



# Creating Competitive Advantage With Location-Aware Processes

## Benchmark Report

By Brian Kilcourse and Paula Rosenblum, Managing Partners

July 2021

Sponsored By:



# Executive Summary

## Key Findings

To be successful in today's fast-changing world, retailers need to be able to "see" what's happening in and around their businesses in real time. Such vision enables them to react quickly to changes that affect their business outcomes, and for several years now, we've been researching the location intelligence tools that hold the key to bringing this vision to life.

So far, most retailers see the value of using location intelligence to find alternative sources to help them to manage supply chain disruptions, to optimize the efficiency and profitability of new customer order fulfillment options, and to ensure that that safety - both of customers and employees - is addressed proactively.

But after a year like 2020 – a year like no other - what now? How far have retailers progressed in their efforts to infuse operation processes with location intelligence in 2021? What technologies have retailers settled on to make that happen, and what stands in the way? Which operational processes have the most to gain from geo-location awareness? And is location intelligence creating a new competitive wedge for winning retailers?

We conducted this survey to find out. The following are some key findings:

- As it relates to **Business Challenges** (page 7), retailers face entirely new issues at they relate to employee health and safety. Nearly one in two calls it their biggest obstacle as they exit the pandemic, and while that is encouraging to hear, an unsettling trend has also emerged: retailers exhibit a dangerously high level of unjustified confidence in the current supply chain's ability to meet demand going forward. Certain lessons from the past few months seem to have stuck, while others appear to have already been forgotten.
- Retailers perceive the biggest **Opportunities** ahead as those that leverage the massive amount of data they've been collecting about customer behaviors for years and years now. However, their ability to support these efforts with technology – and expertise – lags sorely. We examine this data beginning on page 11.
- With 2020 (and hopefully much of the pandemic itself) in the rearview mirror, retailers are ready to turn their attention towards how to realign their organizations. As a result, retailers express a concern about their IT organizations' ability to design the processes and systems to implement location analytics, and also that line-of-business organizations are too slow to react to new insights even when they become available. The analysis of these **Organizational Inhibitors** starts on page 17.
- And lastly, when we look at the **Technology Enablers** (page 21), we find that there are three types of analysis that are almost equally important to retailers: *supply chain network design*, *delivery optimization* and *geo-fencing*. Each receives different prioritization, investment and budgetary plans based on what products a retailer sells, and these vary wildly from Fashion to General Merchandise to Fast Moving Consumer Goods.

As always, we always conclude this report with some baseline suggestions for how retailers of all sizes and performance levels should proceed, and we certainly hope you find it useful,

Paula Rosenblum and Brian Kilcourse, Managing Partners and report authors

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# Research Overview

It is difficult to overstate how tumultuous the retail industry has been since the beginning of 2020. What may have started as a “normal” year was quickly knocked off course by a global pandemic. Add to that an increasing number of climate-related catastrophes, a tense political environment and multiple instances of social unrest across the world, and the typical factors of determining what to sell, where and how to sell it become *far* more complicated than they were even a short time ago.

Furthermore, the disruption is not over yet – nor may it ever truly be. Vaccinations seem to be taming COVID-19 in some parts of the world, while it rages on in others. Much of this is beyond the scope of this report, but it’s impossible to ignore the impact of these events on an economy that is driven by consumers – and the changes they have brought to the entire ecosystem that serves them.

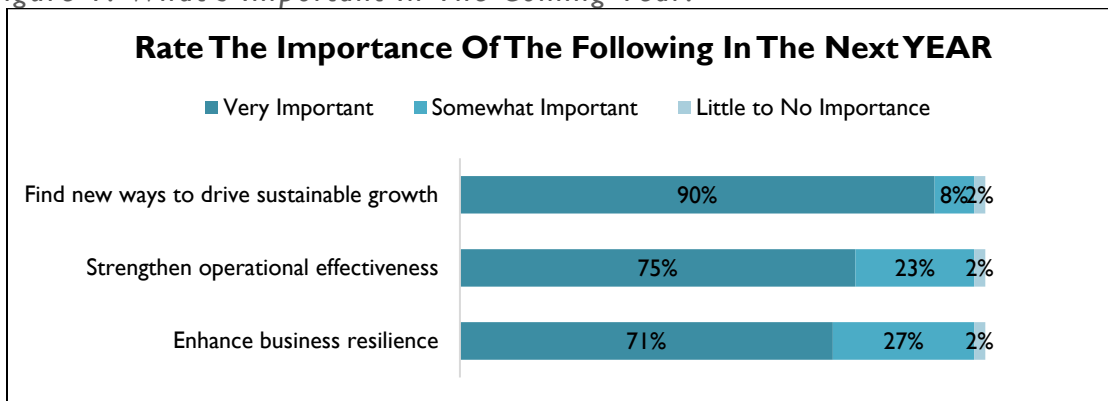
Along with, or as a byproduct of the disruptions of the year, *the US population is moving from cities to suburban and rural settings* (if they can find houses to buy). *Entire companies are moving from high tax states like California and New York to lower-tax states like [Florida, Texas, and Idaho](#).* **These sudden shifts, and others we’ll highlight, underscore the importance of location analytics for efficiency, resiliency and business success.** For this study, we queried retailers and wholesalers to see if they understand that impact, and where they plan to go from here.

