscriptions, especially if retailers can expand the range of services included in the membership such that customers are willing to pay more upfront to lock-in "free" services, such as click & collect, throughout the year.

In addition to pricing, retailers introducing an online channel must consider the demand side of the equation, ensuring the offer will be appealing to its customers. Our research shows that, in the United States, click & collect is most attractive to younger, larger households, as shown in Exhibit 2. All aspects of the value proposition must be designed with this



Q&A WITH CHRIS BAKER AND MARTIN MUMFORD

Is vendor funding for placement or prioritization purely incremental to existing promotional dollars or does it cannibalize from traditional allowances?

You would generally expect this to be incremental to the funding from in-store promotions, as you would be offering a wider range of options that the vendor would pay more for. Increasingly, vendors are putting a lot of pressure on traditional forms of funding, and the online approach may also help to mitigate this type of pressure.

Is there a point of diminishing returns for total or department SKUs offered?

Absolutely. Robust store data about how customers switch between SKUs can give a sense of which SKUs people are loyal to and which items sales are most likely to flow towards if a particular item is discontinued or not offered. This data can be combined with an understanding of the demographic most interested in an online offering to calibrate your selection to include the most important products, while eliminating those that don't add incremental value. You can continue to refine this process over time to develop a carefully curated selection.

Importantly, this does not necessarily mean eliminating relatively worse-selling SKUs; some particular items can drive customer loyalty more than their higher-selling counterparts. As an example, based on sales, a retailer may consider not offering sugar-free orange juice in addition to the top-selling sugared versions, but there is an entire customer set who will only buy orange juice via click & collect if it is sugar-free. Thus, this item may drive more incremental value than other another higher-selling sugared substitute.

It is important to note that, while discontinuing SKUs in your stores will almost always have some negative impact that needs to be offset with a corresponding investment, starting a new format like click & collect with a more limited assortment creates less downside risk.

Is there a particularly good time to think about adopting and executing click & collect in my stores? If I am late to the game, how I can differentiate my offering versus those who have already gained first-mover advantage?

To answer the first question, the time to adopt is now. It matters a little bit what geography you're talking about, but if you look at the new cities Walmart is rolling this service out into, it's not exclusively large metropolitan areas; there are a number of smaller cities and towns as well. Almost no matter where you are, unless you're very rural, the time to adopt is now. One exception may be if you're in massive growth and expansion mode, with operationally stretched stores across the country and a small footprint, it may be beneficial to focus on core growth.

For the second question, customers will switch to an offer for the same reasons that they're willing to switch to your stores. If you have new and different products, meaningfully better value, or an improved service experience, these are all things that can differentiate you online just like in a brick-and-mortar store. However, the barrier to switching is reasonably high. Customers are relatively sticky, given that placing the first order is time consuming and re-order makes subsequent orders much easier.

How have the international retailers been able to deliver click & collect free of charge? What are the implications of the U.S. adopting a charge-based model?

For the first question, the answer is that the offer has been dilutive to margin. They have been able to manage the extent to which it reduces margins through some of the levers we've discussed, such as promoting private brands and generating vendor funding. Those that have been able to drive incremental profit from click & collect overall have done so by capturing market share; their online sales are less profitable than their in-store sales because they can't cover all of their variable costs with the margin-boosting tactics mentioned, but more of those online sales are incremental than at their competitors. Most of those that have succeeded have been the first-movers.

For the second question, the level of charge that we're currently seeing in the US is roughly what we estimate the variable costs of delivery to be, which means that as long as customers are willing to pay this incremental fee, the offer can have comparable margin rates to your in-store business. This would allow retailers to make value-added services part of the offerings and have a broader assortment. It's possible the US could end up with a charge model that has a higher-service, higher-assortment offering than in Europe, while other retailers might have a no-charge, lower-service, curated offer. However, looking at the trends in Europe, as well as in the US in non-food services, it seems likely that there will be pressure on the charge model over time, so there is a real risk that the charge won't be sustainable.

demographic in mind, from assortment to pricing to operations.

Consider the design of the pickup experience. Not having to get out of the car is a critical differentiator for this customer segment. In fact, this format only began to gain market share in France once this feature was introduced. Other key aspects of the proposition like speed of service must also meet the needs of this demographic.

Targeting this demographic with selective assortment can also lead to cost savings. The available assortment of items doesn't need to be especially broad (in France, click & collect selections include about 30 percent of the items available in store). However, the assortment should be deepest in key, over-indexed categories for these customers, such as diapers, baby food, and baby formula. Further, the assortment should be diverse enough to ensure that basic grocery needs are covered; the offer won't appeal to customers if they must still shop in-store for some essentials. Finally, the items offered must have a very high in-stock rate – something enabled by limiting the assortment.

2. Operational model

The operational model must deliver this value proposition in a way that's profitable to the retailer. The key is to make the operational model as incremental as possible to in-store offerings, while ensuring maximum cost-efficiency.

Though online shopping can reduce impulse buys, the online experience has some advantages in driving larger baskets. In particular, online formats have shown that prompting re-order in routine purchase categories can drive up basket size by reducing the "missed items" that might otherwise be picked up in a convenience store or at a mass retailer. Additionally, techniques to drive impulse buys have improved. These techniques include using customer history to recommend new products to try and incorporating recipe features into the shopping experience.

Online channels can also take other steps to incentivize consumers to make choices that are more profitable for the retailer. For example, search pages can promote higher-margin private brands, emphasizing the savings relative to other products. Further, the selection of items available online can disproportionately weight private brands, nudging the customer toward more profitable choices for the retailer. The same can be done to nudge consumers toward more profitable branded goods, and that positioning can be auctioned off to suppliers in the same way shelf placement is sold today.

Beyond auctioning off search placement, online can extract funding from vendors in other new ways. Much of this funding will be incremental to what retailers receive today, while some pieces will simply protect retailers from further downward pressure on funding. Suppliers will pay for inclusion in the curated online assortment, targeted ads, one-to-one marketing, and preferential placement in features like recipes.

The final component of a successful operating model is cost efficiency. Initially, most European examples have started with lower capital intensive implementations, often with staff collecting baskets without any additional aid. This approach can be an appropriate short-term entry into click & collect offerings, but is less cost efficient. In the long run, higher capital expenditures, moving from investments in in-store picking technology to dedicated in-store pick areas to separate picking facilities, will drive down operational expenses and promote lasting profitability.

Limiting the number of items offered can also ensure cost efficiency by simplifying the picking process and reducing out- of-stocks, which cost sales. Combined with careful curation to promote private brands, as described above, a reduced selection can work in multiple ways to support a more successful implementation.

3. Technical execution

Technical execution is critical to effectively delivering your customer proposition while executing against your operational model. A good technical execution can seamlessly support the rest of a retailer's concept, but a poor one can significantly hinder it; the convenience of the platform is a big factor in the perception of the overall service proposition and will influence the number of abandoned baskets and, subsequently, lost revenues.

One of the most important decisions for a retailer's technical execution is whether to utilize a third-party solution or to develop an in-house system. A third-party solution is appealing because of its low cost and speed to implement, and thus can be an easier way to begin executing a click & collect strategy. However, by developing a homegrown system, a retailer will have more control

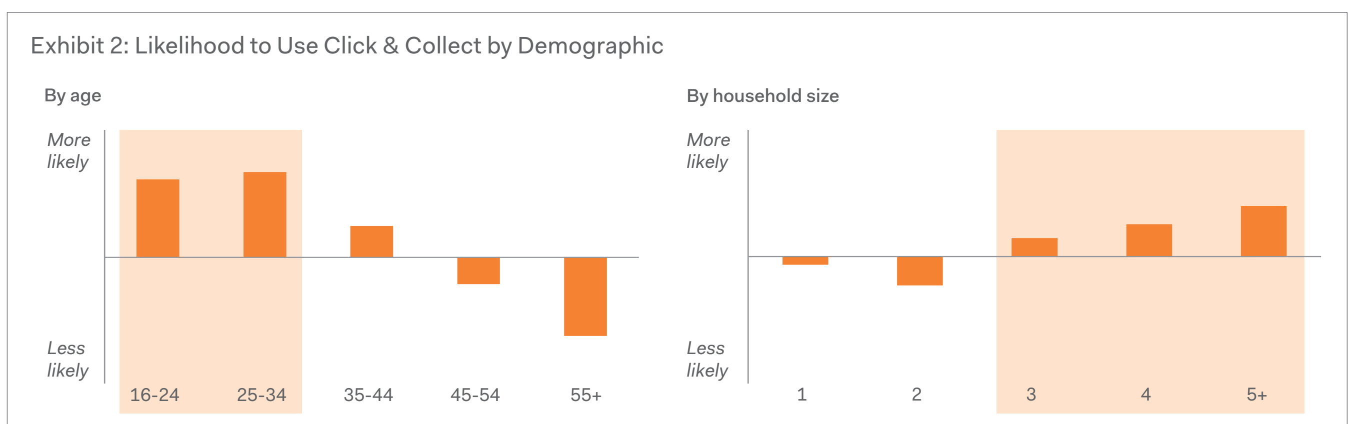


Exhibit 2: Likelihood to Use Click & Collect by Demographic

and customization, which can, if done effectively, create an ongoing advantage over competitors.

The interface is incredibly important to customers, and small effects can have large impacts on the customer experience. As one case study, AmazonFresh has replicated the app features of FreshDirect and Peapod, but in doing so failed to execute on small details which have led to customer dissatisfaction. (See Exhibit 3.)

Contrary to popular belief, shiny features are not the most important interface elements, since they can be easily replicated across organizations. Instead, the technical delivery of each feature is key – the delivery should promote convenience and ease of purchase. Examples of important functionalities include an effective search engine that displays relevant results and the ability to purchase items in useful increments (e.g. searching for chicken breast and getting results for raw chicken as opposed to chicken broth; ability to purchase garlic by the clove rather than the pound).

CONCLUSION

The time to invest in click & collect offerings is now, as the race to gain market share has already begun in a number of geographies. Retailers should learn from the lessons in Europe to develop an implementation that will attract customers. The best way to do so is to ensure that the customer proposition, operational model, and technical execution work in lockstep to create an offer that saves consumers time and effort, while creating value for the retailer.

OF CUSTOMERS WHO ARE REPEAT USERS, FOR AN EARLY ADOPTER IN THE US

48%

OF ONLINE TRAFFIC FROM COMPETITORS' CUSTOMERS, FOR A FIRST MOVER IN THE UK

Digital equality

THREE STEPS TO BETTER SERVE LOW-INCOME CONSUMERS ONLINE

George Faigen and Chris Baker

Digital has been one of the most discussed trends in retail over the past decade. This is not just hype: Many sectors have seen exponential growth of online sales, and almost every product category has been affected to some degree. In our view, though, all the existing commentary about online retail's growth ignores the challenges and opportunities around low-income consumers. Despite comprising a significant minority in developed markets and a majority in others, this group is not well served by many online propositions. In response, we have written this article to explain why low-income shoppers are important; to explore the difficulties they face when shopping online; and reveal three ways retailers in developed economies can respond to serve these consumers.

Our research suggests that, as the gap between the highest and lowest incomes widens, the opportunities for building any type of proposition for low-income customers become more significant. In many situations, including where the market is not growing fast enough to keep owners and shareholders happy, retailers cannot afford to ignore the importance of low-income shoppers. For example, the bottom 30 percent of earners still represent 20 percent of grocery spend in the US, 19 percent in the UK, and 22 percent in Russia.

Low-income consumers are increasingly tech savvy and possess better technology than ever before. Despite increased online access, growth of online spend in this group has been much slower than that of middle- and higher-income consumers.

To attract more low-income customers to their online propositions, we think there are three main areas for retailers to focus on:

1. Develop low-cost fulfillment options.
2. Offer flexible payment methods.
3. Improve the mobile experience.

1. DEVELOP LOW-COST FULFILLMENT OPTIONS

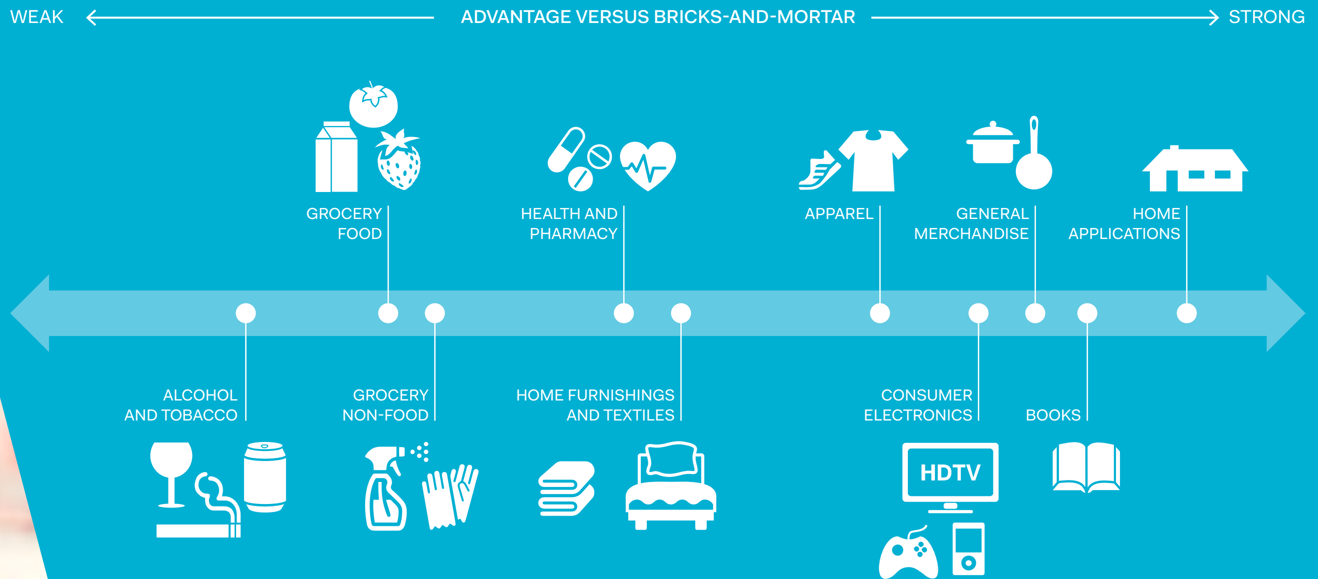
The cost structure of an online retailer is very different from that of a bricks-and-mortar business. On the one hand, an online retailer benefits from carrying less inventory, less shrink, less real estate, and fewer front-line staff. On the other hand, they face higher costs on the supply chain side, especially for item handling and return shipping costs.

In certain product categories, costs cancel out in a way that favors online retail. These are the categories where online sales have captured over 50 percent of the market, such as books, music, and movies. In contrast, in categories such as home furnishings, alcohol, and food, handling and supply-chain costs significantly outweigh other savings, making it more expensive to serve customers online. (See Exhibit 1.)

In product categories where shopping online adds cost to the business model, some of these costs are usually passed on to consumers as delivery charges.

SOURCES
Consumer Expenditure Survey, US Bureau of Labor Statistics 2015; Family Spending 2014, UK Office for National Statistics; Russian Federation Federal State Statistics Service 2015

Exhibit 1: Comparative cost advantage of online retail versus bricks-and-mortar business



This can require a larger upfront cash outlay than is feasible for consumers living from one payday to the next. Even Amazon only offers free shipping with a paid membership, or with long delivery times, or only for select products or large spends.

The simple fact is that, for low-income consumers, it doesn't make sense to pay someone else to pick your order and deliver to your house when you could do this yourself. To serve these consumers, retailers will have to become more flexible about which specific elements of the online value chain they execute for customers, and conversely, which elements they let customers execute for themselves, in order to reduce costs and prices.

An obvious step is to eliminate last-mile costs by providing pickup points or click & collect; this proposition is popular in France for online grocery shopping (see Case Study). In the future, other ways to reduce last-mile costs could include incentives for customers in the same area to share deliveries or pickup orders for friends and neighbors.

These approaches could be used not only to neutralize a cost disadvantage in categories such as fresh food, where last-mile expenses are a real issue, but also to fund additional price reductions in categories where selling online is already cheaper than in store.

2. OFFER FLEXIBLE PAYMENT METHODS

Many low-income customers are also underserved by banks and they either prefer to pay in cash, or indeed, are forced to do so due to a lack of other options. In the UK, 7 percent of customers in the bottom 40 percent of incomes don't have a debit card, whereas in Germany, France, and the US the figure is 13 percent, 24 percent, and 33 percent of customers, respectively. The problem is even more pronounced in the less advanced economies: In South Africa, 60 percent of customers in the bottom 40 percent of incomes lack access to a debit card, and in Russia the number is 64 percent.

To address this inequality, retailers need to create ways for online customers to pay in cash. One option is allowing for cash payment at a pickup point, which also, of course, addresses last-mile costs. Walmart's click-and-collect program in the US already enables this type of payment.

Another option, especially for large retailers, would be helping lower-income customers manage their banking needs, for example, by issuing prepaid cards that customers can top up with cash.

Indeed, such a system could help some consumers save by locking away cash, and could be expanded to include a credit facility to help customers manage between paydays.

Similarly, it is possible to sell products online that are then paid for in installments. For example, UK online retailer Very allows customers to pay before delivery, or pay in three interest-free installments over three months, or use their credit service to spread the cost further. This flexibility has provided their customers with a unique proposition not available at other low-cost, fast-fashion shopping websites.

Flexible payment methods would also allow lower-income customers to benefit from bulk order discounts, which are often not possible because the initial outlay is just too high. To assist, retailers could find ways to help their lower-income customers plan beyond their current funds. Layaway programs, for example, where customers can reserve a product and pay in installments, have made a comeback in recent years. Now is the time for retailers to think about offering an equivalent service for big, bulk, online shops that can be dropped off at a local store or convenient pickup point.

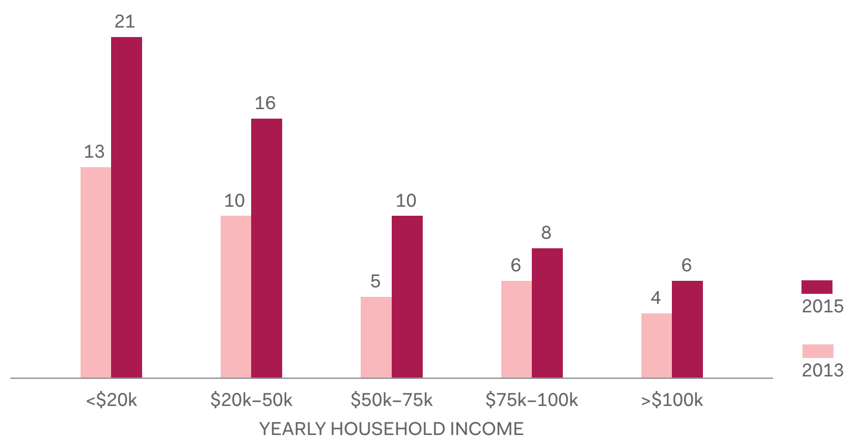
SOURCE: Asli Demirguc-Kunt and Leora Klapper, 2012, Measuring Financial Inclusion: The Global Findex Database

3. IMPROVE THE MOBILE EXPERIENCE

With the rise of smartphones and public Wi-Fi hotspots, many people on a low income can get good internet access, and they are the people most likely to be using their phone as their primary way to get online. (See Exhibit 2.)

This development represents a new and significant opportunity for retailers who wish to support these customers. Currently, however, too many mobile commerce (or "m-commerce") sites are simply smaller versions of the full website, and completing a complex transaction like purchasing groceries, clothes, or electronics can be tedious and difficult on a small screen.

Exhibit 2: Percentage of US adults who access the internet at home by smartphone only



Source: US Digital Users: The eMarketer Forecast for 2016

Investing in a version of the website that is custom-formatted for mobile browsing and purchasing is essential to capture the orders and reorders of customers who use their phone for shopping.

Beyond an easy-to-use mobile site, some retailers have tried to simplify online ordering with features that are not budget friendly. For example, both Amazon's automatic reorder buttons for household items and FreshDirect's click-to-buy recipes save time for middle- and high-income customers. However, in their current form, these systems reduce or erase the price transparency that is critical for lower-income consumers.

Retail leaders are investing in their mobile shopping experiences and designing new features that save both time and money. For low-income customers, this could be a grocery app that allows customers to set their own unique budget, or customize dietary preferences to generate their own weekly shopping list and meal plan. Similarly, a general merchandise retailer who provides parents with a pre-assembled order of school supplies at the lowest possible cost – perhaps allowing the family to start making payments months in advance – might be a very attractive option for many low-income shoppers.

CONCLUSION

Online shopping will continue to grow across multiple product categories, but many retailers are missing the opportunity to reach out to their competitor's low-income customers who would like to shop online. Serving this group will require developing new and creative solutions, as well as reinventing parts of their bricks-and-mortar experience for the digital age. However, significant numbers of low-income consumers are likely to shift their retail spend to those retailers who offer a range of services designed specifically to meet their online shopping needs.

CASE STUDY

CREATING AND MAINTAINING A SUCCESSFUL CLICK-AND-COLLECT BUSINESS MODEL

Introduced in 2004, the click-and-collect format known as Drive has gone on to win 5 percent of grocery sales in France. Auchan and Leclerc were the pioneers of the format, which provided a cheap alternative to home delivery for online orders, and they were able to use it as an advantage over the competition.

With click-and-collect sales plateauing, French grocers are now innovating again to stay ahead. Two solutions are currently being played out:

1. Offering a reduced product range compared to hypermarkets (8,000 SKUs versus 30,000), with 45 percent of products representing their own white label brand (with higher margins). In the remaining product space, suppliers are left to battle it out to be included, giving grocers a better position in negotiations. The result is significantly better online profit levels, some of which can be passed on to consumers in the form of lower costs.
2. Moving from in-store picking for online orders to fulfilling orders from a dark store or central warehouse. This can cut order preparation time by half – on average from 40 minutes to 20 – and thus cut cost from the system.

ASSORTMENT & MERCHANDISING

Making use of data

IN SEARCH OF A BETTER ASSORTMENT

David Waller

Frederic Thomas-Dupuis

KEY TAKEAWAYS

Most food retailers have already begun to collect and leverage enormous quantities of "big data" – which can be used to drive valuable insight about the choices a retailer's particular customers make and how that retailer can optimize its own idiosyncratic assortment.

However, the challenge in harnessing this data is that it necessitates trade-offs between simplicity and value. At the furthest end of the spectrum, the complexity of computing solutions can result in insights emerging from a "black-box," which will not be clearly understood and be mistrusted.

Retailers must instead emphasize solutions that balance the art and science of working with big data, incorporating tools and processes that ensure the insights are actionable.

Big Data 1.0

When considering big data, many retailers may immediately jump to the idea of harvesting Twitter feeds and Facebook histories to serve as proxies for customer preferences. But before looking to outside sources, food retailers should first consider the huge datasets brimming with insight available within their own stores, which the majority have been collecting for years - long before the vogue of Facebook and Twitter.

This data is certainly "big"; the magnitude of information available dwarfs those of comparable industries. (See Exhibit 1.)

For food retailers, the richest data on customer behavior is readily available, and the real question becomes how to best utilize it.

Specifically, data on customer purchases provides a wealth of information about the exact set of customers that shop at a given retailer's stores. This data can be used to deduce a number of buying patterns and preferences at the individual consumer level, including:

- Which items are preferred
- The strength of those preferences
- The role of prices in driving switching and expansion of demand
- Which items are substitutes
- Which items are complements

Exhibit 1: Comparative scale of records: Billions vs. millions

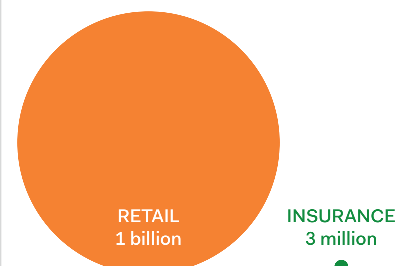
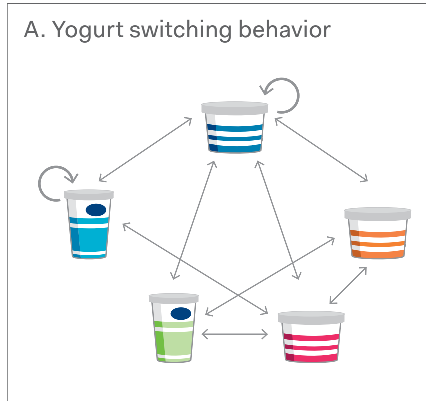
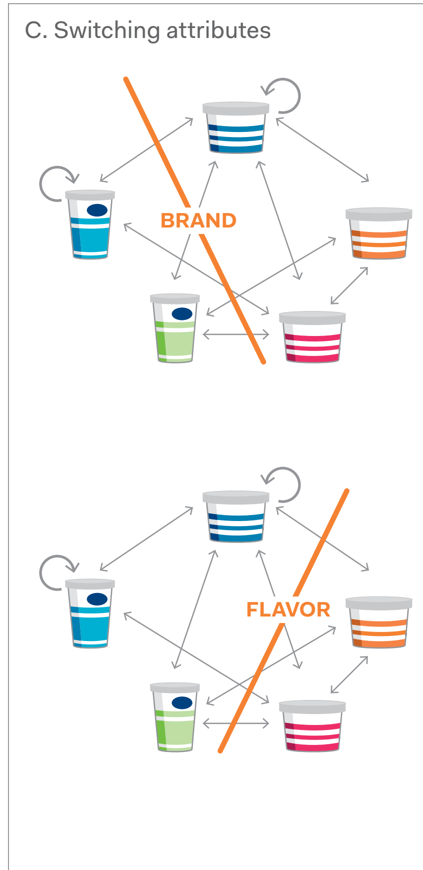
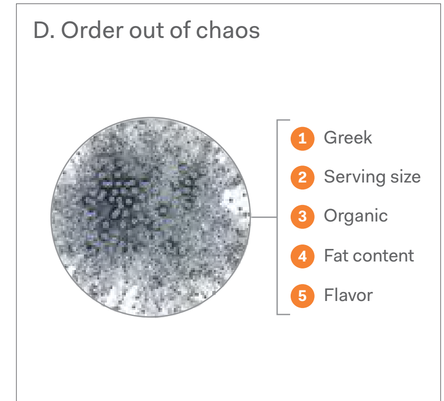


Exhibit 2: Customer constellations







Visually linking these decisions for an individual customer, we can create a unique constellation that summarizes the switching behavior of that customer over time for a specific product. (See Exhibit 2A.)

These constellations encode the crucial components of customer behavior into an easily digestible pattern; the aggregated picture for all customers, however, is significantly more complex. (See Exhibit 2B.)

The "art" of big data is making sense of the complexity and gleaning valuable insight about your customers – with the ultimate goal of translating these insights into implications for your assortment.

Make it simple

A familiar approach is to organize aggregated choices into a customer decision tree (CDT). Typically, these trees are constructed by vendors with huge research budgets who analyze focus groups to understand the prioritization of factors influencing their decisions.

The process, however, is not totally objective; vendors may have their own agendas which can cause retailers to question, for example, the reported significance of brand in influencing decisions. An even subtler difficulty with the typical CDT approach is that focus groups are not necessarily representative of the distribution of customers who shop at a given retailer, which is really the population retailers should be interested in observing.

This is the type of mental shortcut that Daniel Kahneman, a Nobel laureate in economics, warns us to avoid in his book, *Thinking, Fast and Slow*. The real question retailers are hoping to answer with CDTs is "What do customer behaviors reveal about their buying preferences?" Retailers must not be lured into substituting the answer to the simpler question: "What do a few customers in a focus group say about what they buy?" and assuming that this is sufficient to solve the more complex problem. Relying on what a small group of people tell us about their behavior is very different from observing what the sum total of all customer actions indicates.

This is one area where the data retailers already have available can be leveraged to improve the existing CDT process.

From the switching patterns of a retailer's customers, we can deduce the important factors driving these changes. (See Exhibit 2C.)

These could include any number of attributes, such as, for yogurt:

- Sweetener
- Calories
- Size
- Flavor
- Organic
- Single / Multi
- Blend or FOB
- Packaging
- Brand
- Fat Content

By determining the most important factors, those that are the largest explanatory variables for customer switching at the aggregate level, we can create order from what was originally chaos. (See Exhibit 2D.)

The final output is a traditional CDT, but one that is customized to a particular retailer and reflective of actual customer decisions. Data derived from the observed customer switching behavior indicates which attributes are most important to customers – that is, which factors are most likely to predict switches in customer buying patterns. This type of analysis can drive new insights about the relative importance of different attributes; in one real world example for a particular retailer, we saw that whether or not the orange juice has pulp is just as important as the juice brand – and other factors, like serving size, are even more important.

"All models are wrong but some are useful"

The outcomes of the type of switching analysis described above are more unimpeachable than the experimental design-dependent focus groups typically employed, as the insights are derived directly from the actual observed behavior of a given retailer's particular set of customers. However, as the famous statistician George Box once wrote: "All models are wrong but some are useful."