## Things Have Changed

A world that has mostly been locked down for fourteen to sixteen months is suddenly being let loose. Many industrialized nations have vaccinated their most vulnerable citizens, and while the potential for another virus surge remains a possibility and some countries are still suffering terribly, overall, the global economy seems to be doing reasonably well. We wish we could say the same about the supply chain. It remains creaky at best. Even the distribution of vaccines is proving problematic, let alone that of consumer goods.

It leads one to ponder: what’s going to happen next? Before we look at thoughts about the longer term, let’s take a look at what our retail and wholesale respondents believe will happen in the coming year (Figure 1).

Figure 1: What’s Important In The Coming Year?

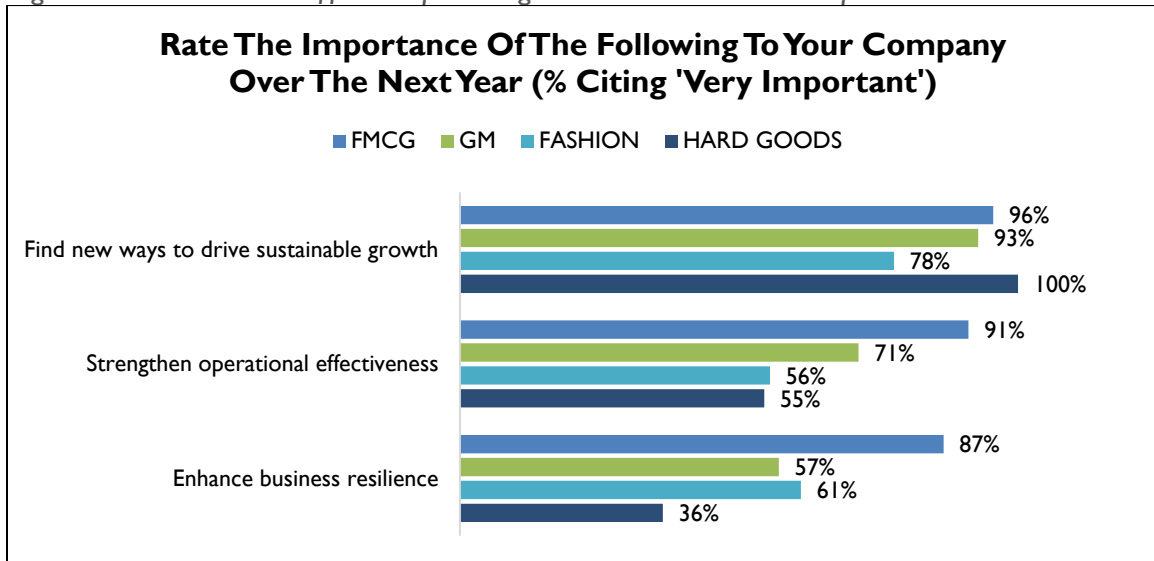


Source: RSR Research, July 2021

The notion of sustainable growth is most avidly expressed by those product segments that were active throughout the pandemic: those selling Fast Moving Consumer Goods (FMCG), General Merchandise, and Hard Goods. Those who sell these categories experienced stunning growth during the pandemic and don't want to let those gains slip through their fingers.

Businesses that were most successful with their top lines are now obsessed over operational effectiveness in this new world. Those selling Fast Moving Consumer Goods (FMCG), in particular, focus both on effectiveness and improving their business resilience in a world where things just aren't always predictable. Think about it: could anyone have predicted toilet paper shortages in January 2020? Again, we return to the concept of a very shaky supply chain. Figure 2 shows the differing opinions of those selling various categories of merchandise.