So rather than questioning whether such models are right, one could ask how useful the distilled observations are in creating a reliable picture of the world. The answer is that they are extremely effective.

Just understanding switching behavior alone - that is, having a global view of what amounts to a collection of probabilities about how likely a consumer is to switch between items – allows one to almost perfectly reconstruct the relative sales distributions of those products. (See Exhibit 3.)

As Box reminds us, this correlation doesn't mean the model is right – but it does mean that there exists a deep underlying linkage between the observed customer switching behavior and real world outcomes.

Which one is best?

Beyond gaining a general understanding of customer behavior, big data can also help retailers make decisions about the specific products that will optimize their shelves.

The first step in this process is to re-think the traditional method for identifying a "good" product. Sales and margin are no longer sufficient to determine whether a product should be stocked; retailers must now consider a range of additional product factors, including: space, facings, funding, customers, strategy, incrementality, trends, halo, JBPs, vendor support, vendor strategy, case packs, etc.

As it can be difficult to balance the impacts and determine the final net effect from this multitude of competing factors, one approach is to distill the relevant components into a single metric that can be optimized across products and categories. This metric should capture the relationship between all of the economic, customer, and strategic factors at play, as well as the limitation of available space and the incremental impact of adding the product relative to the existing assortment. (See Exhibit 4.)

However, assessing the incremental impact of a new item is a difficult problem to solve. Not only does it require an understanding of aggregate customer behavior, but it is also dependent on the items already on a given retailer's shelf. Said differently, adding or removing a single item in the assortment will necessarily change the value of the remaining items and the utility of adding new ones.

While this incrementality creates significant complexity, it is crucial to get it right. Exhibit 5 shows total utility, relative to the starting point utility, as products are removed one-by-one (an "iteration step"), across three different strategies

Exhibit 3. Product sales distributions: Actual vs. predicted by switching behavior

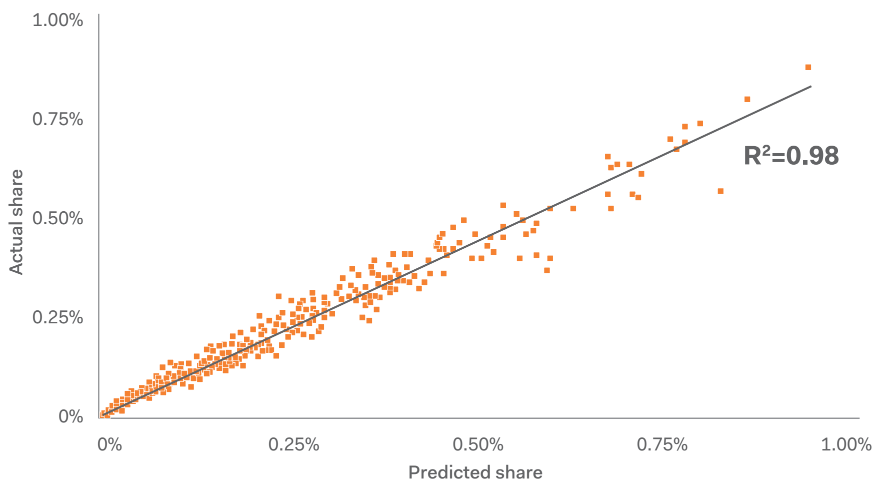
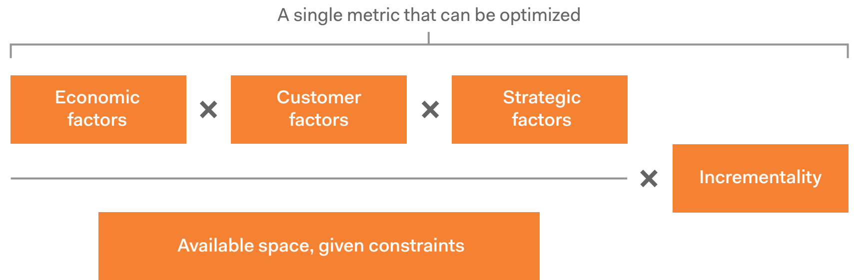


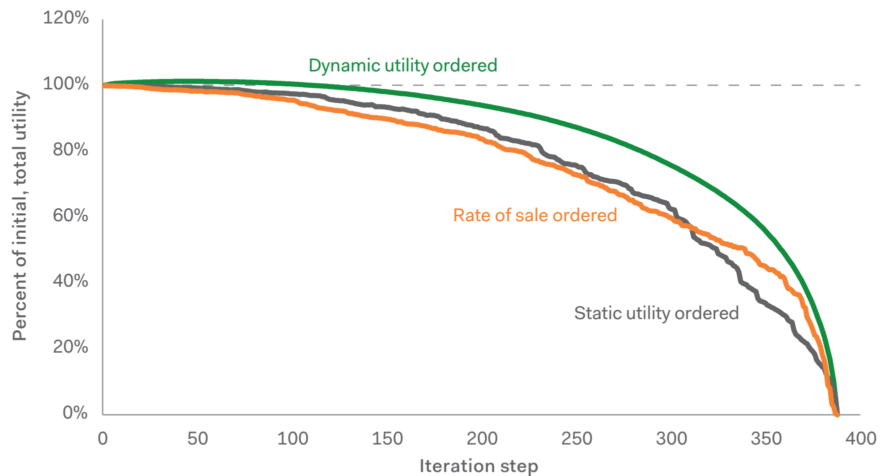
Exhibit 4: Defining utility: One metric to rule them all

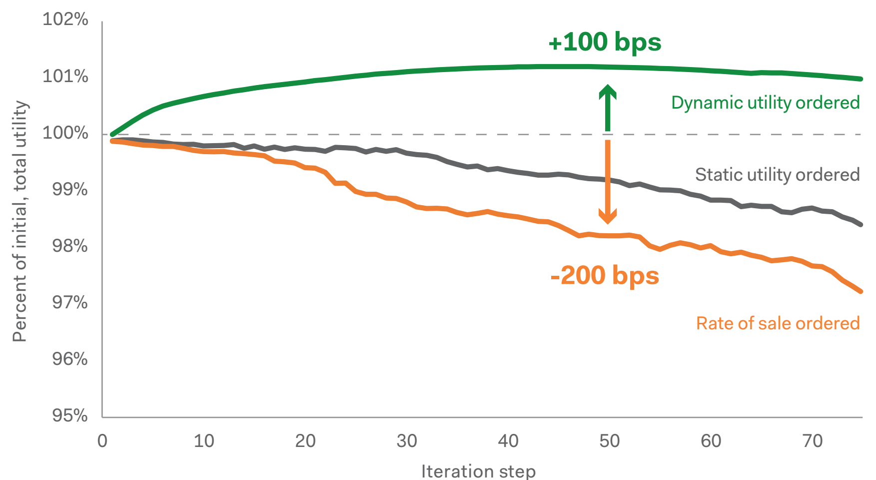


that incorporate incrementality to a varying degree. The orange path shows the change in utility as products are removed simply based on which have the lowest sales; incrementality is not considered at all in this strategy. The grey line describes a slightly more sophisticated approach, which considers incrementality in the initial ranking of which products to remove first, but doesn't recalculate this ranking as items are subsequently removed. The green curve shows the impact of dynamically re-calculating incrementality based on the new assortment at each iteration step. Recall that the incrementality of an item depends on the existing assortment, so that as the assortment changes, the incremental value of an item also changes – the green line takes this evolution into account.

As demonstrated, it is clear that the strategy that delivers maximum utility is that which dynamically adjusts for the incremental impact of each item (the green line). In fact, in the early iteration steps, this strategy can actually increase utility relative to the starting point, as shown below.

Exhibit 5: Impact of dynamic incrementality: Getting it right matters





The calculations to perform this type of analysis are huge. But we must remember that, these days, it is cheap to do huge calculations and the impact can be significant.

Unique: Just like everyone else

In theory, the switching behavior and utility analyses described above could be carried out at the individual store level, given that each store, and its population of customers, is unique – but it's not necessarily true that this degree of convolution will pay out sufficiently compensating dividends for a large retailer.

The crucial trade-off in the problem of localizing assortment balances the tension between simplicity and value. As assortments become increasingly localized, managerial complexity will grow in tandem, and at some point, the incremental value will not justify the additional complexity.

Retailers should approach this problem by trying to reduce complexity, while still capturing real and meaningful differences in customer demand. One obvious technique for this strategy is clustering. Historically, there are three, not necessarily mutually exclusive, approaches to clustering: demographic, geographic, and behavior-led clustering.

For a behavior-led approach, we can use a typical CDT to summarize customer demand in a simple way that allows us to recognize clusters across multiple dimensions. Each store has its own CDT "fingerprint" – how each branch of the tree, that is, each facet of a product type, indexes as compared to other stores. (See Exhibit 6.)

Comparing these fingerprints, retailers can determine which stores have similar fingerprints, and can be clustered together. This analysis will also show just how different a population of stores is, and thus, help determine how many clusters are appropriate, as guided by the relative intensity of customer demand across stores. (See Exhibit 7.)

Exhibit 6: CDT fingerprints

How does this method compare to the other clustering approaches, namely demographic and geographic clustering? Because it is based on customer behavior, this approach captures nuances of each of the other two approaches. For example, as shown in Exhibit 8, the demand for corn & peas versus greens & carrots seems to be driven largely by geographic taste preferences, a distinction that would have been lost in an assortment based solely on demographics. However, in the brand dimension, demographics play a much larger role and thus cannot be ignored. Clustering by behavior is the best of both worlds, highlighting the most powerful implications of each of the other two approaches.

This approach allows us to determine how different demand truly is across stores and then calculate what the corresponding assortments would be at various degrees of clustering. But how many clusters optimize the tension between simplicity and value?

Computers can analyze the additional value from each increased level of granularity, but it is ultimately up to a human to consider whether this justifies the corresponding increase in managerial complexity.

Making it stick

Having interpreted the data, translating these insights into actionable processes within an organization presents another obstacle to consider. Without proper procedures to implement the results, all of the benefits of the analysis are at risk. Because of the complexity of these types of problems, it can be tempting to plug the data into a black box which spits out a final answer, abandoning any familiarity with the underlying logic.

This type of black-box approach, however, is ultimately doomed to failure. People reject what they don't understand – and they stop feeling accountable for the results. Senior leadership will expect merchandisers to be able to answer questions about the outputs and will

Exhibit 7: Clustering with CDT fingerprints

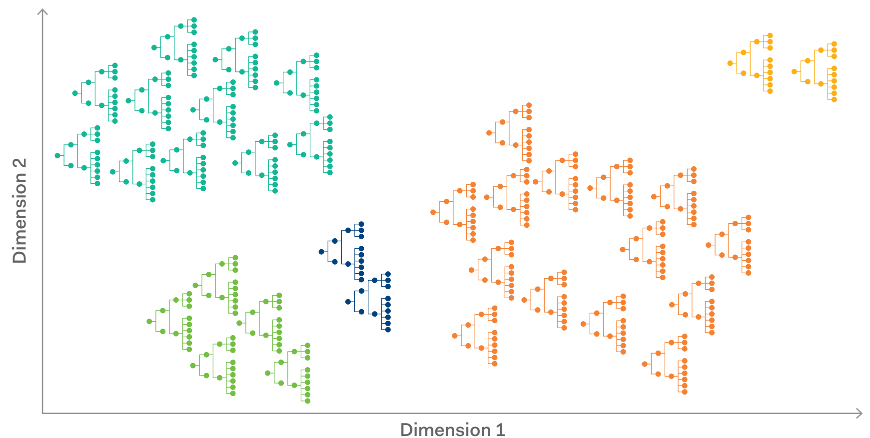


Exhibit 8: Behavior-led clustering: Best of both worlds

GEOGRAPHY
DEMOGRAPHICS

Region 1
Region 2
Region 3
Region 4
Low
Mid
High

Corn & Peas
Green & Carrots
Premium Brand
Store Brand

mistrust and reject solutions that aren't accompanied by explanations.

Because these analyses rely on human interpretation as well as purely computed outputs, the "art" of this approach necessitates a seamless interaction between the two components. When this type of coordination is successful, the outcomes can be ground-breaking.

Take as an example a series of famous chess duels that illustrates the power of a partnership between tools and their users. (See Exhibit 9.)

In 1997, the chess Grandmaster Garry Kasparov faced off against IBM's supercomputer Deep Blue and was defeated, in a dark day for mankind. Several years later, an enhanced supercomputer, Hydra, with even more computing power, was paired against various chess Grandmasters who were given access to personal computers. Working as a unit with their computers, a number of these Grandmasters were able to defeat Hydra. Even more compelling, when later matches set chess Grandmasters, with their personal computers, against amateur chess players also using personal computers, the amateurs fared better!

The implication of these tournaments is that the best outcomes occur when people and their computers work as a unit – outcomes that strictly dominate pure computing or pure people-driven solutions. The intuition of a chess Grandmaster can't be fully encapsulated into a supercomputer, but nor can a chess Grandmaster equal the computing power of Deep Blue or Hydra. It takes both to defeat the supercomputers.

Furthermore, an amateur and his PC can outmaneuver a chess Grandmaster and his PC, even as this combination was able to beat Hydra. This is because the amateurs were more willing to rely on the information their computers gave them and to accept the limits of their own knowledge, whereas Grandmasters were tempted to override computer results to their own detriment.

Analogously, the best implementations of big data solutions are those that enable their users to work in partnership with the tool. The users must be well-trained, and the tools must also be designed with the goal of interacting and communicating with users.

User training cannot stop at tool documentation, but should require further certification tests. One successful technique requires future tool users to give a presentation explaining the tool to a panel, which necessitates a far greater depth of knowledge than does simply answering multiple choice questions. Training in this way also assures that the tool outputs can be clearly communicated to senior management, backed by a deep understanding of the underlying logic.

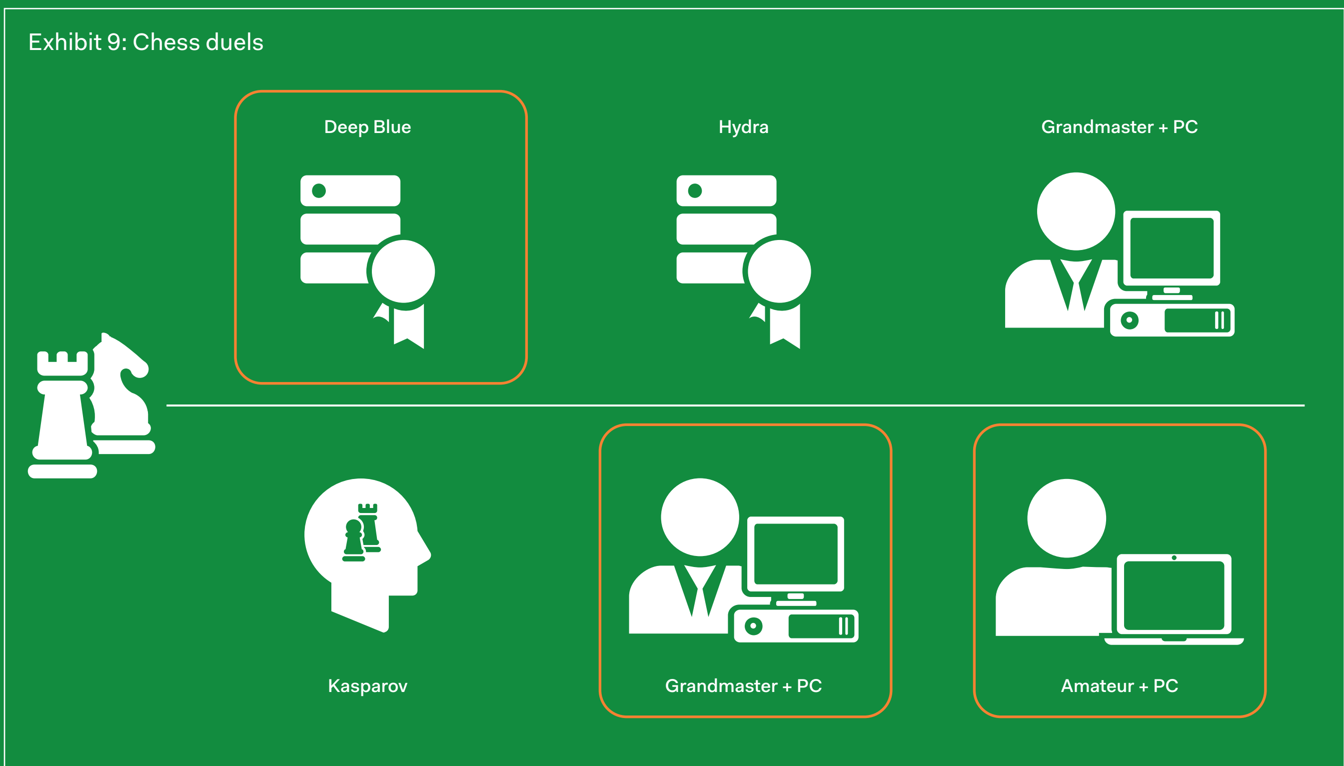
Similarly, customized tools that prioritize intuitiveness will result in better informed users. Design your tool to complement the amateur chess player from our chess example above, as that unit will be the overall tournament winner.

CONCLUSION

When it comes to optimizing assortment using big data, there are a few key points to remember:

- You have the most informative data already (in all probability).
- The tools need to fit your processes, not the reverse.
- Your processes need discipline – don't miss the obvious stuff.
- With today's technology, fast ≠ lame and cheap ≠ fragile.
- Faced with a choice of art or science, choose both.

Exhibit 9: Chess duels



Breaking the addiction

PROMOTIONS IN FOOD RETAIL

Frederic Thomas-Dupuis and Martin Mumford

INTRODUCTION

Promotions are the hard drugs of the retail system: They ease the pain in the short term, but as use increases, so does dependency and it becomes harder and harder to quit. After decades of misuse, the side effects are starting to damage the whole retail ecosystem, and we believe more and more retailers will need to break free from their promotions addiction.

In this article, we talk about how promotions became the short-term fix for a suite of issues, and present the case for the detrimental effect their overuse is having on retailers, manufacturers, consumers, and the environment.

We then provide a six-step program for successfully addressing the addiction.

A PROMOTIONS ADDICTION IN NUMBERS

ONE

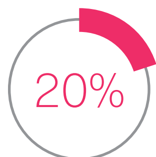
The number of points of profit erosion to expect from each 10 points of promotions participation

x2

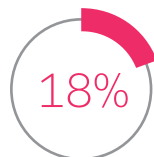
Average uplift ratio from each unit of giveaway – significantly lower than most retailers realize

30%

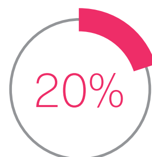
Proportion of promotions that do not really drive sales and actually reduce profit before funding from suppliers, destroying value for both retailer and manufacturer



Amount by which cannibalization has increased in Europe over the past 10 years



Decrease in sales uplift from promotions over the past five years



Proportion of promotions in fresh categories, despite the strategic importance of these areas

PROMOTIONS ARE FAST AND EASY

Promotions can be an automatic response to tough times, used to help retailers meet targets in a difficult quarter, compensate for declining customer numbers, or increase sales over an important holiday period. In many mature markets, promotions are increasingly used to drive sales once room for additional store growth runs out and participation is rising inexorably: In Europe promotion participation rose from 20 percent in 2003 to 35 percent 2015.

The dynamics of funding negotiations also drive promotion participation upwards. As retailers push suppliers for better terms, the suppliers want something in return: an increase in promotional funding and intensity.

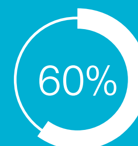
So if promotions do drive sales, bring in customers, and are funded by manufacturers, what is the problem?

PROMOTIONS DRIVE SUGAR CONSUMPTION

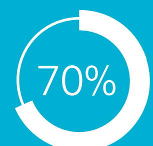
Reducing the consumption of sugar, salt, and fat is an increasing concern for consumers, governments, and healthcare systems in developed countries. When the role of promotions in diet-related ill health was discussed at our World Economic Forum panel on managing obesity, we decided it was time to take a look at a typical promotions program and see if sugary products really were on promotion more often, and what the increase in consumption patterns really was.

x2

Products and categories with above-average sugar content are twice as likely to end up in the promotions program



Rise in consumption of high-sugar products due to promotions; primarily driven by the participation of lower socio-economic groups



Proportion of supplier funding linked to promotions on sweets, confectionery, sodas, and spirits

The reputational risk to retailers is real, providing an additional reason to reduce promotional participation in these categories.

REVEALING THE TRUE COST OF PROMOTIONS

MYTH

FACT

MANUFACTURERS

Promotions help build brand and popularity.

Promotions degrade long-term brand equity. Customers start seeing the regular price as poor value.

Promotions are the best option when market growth is low and product innovation and differentiation are not generating enough sales.

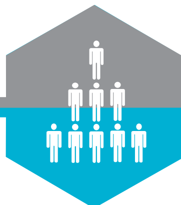
Reducing promotions programs allows manufacturers to invest more in innovation and development, rather than spending so much time on trade tactics with their retailer customers.

Promotions bring customers through the door and capture their whole baskets.

Price-comparison websites and apps show where the best offers are, allowing consumers to "cherry pick" promotions at different retailers for different parts of their shop.

Promotions get customers to spend more.

As more and more promotions are run, the sales-driving efficiency of the deals diminishes mostly due to lower promotional elasticity and higher cannibalization.



CUSTOMERS

Promotions offer customers value for money.

Some promotions are confusing, and simpler pricing and assortments would meet customers' true needs more easily.

Promotions keep sales volumes up.

Volume uplift is short-lived and customers will switch to only buying the product when it is on special offer.

Promotions are a cost-effective way to increase factory utilization.

Promotions add cost to the value chain because of the increased volatility and complexity they introduce.

Promotions are an easy option.

Promotions trigger additional costs at each step of the process, from printing coupons, to supply chain volatility, waste, and availability issues in store.

Promotions make retailers look cheaper to customers.

Promotions have a lower impact on value perception than everyday low prices (EDLP). Too many promotions can even damage value perception by confusing customers.

RETAILERS

Promotions are always a good thing for customers.

Promotions can contribute to unhealthy eating patterns when targeted at categories such as sugary drinks and snacks where buying more means consuming more.

There is little to no environmental impact of running a promotion.

Because volumes are more difficult to predict on promotional items, they are typically a big cause of in-store shrink. Promotions also cause consumers to overbuy, leading to waste at home.

ENVIRONMENT

In fact, promotions are detrimental not just to retailers, but also to manufacturers destroying value in the long term for both parties. Indeed, they can also be bad for customers' health and finances, as well as the environment. We explore these issues above.

It could be argued that this situation is no different from five or 10 years ago, and it is true that promotions have always been a source of internal complexity and tough debates. However, we believe that this time it is different. Pressure from multiple sides – including regulators and government – is forcing retailers to look at this topic again, and the call for action is becoming urgent.

As a result, we think it's time for retailers and manufacturers to reduce their promotions programs, and in the next section we explain how this can be done.

GOING INTO REHAB

For retailers who recognize the damage promotions are causing their business, there are six steps to break the cycle of dependency. Taking these steps will create a competitive advantage of improved value perception, which may prevent sales volume decline and remove costs and complexity from their business.

STEP 1: Seek clarity on the role of promotions

As a first step, be clear about the purpose of promotions. What role do they play in the business proposition? Which customer segments buy into them? How do they link with other levers? How do they work in a world that's shifting to one-to-one customer communication?

This should enable a desired level of promotions to be defined – one which is probably significantly lower than today's activities.

STEP 2: Understand the real impact of promotions

At both retailers and manufacturers, managing promotions takes a lot of time and energy but only a fraction of this usually goes into measuring the actual business benefit of the offers.

For example, often promotions are assessed by looking only at sales increases on promoted items. This means that side effects such as cannibalization and pull-forwards are ignored. More fundamentally, the traffic-driving power of the program is not monitored, making it difficult to take a critical look at performance week-by-week.

One of the reasons for it being hard to measure the real impact of promotions is that there are so many factors which must be considered. Below and in Exhibit 1 we lay out the criteria that we recommend companies measure to understand the true underlying impact of any promotion:

- Direct sales increase
- Cost of the discount being given away
- Supplier funding
- Sales changes in related products and brands (cannibalization)
- Sales changes after promotion versus pre-promotion sales (pull-forward)
- Cost of marketing the promotion
- Additional store labor and supply chain costs of processing extra volumes
- Change in basket size (halo)
- Change in number of customers (halo)

STEP 3: Act on the knowledge your data gives you

Once these effects have been measured, it is possible to work out why some promotions do not work economically.

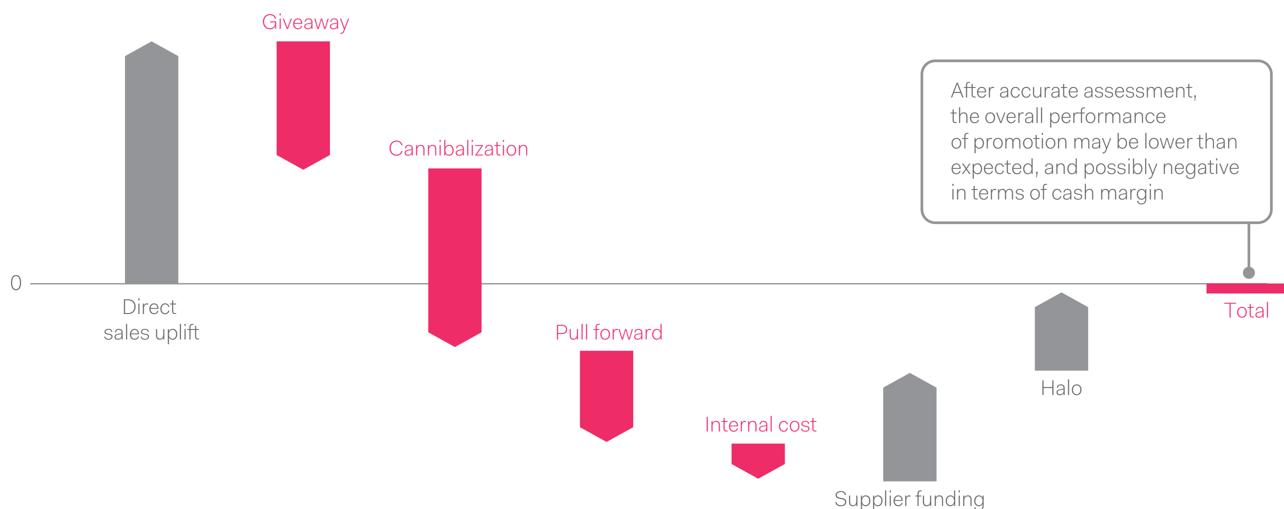
If there is not much uplift:

- Are customers uninterested?
- Is the product placement optimized?
- Is enough stock available on the shelves at all times?

Even if there is uplift, challenge whether the effect is from the promotion or an external factor, such as good weather driving ice-cream sales or a competitor receiving some bad press.

Improved understanding of the true performance of each promotion will lead to better decisions regarding the promotions companies choose to run. Armed with this information, it is possible to decide what to keep promoting, what to stop promoting, and how to manage each of the factors affecting a promotion's profitability, in order to drive additional sales and margins.

Exhibit 1: Measuring the real effect of a promotion on cash margin



STEP 4: Move away from promotions where possible

Once the true benefits of promotions are identified and unprofitable promotions are removed, a more thorough analysis of the remaining program will highlight products and categories where it would be better to shift away from promotions towards an EDLP approach. These will typically be categories where promotions participation is high (more than 40 percent), where uplift has been decreasing (any money spent on promo yields lower returns), and where the amount of supplier funding is massive (typically covering more than 80 percent of the discount).

It is likely that some suppliers within these categories are suffering from the same vicious cycles as the retailer – high cannibalization, low or no volume growth, and degradation of their brand position – making them receptive to partnerships to help correct the promotional strategy.

STEP 5: Work with suppliers to transition funding structures to everyday low prices

As mentioned earlier, one of the main issues contributing to promotions proliferation are the terms and conditions negotiated over time between retailers and manufacturers. This reliance (on both sides) on promotional funding needs to be addressed. While such discussions are hard work, a change is ultimately in the best interests of both parties, breaking the cycle of promotions addiction.

Moving to an EDLP structure ultimately makes funding flows less fixed – increasing the degrees of freedom for the retailer to find better ways to win customers and drive share and helping suppliers to put their money into the places where growth lies.

In Europe, we are seeing renewed interest from both sides to address this issue.

STEP 6: Continue to invest in technology and capabilities

Understanding and managing promotions requires analytical horsepower, as well as excellent operational workflows. Many retailers and manufacturers have invested heavily in new technology but are joining an arms race: only those on the leading edge will win customers and drive financial returns.

Technology has a tangible impact on the business when it comes to the power of promotional forecasting. In the past two years, there has been a shift from more traditional linear forecasts towards sophisticated machine-learning approaches, which can cut error rates by more than 50 percent.

CONCLUDING REMARKS

Promotions can be a quick fix, but long term they cause issues for retailers, manufacturers, and customers. The promotions addiction has been going on for a long time, but we do see a shift, with retailers wanting to change and manufacturers being willing to participate in programs to reduce promotional intensity. Doing this is not easy but it can be done, by following a systematic data-driven approach to reducing dependency.

CUSTOMER EXPERIENCE

Shaping the mobile experience

USING A MOBILE PLATFORM TO ENGAGE CUSTOMERS

Paul Beswick

Shiv Gupta

KEY TAKEAWAYS

The world is being transformed, from a place of in-person commerce that has been facilitated by physical payment forms, to one that is heavily reliant on mobile, digital transactions and online conversations – a transformation that will result in winners and losers.

Succeeding in this new world will require a shift in thinking:

- Payments are no longer outside the realm of marketing; instead, they form a critical jumping-off point for customers to engage more meaningfully with a retailer's digital brand.
- Retailers must migrate to the next generation of promotions and loyalty programs enabled by today's mobile environment – one that emphasizes frequent, personal relationships, rather than formulaic deals.
- Customer experience must be at the heart of mobile thinking, whether supplementing existing brand experiences or innovating with new services.

Retailers must begin to consider the integration of mobile payments, rewards and loyalty programs, and other value-added customer services into a unified mobile experience strategy.

MOBILE PAYMENTS

Consumer payments in commerce are undergoing tremendous change: Mobile shoppers and buyers are more prevalent, digital transactions are increasing, and new players are emerging. As a result, retailers face significant financial and strategic risks – but those retailers who take on innovative and aggressive strategies have a major opportunity to enhance their customers' experience. In this context, retailers must understand five key transformations in this changing world of payments.

New providers are radically changing payments business models and ecosystems. No longer just populated by banks and card networks, the payments value chain now includes startups (Square), tech companies (Apple, PayPal), telecom (Verizon), and retailers offering closed-loop payment systems (Starbucks).

Transformational solutions are offering superior value propositions in payments and beyond. New providers and new types of partnerships offer faster, cheaper payment options that are more convenient, more inclusive, and more secure than traditional card and cash payments. For example, online retailers with one-click shopping and apps like Uber are making the payment process essentially invisible – the transaction and receipt delivery occur automatically with no effort from the customer.

Customers' evolving expectations are driving innovation. "Anywhere, anytime" is the new standard for shopping, buying, and paying. And as value propositions improve, customers increasingly expect seamless usability when they use mobile devices to search for products and retailers, read reviews, and compare prices, as well as make payments or purchases. Higher expectations are not limited to consumers alone – retailers and businesses are also demanding faster, safer, more global solutions from B2B services.

Rules and standards are challenged with faster pace of change. Previously, payments networks like Visa and MasterCard dominated branding and rule making across the value chain. But as new economic models come into being – along with new security, authentication, and tokenization standards – other players (including retailers) are gaining the ability to set the rules in the ecosystem.

Data is becoming a major battleground. Mobile platforms are enabling collection of far more customer data, including identities, location data, search histories, purchases across multiple merchants, and time spent in-store. But who exactly owns this data, and who is allowed to use it? New players, especially phone companies and open wallets, are already staking their claim, but retailers must be cognizant of the potential of this data – and the risk of being shut out.

Together, these trends have three major implications for retailers:

1. Customer payments, as well as commerce relationships, will increasingly be at risk

As payments business models and ecosystems evolve, social platforms, phone manufacturers, and open wallet providers seek to own customer relationships that were once solely the domain of retailers. The result is that these companies are gaining the leverage to steer customers toward commerce channels and merchants of their choosing.

If retailers fail to take action, they risk losing their ability to communicate with the customer, decreasing brand awareness and loyalty. Further, they may face increased competition to enter and remain in a customer's consideration set within these broader platforms.

Unfortunately, traditional retailers can be at a disadvantage in this new relationship-building process, as social and mobile platforms are often the front line of customer interaction. Buying and shopping are becoming embedded in these online platforms – many decisions are made based on conversations in digital channels and in social media. And the impact is great: 69 percent of mobile shoppers changed where they made a purchase after price comparisons, while 79 percent changed what they purchased after reading product reviews while at a retail store.[1] Ensuring that the retailer remains in the conversation is now a key consideration for merchants.

2. Understanding the payments environment is a "must"

Retailers are already moving past viewing payments as just a "to-do" on the operations checklist. Beyond shifting their approach, however, retailers must take care to refresh their thinking and stay current with their understanding.

1. Federal Reserve, *Consumers and Mobile Financial Services Report*, 2016

The reason for this refresh is that payment types, channels, and technologies are multiplying, requiring frequent assessment to ensure that costs and operational processes are optimized. Indicative of this is the fact that investments in new payments companies rose to around $3 billion in 2015, nearly tripling their level in 2013.[2] Further, consumers' growing comfort with nontraditional banks introduces the potential for higher payments costs and complexity – processing, fraud, technical connections, store operations, and settlement must all be considered.

Particularly for chief merchants and marketers, this understanding comes into play when considering new opportunities for retailer-branded forms of payment and mobile experiences. Successful execution means that the retailer can retain ownership of the payments process, helping to protect existing data sources and customer relationships.

3. Payments and digital commerce innovation create significant opportunities for retailers

The most important realization for retailers is that mobile and digital commerce provides the opportunity to have richer engagement with their most loyal customers. The buying and payment process can now be better integrated with the overall customer experience, allowing for more creative and value-added services.

In-store and at the point-of-sale, this could mean digital payment options, store-specific marketing and guidance, or scan-as-you-go functionality in a mobile app. Using new mobile capabilities, retailers can make the customer's in-store experience more frictionless and more personalized.

Going beyond bricks-and-mortar shopping, examples include mobile click-and-collect and delivery services, or partnerships with social media and payment providers. Finally, there are opportunities to increase customer adoption by integrating payments with an upgraded loyalty program, as described in the next section.

REWARDS AND LOYALTY PROGRAMS

Rewards and loyalty programs are an important strategy for retailers to maintain and improve the customer relationships that are coming under threat from new competitors. However – as is the case with the payments environment – loyalty programs are undergoing major transformations driven by mobile and digital capabilities.

Today, many food retailer loyalty programs can be described as undifferentiated, underexploited, data purchasing, and break-even/minus:

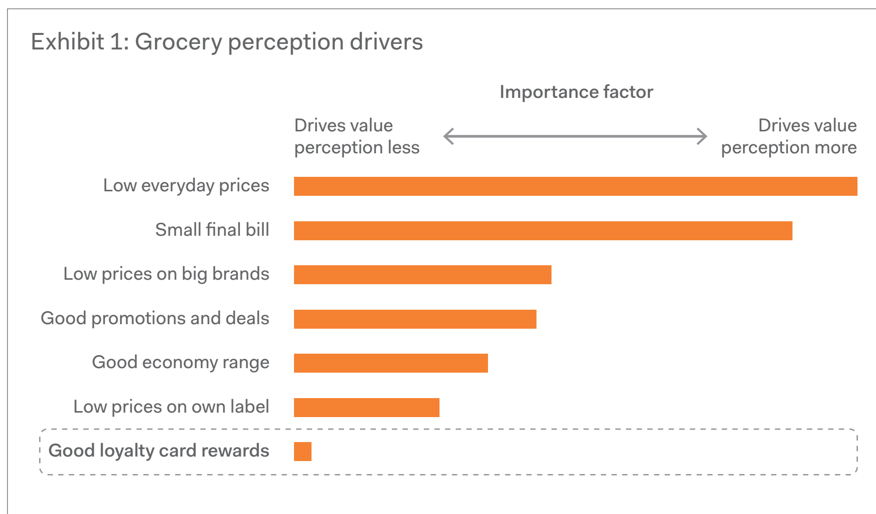
- Loyalty programs are often formulaic and transaction-based – offering points or discounts to customers but disconnected from retailer branding and lacking personalization or unique experience.
- These programs have very little impact on brand perception. (See Exhibit 1.) Retailers are missing opportunities to influence customer behavior and to enhance shopping experiences, especially for their most loyal customers.
- With the low perception impact, many retailers instead justify the cost of their loyalty programs by the data they yield – which can be employed to inform business decisions, sold to suppliers, and used to develop targeted campaigns.
- However, these benefits are often not enough to recoup the cost of the scheme. Significant volume uplift is required to recoup the costs of running the program, and data cannot be the only value proposition.

Instead, the next generation of loyalty programs needs be more "human" – based heavily on customer relationships and offering broader benefits, rather than formulaic discounts (see "The Future of Customer Loyalty" on page 54). The programs should take a broader view of building customer relationships and providing benefits – in turn driving loyal behavior through intrinsic value and nurturing relationships as assets, rather than focusing only on P&L. Retailers are already innovating with a variety of techniques beyond simple transactional exchanges.

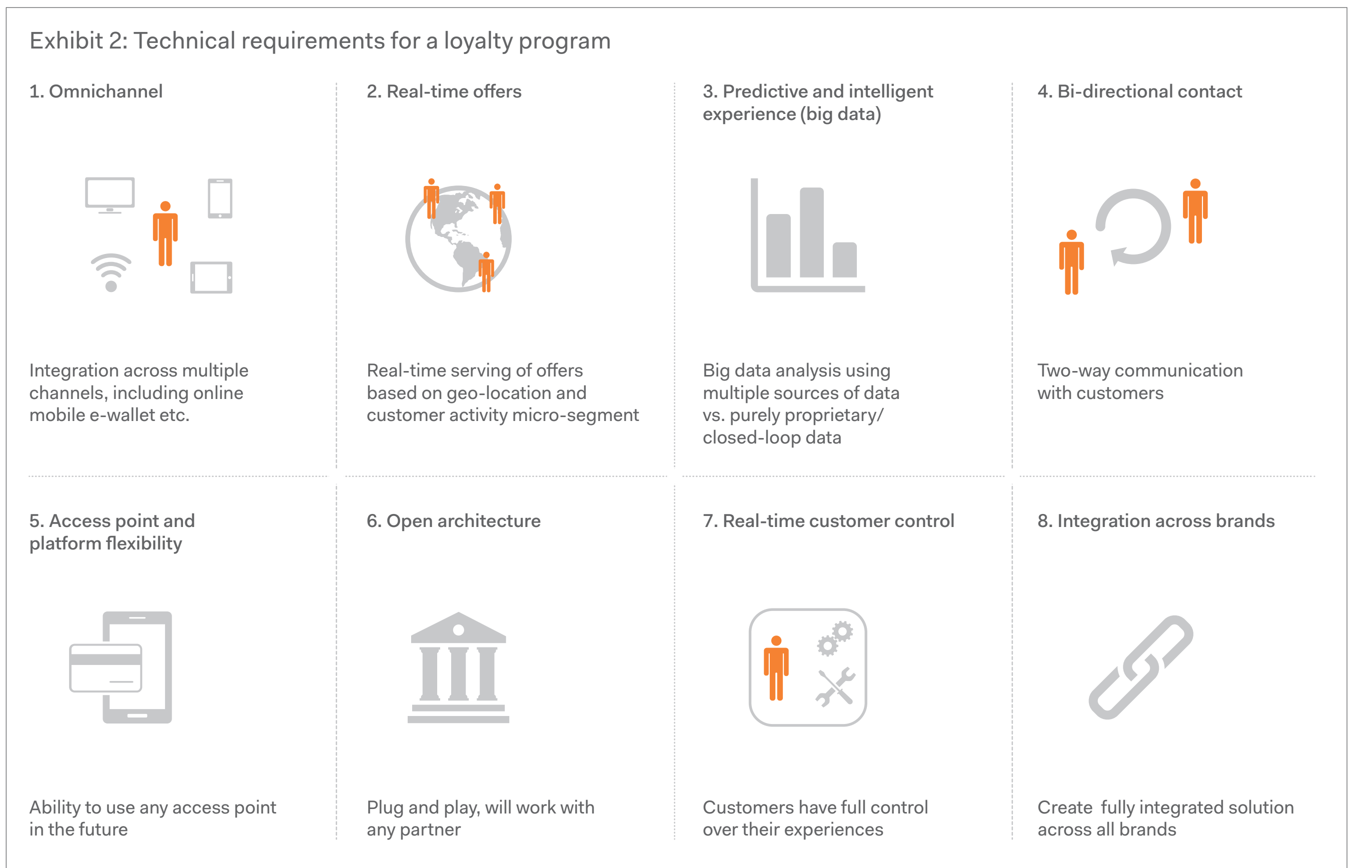
Gamification: Teleflora offers points for actions, including user reviews, comments, answering other customer queries, and posting on Facebook. As customers earn points, they are rewarded with higher levels of badges; a leaderboard also highlights the top performers.

Social media integration: Victoria's Secret has held contests offering $500 prizes to customers who submitted the best photos through Instagram. To participate, customers had to sign up for the loyalty program and download the mobile app.

Exhibit 1: Grocery perception drivers



2. CB Insights, *Funding to Payments Startups*, 2016



Personalization: GameStop store clerks are equipped with tablets to view customers' shopping history and make personalized shopping recommendations. Rewards and discounts offered are unique to customers, based on their transaction history.

Alignment with brand positioning: Instead of a traditional loyalty program, Pret A Manger allows cashiers to hand out perks at their discretion, like a coffee on the house. Pret uses this technique to promote itself as a more personal and less corporate brand.

Of course, there are also significant requirements for internal capabilities, platforms, and brand insights in order to deliver a loyalty program. (See Exhibit 2.) Beyond technical prerequisites, we also discuss in the next section a number of strategic building blocks to successfully create a mobile platform that fosters loyalty.

EXECUTING A MOBILE APP

It's easy to get caught up in the "land of shiny objects" when it comes to mobile apps and designs, but the reality is that customer adoption is a huge challenge for all app designers. Retail apps represent only about 5 percent of usage time, and a majority of new apps are deleted after just one day. On the other hand, a successful mobile platform creates several important outcomes for retailers:

- Boost revenue by easing transactions, increasing engagement and allowing for a higher degree of personalization and interactivity (engaged app users spend up to 25 percent more per month and visit stores 59 percent more often)
- Lower costs by providing a permission-based market for suppliers, open to valuable interactions with your products and services
- Position yourself for long-term growth by setting up the infrastructure needed to have highly relevant conversations with customers

We've seen so far that payments and loyalty programs are crucial components for realizing these outcomes. But how do you successfully combine them to create a vibrant and engaging mobile platform?

The key is to take a holistic approach – not just toward mobile, but one that is also integrated into a company-wide branding and customer strategy. (See Exhibit 3.) Therefore, several key building blocks of company perception and consumer understanding must be well established before launching a mobile app. As we walk through these building blocks, we'll also look at two retailers, Bed Bath & Beyond and Sephora, who have successfully built mobile platforms around existing brand strategies.

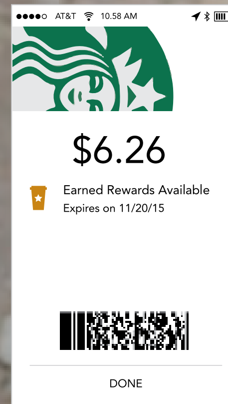
CASE STUDY: WHAT DOES "GOOD" LOOK LIKE?

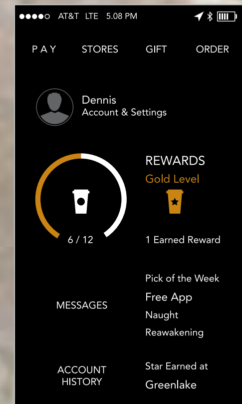
Starbucks' mobile app, integrated with their loyalty program and payments platform, has grown to more than 12 million users and accounts for almost a quarter of all Starbucks transactions.[3] The effectiveness of the app stems from the way it is embedded into the broader ecosystem:

The program is an inextricable part of the customer experience. Customers receive individualized offers for bonus "stars" (the rewards currency) based on preferences and location. Also, features such as Mobile Order and Pay to avoid lines and free refills on brewed coffee and tea are only available to program members.

It is an integrated part of the distribution channel strategy. In addition to in-store purchases and online ordering, items from other retailers and distribution channels (such as coffee beans, tea, K-Cups, bottled drinks) can also earn stars through the app.

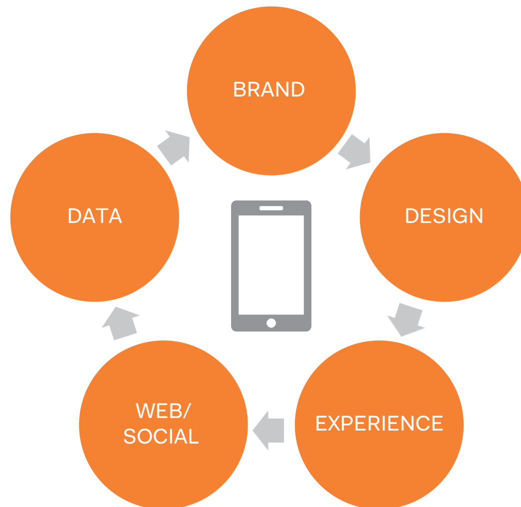
The payments approach is seamlessly incorporated. Rewards currency, prepaid Starbucks cards, and monetary payments (such as a linked credit card) are integrated into the program and easy to use at the point-of-sale. Using the app to pay is also more convenient, accelerating the purchase process for the customer.





3. Starbucks, Q3 FY16 Earnings Release

Exhibit 3: Technical Components of a holistic brand and customer strategy



First, you need **signature brand experiences:** the elements of your experience that draw in your most loyal customers. The mobile platform can capitalize on these experiences to provide coherent branding and messaging.

For example, Bed Bath & Beyond's 20 percent coupons have become more than just a discount – they are a branded, recognizable marketing tool that serves as an "indicator to buy" for their most frequent customers. Their mobile app occasionally displays these coupons so customers no longer have to wait for them in the mail and can use them when convenient. To further integrate the experience, the app allows users to track all existing coupons and offers, apply them automatically to in-app orders, and scan in additional coupons that are still made available through direct mail or email.

A signature brand experience for Sephora is the free in-store beauty class, an important way to demonstrate and promote products, as well as provide expert advice. The app notifies users of nearby classes, and allows them to directly reserve spots in the app. For customers who like to frequently change or experiment with their look, Sephora also offers free mini-makeovers with pop-up reminders through the app when customers are in-store. And even if customers can't make it into the store, the app's "Virtual Artist" feature allows users to experiment on photos of themselves.

You must also be able to **identify your most important and loyal customers** and understand how to **enhance their experience.** These customers will be the core users of the mobile platform, and adoption can branch out from this initial customer base. Without this foundational support, it can be difficult for an app to gain momentum.

Knowing that Bed Bath & Beyond is a big destination for wedding registries, the app provides customers with a 360-degree view of products, which require just an easy click to add to your registry. Registry creators also have the option to scan items in-store or from a catalog, while gift-givers can use the app to search for existing registries. Another key customer segment is college students, perennial shoppers at Bed Bath & Beyond. The app offers college and apartment checklists, a search function for school-specific requirements and permissions, as well as easy options to ship items at specific dates to stores near schools. It also links to YouTube and Pinterest showcases for age-targeted sources of inspiration.

Sephora has fully integrated their Beauty Insider loyalty program into their mobile app, helping to augment the mobile experience. Basic members can use key features directly in the app, such as tracking points, redeeming points for merchandise, and viewing birthday offers. The most loyal customers, Very Important Beauty Insiders (VIBs), also have exclusive benefits available in-app – they can reserve exclusive classes, book free custom makeovers, and redeem handpicked gifts and offers.

Further, you must identify **high vitality products** that represent your brand and generate traffic to your locations. Promotion of staples or innovative new products through the mobile platform can act as a way to prompt a purchase or a store visit.

Bed Bath & Beyond features popular and innovative SKUs prominently in their mobile app, with easy access to order the items directly, find them in store, or add them to a registry. Product highlights are both customer-specific and seasonal, such as for Back-to-School or Christmas shoppers.

In addition to showcasing new products in the app, Sephora's app also utilizes beacons to send out specialized "surprise-and-delight" offers that allow customers to experiment with products in-store. Beacons allow Sephora to target customers walking in specific sections of the store or can be activated at specific times, such as when a customer's birthday is approaching.

Finally, you need a **well-developed omnichannel sales experience.** The mobile experience works in tandem with options like delivery and click & collect – as much as omnichannel can be bolstered by an effective mobile app (see "Digital Equality" on page 26), the reverse is also true: The mobile experience is limited if customers do not have the ability to order items directly. Bed Bath & Beyond and Sephora both have well-established channels, allowing customers to find items in-store, reserve them for pickup, and have them delivered via their respective mobile apps.

CONCLUSION

The rise of mobile devices is reshaping retail and commerce, transforming customers' shopping and buying behavior, as well as the retail ecosystem's approach to payments, data, loyalty, and customer relationships. Although this shift can be a threat to traditional models, winning retailers will view it as an opportunity to grow their customer experience. They will also realize that building a mobile platform is a significant investment; therefore, retailers must be thoughtful about creating a holistic mobile strategy that integrates with their existing brand and provides customers with true value-added services.

The future of customer loyalty

BUILDING A NEXT-GENERATION REWARD PROGRAM

Nick Harrison and David Waller

In a world of new technology and high customer expectations, standard customer loyalty programs based on transactional rewards will soon be recognized for what they really are: undifferentiated, underutilized loss-makers.

Usually, retailers justify the cost of their loyalty program by the data it yields: data which can be used to inform business decisions, sold to vendors, and used to develop targeted campaigns. But on closer inspection, these additional benefits often do not materialize nor justify the investment in the program. Our analysis shows that a transaction-based loyalty program – where the customer is rewarded with a 1 percent return of the value of their spend – can cost a $10 billion retailer $30–$60 million in reduced margin every year. Add to this the considerable cost of running the program, and these costs will likely never be recouped with the gains made by utilizing the program's data.

Exhibit 1: The economics of a typical loyalty program

Loyalty program cash profit input at a $10 BN retailer
Loyalty program gives 1% return on spend as points

VOLUME UPLIFT DUE TO SCHEME (%) / AWARDED POINTS GOING UNSPENT (%)	0	10	20	30	40	50
3.0	-$13 MM	-$6 MM	$2 MM	$9 MM	$16 MM	$23 MM
2.5	-$23 MM	-$15 MM	-$8 MM	-$1 MM	$7 MM	$14 MM
2.0	-$32 MM	-$25 MM	-$18 MM	-$10 MM	-$3 MM	$4 MM
1.5	-$42 MM	-$34 MM	-$27 MM	-$20 MM	-$13 MM	-$6 MM
1.0	-$51 MM	-$44 MM	-$37 MM	-$30 MM	-$23 MM	-$15 MM
0.5	-$60 MM	-$53 MM	-$46 MM	-$39 MM	-$33 MM	-$25 MM

Most likely outcome is a $27–$60 MM loss

Even if your program isn't analogous to the one shown in Exhibit 1, we believe the best retail loyalty programs can be better, and indeed, need to improve quickly.

In the first half of this article, we articulate the case for change, and in the second half, we explain what retailers need to be thinking about when it comes to customer loyalty programs.

PART 1: THE CASE FOR CHANGE

New competitors are disrupting the market

Traditional retailers are feeling the pressure to find new ways to stay close to their customers in a world where disruptive new entrants are trying to own the customer relationships that retailers once took for granted. Retailers face an assault on their status as the owner of the customer. Be it online pure-play retail competitors, manufacturers selling direct to consumers, or payment providers and digital wallets, many businesses are now trying to develop direct customer relationships. If retailers do not respond, they will find that over time their customer loyalty decreases as other players join the party.

So, reinventing loyalty is not some passing trend; it is fundamental to continued survival and future success.

Customer expectations are changing

It's not just that customers want more rewards; they want a different kind of relationship with the businesses they choose to interact with. As such, loyalty programs are changing from transaction-based exchanges between a retailer and a customer to an ongoing relationship with the customer at the center. (See Exhibit 2.)

Our sister firm Lippincott, specializing in brand and design, examines these trends in depth in the report, "Welcome to the Human Era: The new model for building trusted connections, and what brands need to do about it."

Many companies are starting to update how their loyalty programs provide shared benefits with customers. Some of the most important trends include:

- Increasing use of exclusive promotions and a move away from points
- Non-monetary rewards and symbols of belonging, such as free coffee at UK grocer Waitrose, or childcare and frozen yogurt at Ikea
- Charity-based rewards and points, such as Kroger's community awards in the US, or Pets at Home animal charity program in the UK
- Services to improve the shopping experience, such as Neiman Marcus' shopping app that incorporates shopping, blogging, events, and loyalty points management
- Broader lifestyle applications, such as Walgreens' Steps program

In these examples, customers are happy to give the retailer access to their data, not because they are getting points in return, but because they are being rewarded or helped in other ways.

Exhibit 2: Characteristics of loyalty programs, past and present

	OLD WORLD REWARDS	NEW WORLD AFFINITY
Foundation	Formulaic deal	Relationship and belonging
Assessment	Transparent criteria, with no discretion	Role for serendipity and judgment
Time horizon	Present and future	Recognition of the past
Program language	Points, statements, terms and conditions	Symbols of belonging (without overstepping the mark)
Identification	Plastic card	Crosses all channels and platforms
Customer benefits	Economic	Broader
Feeling	**Entitlement**	**Appreciation**

Once this virtuous cycle is started, it can be very powerful – customers are prepared to allow more detailed use of their data and more intimate analysis of their habits so long as they are getting useful products and services in return. For the retailer, this extension of brand permission and increase in the number of customer touch points will boost customer loyalty today, and can be monetized in the future (as it increases the range of commercial opportunities in the retailer–customer relationship). Interestingly, many traditional retailers are some of the most trusted brands in their home market, giving them more opportunity to drive this virtuous cycle than many other companies, such as financial services firms or internet giants.

The right technology used in the right way

Technological advances are rapidly changing the loyalty playing field. In the old world, customers would typically have a plastic card scanned on payment, then rewards would be received as coupons or offers through the mail and by email.

In recent years, smartphones and other new technologies have transformed this playing field. Customers are always connected and the online and physical worlds are merging, with customers expecting seamless integration across channels.

Real-time or time-limited offers are becoming much more common. For example, fashion shoe retailer Meat Pack in Guatemala has GPS embedded into its app and tracks when users enter competitors' stores. At certain times during its "Hijack" campaign, this triggered a promotional discount for Meat Pack, which started at 99 percent and decreased every second until the customer entered a Meat Pack store. The discount and subsequent purchase were then automatically shared on Facebook, sending the app viral.

There is much more two-way communication with customers. For example, social media is now a key channel for customers to complain, and they expect their issue to be resolved via the same channel. Additionally, customers are more in control of how they interact with loyalty services; they can choose to share Facebook data to access a discount or enter a competition.

Online services are being brought in-store. For example, there are apps to help customers navigate and find products, as well as smartphone technology to accelerate self-scan and payment.

Underpinning much of this technology are more sophisticated analytics on much bigger datasets. These, along with rapid iterative app development, are becoming important new capabilities for retail IT teams.

PART 2: GETTING IT RIGHT IN THE REAL WORLD

In reality, an exceptional, original, and effective loyalty program is much easier to describe than it is to deliver. But it can be done. One example is Balance Rewards by US health and beauty retailer, Walgreens. The program is built around unique, non-purchase rewards and creates additional value for both customer and retailer. In Exhibit 3, we summarize how loyalty programs like the one at Walgreens, operate.

Today, some retailers are making successful changes to their loyalty program while others are not. Although no two situations are identical, we would pick out two themes that separate the leaders from the laggards:

A future-flexible approach to technology, with the retailer owning the overall loyalty ecosystem, but not necessarily every specific component within it

A startup mindset (and often organizational structure) that enables long-term investment in the loyalty proposition

A future-flexible approach to technology

Twenty years ago, the first retail loyalty programs relied on expensive in-house systems and technology, and were very inflexible in how they operated. Back then, the only alternative to this model was partnering with third-party providers such as Canada based Aimia, or Payback, in Germany, but such a move essentially ceded control of much of the loyalty program and data.

Today, flexibility is the watchword. The cost of the technology required to run a loyalty program is much less than it once was, and there is a plethora of specialist providers offering solutions to each different area in the loyalty ecosystem. This gives retailers many options for how to set up the loyalty program: either in-house or outsourced, or a mix, each covering a different aspect of the program.

Control the loyalty ecosystem but not every component

Our view is that retailers' interests are best served if they take control of the overall loyalty ecosystem – rather than outsource it to a single provider – but are comfortable partnering with a number of specialist vendors where they add powerful or differentiated capabilities. Taking a leaf out of Apple's book and applying this "designed in California"

Exhibit 3: Loyalty program from a customer's perspective

CUSTOMER VIEW

HOW TO MEET THE CUSTOMER NEED

- Provide relevant rewards for the customer to choose from
- Perform big-data analysis using multiple sources of data to provide rewards based on consumer behavior and life cycle, with a focus on cross-selling and retention

- Deliver multichannel loyalty with consumer insights and a loyalty program that goes across all sales channels, including in stores, brands, and online

- Enable the customer to manage rewards in one place, for example, by bundling miles, points, or rewards into a single app or website

- Replace loyalty cards with apps
- Push product updates to the customer
- Distribute benefits and coupons directly to a mobile device
- Be flexible to adapt to new consumer technology (phones, tablets, glasses, watches...)

- Give rewards based on the customer sharing more information about themselves, for example by interacting on social media

- Make offers based on geolocation and customer activity, or microsegment

- Reward customers with more personalized offers when they share their likes and dislikes

- Introduce a user-friendly platform to change settings that control contact information, preferences, and so on

Exhibit 4: The future of loyalty looks very different from the past

	15–20 YEARS AGO	TODAY	THE FUTURE
CORE PROPOSITION	• Points in return for data • Vouchers	• Points • Points plus bespoke offers and rewards (for example, UK's Waitrose offering loyalty card holders a free coffee on each visit)	• Wider variety of recognition methods • More emotional content
PURPOSE AND FOCUS	• Observing customer behavior from a distance • Capturing data and segmenting • Sending things infrequently	• Understanding behavior and feelings • Building a 1:1 relationship • Frequent, two-way contact	• More personal • More frequent • More directly beneficial to the individual
WHO IS INVOLVED	• Only a few or the largest retailers	• Many retailers of all sizes and sectors	• Almost every retailer
CUSTOMER INTERACTION	• Swiping card at till • Mailing paper statements	• Multiple ways to interact and capture data • Move to online (for example, email updates)	• Anywhere, anytime, and on any platform
NATURE OF ECOSYSTEM	• Invented and built largely in-house • Large one-stop-shop loyalty providers	• Established loyalty providers • Multiple specialist "component" providers • Lower entry or development costs	• Retailer-controlled third-party ecosystems • Flexible, continuously changing architecture

mindset allows retailers to maintain control of their loyalty program without having to develop internal capabilities in every single area of activity.

Be future-flexible, not future-proof

Given that customer expectations and technologies are changing rapidly, it is tempting to try to future-proof the loyalty ecosystem by thinking ahead and designing solutions for every eventuality. This approach is unlikely to address the as-yet unknown challenges and opportunities ahead. A far better approach is to design a future-flexible loyalty ecosystem, which allows for new components to be plugged in within a modular architecture.

Deliver excellence in customer analytics and iterative development

Long-term, competitive differentiation will come from better customer analytics – underpinning more innovative products and services for consumers – as well as improved decision making in the core business.

Linked to this, the fast and continuous development of customer services and apps is an important capability: Customers expect the products they use to improve rapidly.

A startup mindset

It's a simple fact that an effective loyalty program and the IT that enables it, require investment. Most retailers keep tight control on such expenditures and need clear business case justification for investments.

This mindset, though, can be an issue in the loyalty arena. For example, a new menu management app for a food retailer might cost $5 million to develop and launch.

Although supported by a strong hypothesis that it would improve customer loyalty and "stickiness" over time, the direct sales benefit of such an app might be difficult to quantify. Understandably, this makes it difficult to raise support for the large initial investment.

In contrast, by using a startup mindset the proposition around this app could look quite different. For example, by assigning a $50 value to each customer who downloads the app, you create a way of assessing the app's cost–benefit, which is much more tangible. Here, it would take 100,000 downloads to cover the app development costs (a small number relative to the millions who shop at large grocers), and would build a much more appealing business case.

We would encourage retailers to think about their loyalty products in this way and develop new KPIs to measure them accordingly. Doing so will enable them to make – and justify – the investments needed to make their loyalty programs successful.

CONCLUDING REMARKS

Today's customer loyalty leaders are moving away from transactional points-based schemes toward more varied, flexible customer engagement systems. (See Exhibit 4.) Technology is at the heart of this change. Retailers must ensure their programs are structured to support and enable the technological innovations necessary to deliver loyalty programs of the future. In the new world, many retailers will require new KPIs to assess the returns they make in their loyalty programs to make long-term investments possible.

For retailers who succeed, an improved loyalty program can deliver significantly better customer engagement and stickiness. It can also act as a defense against disruptive new entrants trying to get between retailers and their customers.

RISK MANAGEMENT

The food safety landscape

SECURING OUR FUTURE IN A CHANGING REGULATORY ENVIRONMENT

Chris Baker

Hilary Thesmar

The ongoing importance of food safety to our industry

In last year's edition of *Boardroom*, Oliver Wyman and FMI shared perspectives with the industry on how to create a culture of food safety within your organization. In some ways, not much has changed since then. Food safety remains the industry's number one priority. In other ways, however, everything has changed. The Food Safety Modernization Act (FSMA) has brought about some of the most significant regulatory changes to food safety that this country has seen in more than 70 years. FSMA is now going live and starting to impact all of our members in serious ways.

Revisiting some cautionary tales: Could this happen to you?

In our last edition, Oliver Wyman and FMI used two examples to illustrate the significance of food safety to two companies and the industry at large; our story was about peanuts and cantaloupes, drawing insights from the Peanut Corporation of America (PCA) and Jensen Farms food safety crises.

In 2016, unfortunately, there are new examples to illustrate the ongoing struggle with food safety - this time, tacos and ice cream.

Since July of 2015, **Chipotle** has been involved in six different food safety incidents in which more than more than 500 people fell ill. The culprits were threefold, varying by outbreak: E. coli, Salmonella, and noroviruses. Chipotle moved quickly to mitigate the crisis proactively: In December, Chipotle's CEO apologized on national TV, and Chipotle later hired a food safety expert to guide the company through the crisis. However, despite these actions, the crisis continues to plague the company even now.

Chipotle is now involved in multiple different lawsuits, which question Chipotle's response to the outbreak. The US Attorney's office of California served the company with a grand jury subpoena to investigate the August outbreak of norovirus in Simi Valley, Calif., that made 234 people ill. In late January, a class action lawsuit accusing Chipotle of a cover-up was filed in federal court.

Since the outbreaks were first uncovered, Chipotle's stock price has dropped by 36 percent, reaching a three-year low in January 2016. Additionally, all Chipotle stores faced mandated closures for three to four hours in February 2016 to address food safety concerns, resulting not only in a loss of revenue but in consumer confidence, too.

In another food retail segment, the response was quite different. Ice cream maker **Blue Bell's** food safety outbreak first became public in January 2015 when inspectors identified listeria germs in ice cream produced at the company's flagship Brenham, Texas, plant; subsequently, the company opted to "voluntarily" recall a few flavors. Eventually, listeria germs found in Blue Bell's ice cream were linked to 10 cases of listeriosis and three deaths that started as early as 2010, forcing the company to shut down production completely from April to August of 2015 and resulting in layoffs of 38 percent of Blue Bell's workforce.

Blue Bell has been widely criticized for failing to apologize fully and taking only limited actions to minimize commercial damage, only to find itself forced to expand the recall repeatedly. Already under criminal investigation by the Justice Department, Blue Bell announced in January 2016 that listeria might still be present in sections of the Brenham plant, and in September 2016 issued another recall of selected flavors due to listeria.

This last food safety outbreak has not been without consequences for the rest of the ice cream industry. Indeed, ice cream producers who were previously off the FDA's radar, as frozen food is assumed to be safer than fresh products, are now dealing with increasingly frequent listeria sampling and testing. The whole industry has been implicated by one organization that failed to meet the standards.

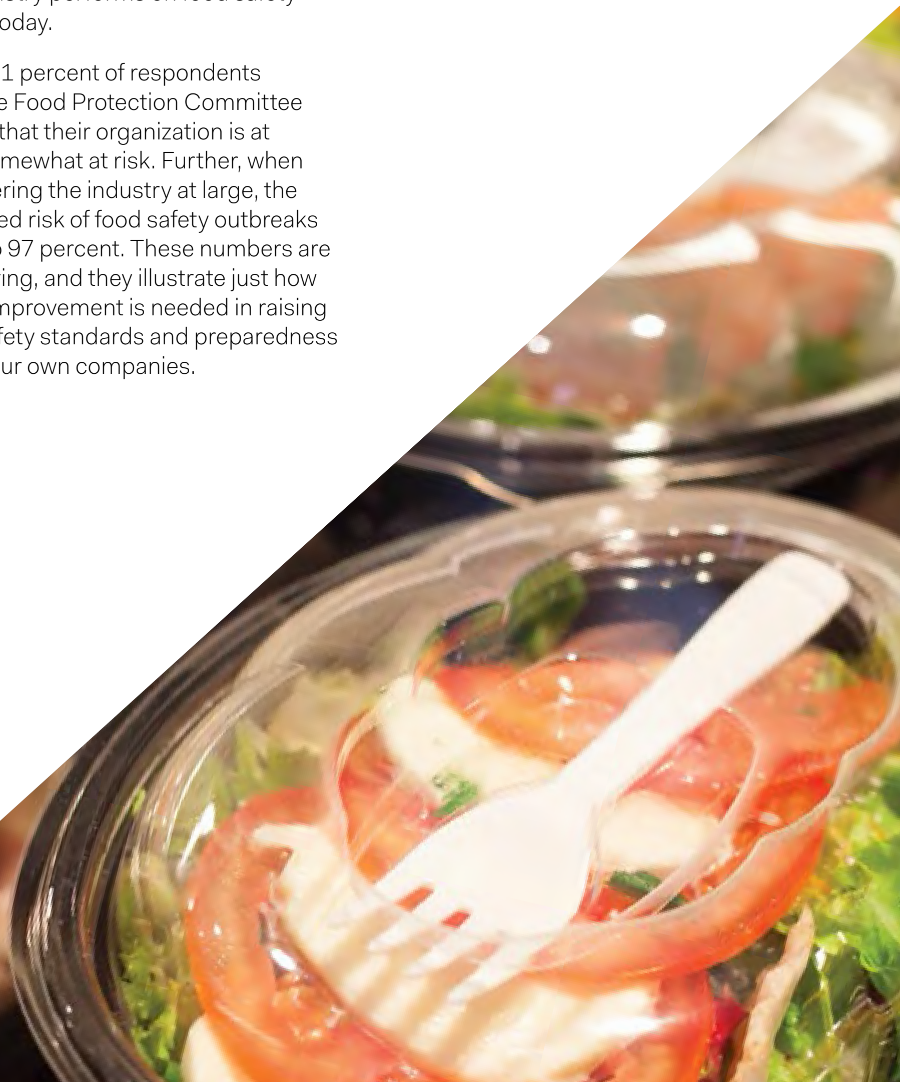
How prepared are retailers to address food safety?

The Blue Bell and Chipotle examples underscore how important food safety is to our industry and how high the stakes are to get it right. FMI members repeatedly say that food safety is our industry's number one priority, but until recently there weren't many metrics to evaluate industry performance. A poll of FMI's Food Protection Committee has provided greater insight into how these members believe their company and the industry performs on food safety issues today.

Some 81 percent of respondents from the Food Protection Committee believe that their organization is at least somewhat at risk. Further, when considering the industry at large, the perceived risk of food safety outbreaks soars to 97 percent. These numbers are staggering, and they illustrate just how much improvement is needed in raising food safety standards and preparedness within our own companies.

Within this context, we would like to address these key areas in this article:

- The importance of food safety to your organization
- What you need to know about FSMA
- Steps you should take to protect your organization
- What you should be doing for your organization on food safety
- FMI's commitment to your organization and the industry on food safety

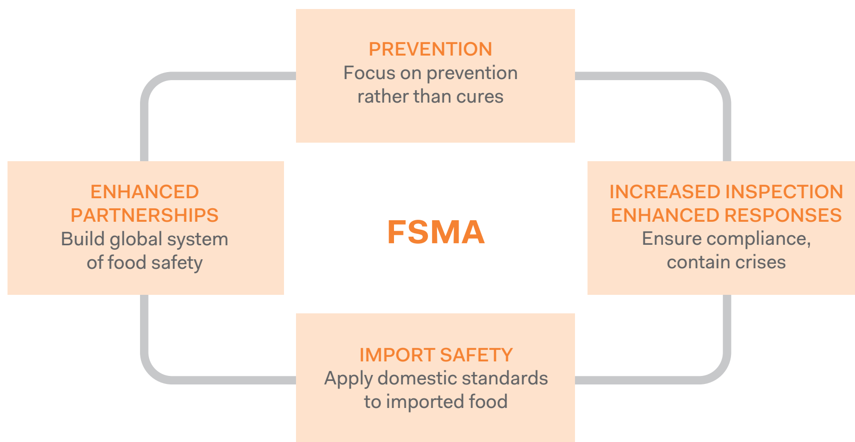


UNDERSTANDING THE FOOD SAFETY MODERNIZATION ACT (FSMA)

What you need to know

To address food safety appropriately, we need to start by understanding the Food Safety Modernization Act (FSMA), which aims to better protect public health by strengthening the food safety system on a global scale. Not only is the 2,000-plus page regulation daunting in length, it is the most sweeping reform of U.S. food safety laws in more than 70 years.

Exhibit 1: FSMA Objectives



Following a number of outbreaks and high-profile cases, FSMA has laid the groundwork for important consumer safeguards, doing so by placing greater responsibility on retailers, including increased corporate criminal liability. Addressing the new FSMA standards will require a culture change for retailers that process food or have food distribution centers.

FSMA enables the FDA to focus more on preventing food safety problems, instead of reacting to problems retrospectively. To achieve this end, the law provides the FDA with new enforcement authority and capabilities designed to achieve higher rates of compliance – and to better respond to and contain problems when they do occur. Finally, the law also gives the FDA important new tools to hold imported foods to the same standards as domestic ones.

In short, FSMA means four things for your firm:

1. **More responsibilities** for food retailers (especially for imported food)
2. **More stringent standards** to comply with
3. **More frequent and thorough inspections**
4. **More concrete legal consequences** in case of noncompliance (such as mandatory recalls, suspension of registration, and expanded administrative detention)

These key FSMA objectives translate into seven primary rules, four of which could directly impact retailers and wholesalers going forward:

- Preventive Controls
- Food Defense
- Sanitary Transportation
- Foreign Supplier Verification Program

How the rules impact you depends on how your business operates. Exhibit 2 illustrates how you may be affected by various FSMA regulations.

Importers take note: According to FSMA, an importer is either the US owner or consignee of an article of food that is being offered for import into the US, or, if there is no US owner or consignee of an article of food at the time of US entry, the importer is the US agent or representative of the foreign owner or consignee at the time of entry.

The regulation is fast approaching for retailers: Nearly all final FSMA regulations have been published and in September 2016, select regulations will become enforceable. Compliance deadlines will continue through fourth quarter of 2017, at which point all FSMA regulations will be live and impacting your business.

WHAT IS AN IMPORTER, ACCORDING TO FSMA?

The **US owner or consignee of an article of food that is being offered for import into the US.** If there is no US owner or consignee of an article of food at the time of US entry, the importer is the **US agent or representative of the foreign owner or consignee at the time of entry,** as confirmed in a signed statement of consent to serve as the importer under this subpart.

Exhibit 2: What FSMA regulations impact you as a retailer/wholesaler?

POTENTIAL FSMA REGULATION IMPACTING FMI MEMBERS			
PREVENTIVE CONTROLS*	FOOD DEFENSE	SANITARY TRANSPORTATION	FOREIGN SUPPLIER VERIFICATION PROGRAM
IF YOU HAVE A CENTRAL KITCHEN OR AN OFFSITE PRODUCTION SITE			
			IF YOU IMPORT
IF YOU HAVE A DISTRIBUTION CENTER			
		IF YOU HAVE A TRUCK FLEET	
IF YOU ONLY HAVE RETAIL STORES: NO CURRENT FSMA REGULATION			

*Includes both Animal and Human Food rules

WHAT SHOULD YOU DO FOR YOUR ORGANIZATION

Is your company prepared to address food safety requirements? FMI can help

With so many regulations hitting quickly, FMI would like to ensure that you are prepared to address FSMA requirements – and to build a strong culture of food safety within your organization.

Let's start with a simple five step checklist:

- **Understand** the regulation
- **Design** food safety plans
- **Train** qualified individuals
- **Keep** records organized
- **Hold** your suppliers to the same standard as yourself

FMI has resources to help you accomplish each of these objectives.

As outlined above, the first step is to make sure you understand the regulation. FSMA is extremely complex and, considering its length, you may have questions about how to be in compliance. There is no better place to start than with FMI's in-house regulatory counsel and food safety team. FMI has extensive resources and research, including webinars on final FSMA rules, factsheets, regulation flowcharts, and summaries of each provision, which are targeted to our members who may not be food safety experts, as well as those who are.

Once your team understands the core requirements, FMI has templates and best practice guides to help you convert that knowledge into effective implementation plans.

In addition, your team will need to be trained and equipped to handle FSMA regulations, as well as the broader requirements of a food safety program, including safe in-store food handling. FMI offers lead instructors and training to develop both your team and your head of training to effectively embed food safety best practices into your organizational culture. On a store-specific level, SafeMark can help your teams learn food safety fundamentals on the ground.

For government compliance, you must assure that your records are organized and clear; FSMA stresses the importance of extensive recordkeeping and gives the FDA unprecedented records access. Required records have a retention period of two years and must be presented within 24 hours once requested. ReposiTrak is FMI's recommended solution, which centrally locates all of your documents, allowing you first to access and manage stores' documentation and then to track and trace suspect products within minutes – rather than months.

Additionally, should you have a recall, Rapid Recall Express is available to help you inform your stakeholders quickly. This fillable standardized form applies industry expertise and best practices to recall and withdrawal notifications.

Exhibit 3: What should I do for my organization?

FOOD SAFETY TO-DO LIST	FMI RESOURCES, FSMA SPECIFIC	ADDITIONAL FMI FOOD SAFETY RESOURCES
1 UNDERSTAND THE REGULATION	Extensive resources available from FMI's food safety and government relations teams, as well as from the FMI Foundation, including: regulatory counsel, webinars, best practice guides, and template plans	
2 DESIGN FOOD SAFETY PLANS		
3 TRAIN QUALIFIED INDIVIDUALS	FMI lead instructors and training available	SafeMark
4 KEEP RECORDS ORGANIZED	ReposiTrak	Rapid Recall Express
5 HOLD SUPPLIERS TO THE SAME STANDARDS THAT YOU ADHERE TO	SQF	

Finally, you'll need to make sure you are holding your suppliers – and not just your own organization – to the highest standards. Any issue in the value chain can be problematic for you as a retailer, considering today's food safety rules. SQF is a key tool to ensure that your suppliers have complied with the new food safety requirements under FSMA. There are a few food safety schemes recognized by the Global Food Safety Initiative. Among them, SQF is perceived as the highest quality scheme with the most stringent requirements. Owned by FMI, it is also the only scheme based in the US and therefore the one most familiar with the new FSMA requirements. As a result, using the SQF certification program will help you reduce assessment inconsistencies and costs of multiple assessment standards.

There is plenty to address, but luckily FMI has resources to support each step of your to-do list. (See Exhibit 3.) And when you or other FMI members are in a pinch, FMI is available 24/7 to assist in times of crisis. We will stand by our members and make sure that crises are handled appropriately and swiftly to minimize the damage.

HOW CAN WE RAISE FOOD SAFETY STANDARDS INDUSTRYWIDE?

Each food safety outbreak has consequences on the food industry at large, and FMI believes there is an opportunity to reduce our risk of a food safety issue not only within individual organizations, but also on an industrywide level. FMI is continuing to expand its portfolio of solutions to include industrywide offerings that help us understand our strengths and weaknesses in this area. We have a common goal to build a culture of food safety in our organizations and across our industry.

Cyber-Risk Management

WHY HACKERS COULD CAUSE THE NEXT GLOBAL CRISIS

Leslie Chacko and Claus Herbolzheimer

In recent months, cyber terrorists have accessed the records of 21.5 million American public service employees, infiltrated the German parliament's network, and blocked a French national television broadcaster's 11 television channels for several hours. Last summer, a malware attack compromised the operations of more than 1,000 energy companies, giving hackers the ability to cripple wind turbines, gas pipelines, and power plants in 84 countries, including the United States, Spain, France, Italy, Germany, Turkey, and Poland at the click of a mouse.

For many years, the world has benefited from information technology advances that have improved the productivity of almost every industry – banking, healthcare, technology, retail, transportation, and energy. But we continue to underestimate the dark side of this equation: Greater dependence on information technology is resulting in an increasing and unprecedented number of cyberattacks.

More than 30 countries – including Germany, Italy, France, the United Kingdom, the United States, Japan, and Canada – have now rolled out cybersecurity strategies. Financial services regulators in the United Kingdom are working with top banks to improve their cyber-risk management. Germany is weighing a cybersecurity law that will require companies deemed critical to the nation's infrastructure to immediately report cyber incidents to the government. And on June 29, the Latvian Presidency of the Council of the European Union reached an understanding with the European Parliament on the main principles of what could become a unified cybersecurity directive for the European Union designed to protect critical infrastructure.

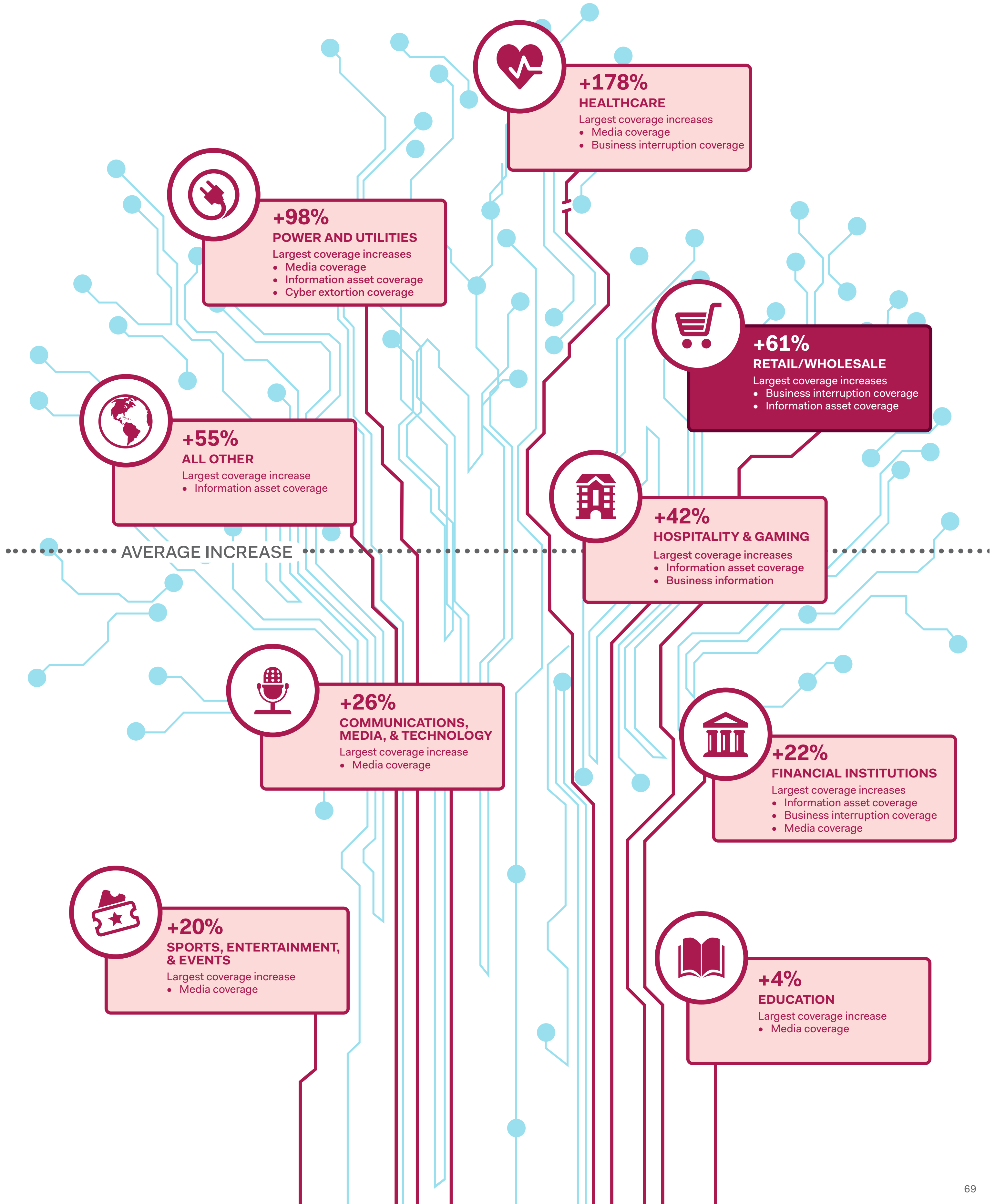
MOUNTING CYBER THREATS

But the searing reality is that both the growing strategic relevance of data and the potential impact of data breaches for companies are outpacing these initiatives. The most recent Global Risks report by the World Economic Forum and its partners (including our firm Oliver Wyman) ranks cyberattacks as one of the top 10 risks most likely to cause a global crisis. The World Energy Council, a forum for energy ministers and utilities, considers cyber threats as one of the top five risks to the world's energy infrastructure.

That's because the industrial control systems that support power utilities, oil and gas companies, and refiners are more exposed to external threats now that they increasingly rely on digital data networks. Digital blockchain collective ledgers of Bitcoin transactions and other new technologies are rapidly multiplying the potential points of intrusion in global banking systems. Manufacturing and machinery industries, too, are entering a new world of cyber product liability and data protection, as they share production facilities and introduce more devices produced elsewhere into their own products. In response, companies with revenues of more than $1 billion have increased their cyber insurance limits worldwide by 42 percent on average since 2012, according to Marsh Global Analytics estimates. Marsh, like Oliver Wyman, is a division of Marsh & McLennan Companies. Over the same time period, healthcare companies have bought 178 percent more cyber insurance and power, and utilities firms have expanded their coverage by 98 percent. (See Exhibit 1.)

Former director of the United States' National Security Agency, General Keith Alexander, has commented

Exhibit 1: Rising Cyber Crisis
Companies are spending more on cyber-risk insurance to protect themselves from an increasing number of cyber attacks



that countries need something like an integrated air-defense system for the energy sector to keep up with mounting cyber risks. The same is true for other industries. But recent clashes between the White House and Republicans over the establishment of a new Cyber Threat Intelligence Integration Center demonstrate that marshalling the resources required to protect companies more broadly will take time.

TREATING CYBER RISKS AS OPERATIONAL RISKS

So what else can be done? Above all, companies must treat cyber risks as permanent risks to their entire enterprise and not as isolated "information technology" events. Unlike strategic, operational, and financial risks, cyber risks are often mistakenly treated as lower priority and relegated to the information technology and communications departments.

As a result, the true cyber risk exposure of companies often goes unnoticed by top management and boards of directors, exposing companies to greater risk. Cyber risks are rarely quantified or linked with their potential impact on companies' financials, making it almost impossible to conduct cost-benefit analyses or make strategic choices. Information-technology departments introduce new technical solutions with minimal top-level direction and without any comprehensive understanding of the risk appetite of the organization. Companies adopt case-by-case reactive measures instead of a balanced portfolio of initiatives that involve their entire organization and align with their overall appetite for risk.

Companies, instead, should set a target level of cybersecurity for critical networks based on their importance to the firm's overall appetite for risk, much as they would with any other operational risk. This should be done quantitatively, perhaps in the form of financial exposure a company is willing to accept.

The company should then ensure that controls and processes address gaps that are accordingly prioritized, starting with those that are mission critical. For example, the potential economic loss associated with construction plans for a new, innovative product may be significantly higher than that of an older production line that is about to be retired.

MAKING CYBER-RISK MANAGEMENT SECOND NATURE

Top managers also need to develop a cyber-risk management culture to the point that it becomes second nature. Cyber-risk management goals, such as the protection of important customer data or the prevention of unauthorized access to mission-critical systems, should be baked into performance targets, incentives, regular reporting, and key executive discussions. When executives evaluate their tolerance for breaches that could impact their company's reputation or violate health, safety, and environmental standards, cyber incidents involving their industrial control systems should be front and center.

Otherwise, like other slow-building risks that people take for granted, ignoring the threat of increasing cyberattacks could drop unprepared companies into the middle of a full-blown crisis. Consider: 90 percent of large businesses in the United Kingdom suffered a cybersecurity breach during the past year and the average cost of breaches has nearly doubled since 2014, according to a recent report produced by the United Kingdom Department for Business, Energy and Industrial Strategy. This isn't a threat that is going away. Companies need to do the math and truly make cybersecurity a top priority.

14%

THE PERCENTAGE OF ORGANIZATIONS WHO HAVE NEVER BRIEFED THEIR BOARD ON CYBER SECURITY RISKS

90%

THE PERCENTAGE OF LARGE UK ORGANIZATIONS EXPERIENCING A SECURITY BREACH IN 2015

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