Figure 2: Priorities Differ Depending On Pandemic-era Experiences



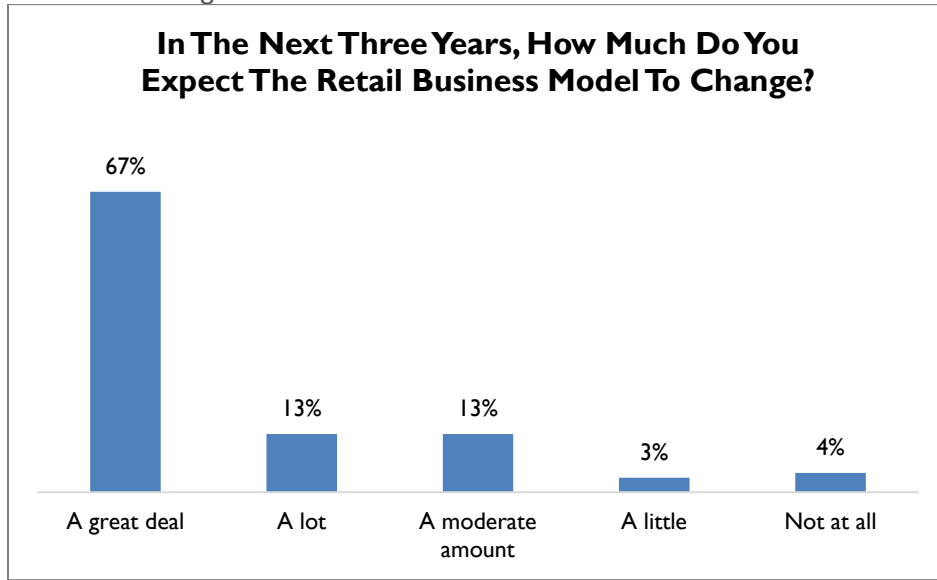
Source: RSR Research, July 2021

Of course, as Bob Dylan famously observed, “When you ain’t got nothin’, you’ve got nothin’ to lose,” and fashion retailers weren’t active enough to have the same level of concern today. We’ll see shortly that this industry segment is more likely to believe things will “go back to normal.” Are they correct?

### What Is The Longer-term Outlook?

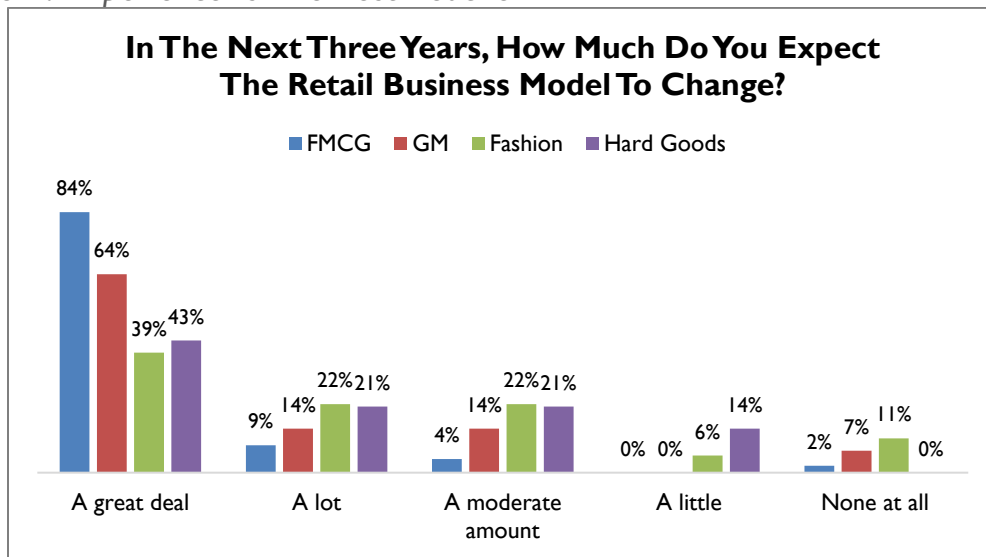
It’s apparent from our survey respondents that the changes 2020 wrought are not a “one and done” kind of thing. Those who reaped the top-line benefits of consumers mostly stuck in their homes or performing socially-distanced activities are hoping they can bring the types of incremental profits to their own that retailers like Target, Best Buy and Walmart experienced. Others just aren’t as sure big changes will continue to come. Looking at Figure 3, we can see that two-thirds of respondents believe there’s a “great deal” of change yet to come in the next three years. But if we look at Figure 4, just below Figure 3, we can see some dramatic differences based on the products sold.

Figure 3: More Changes To Come!



Source: RSR Research, July 2021

Figure 4: Experience Is The Best Teacher



Source: RSR Research, July 2021

Here's where we can see the voice of pandemic era experience speaking. Those selling Fast Moving Consumer Goods, General Merchandise and Hard Goods expect their businesses to continue being disrupted. Surprisingly, at first blush, fashion retailers appear the least likely to see widespread change on the horizon, as only 39% expect "a great deal" of change in the next three years. However, once we look at the follow-up data, (combining "a lot" and "a moderate amount"), 44% anticipate their business models will be disrupted. In short: no one will be spared – change is coming, and retailers are fully aware.

With this as a general backdrop, we opted to ask some specifics. The results were quite surprising.

## New Business Models In Ascendancy

Again, experience seems to have taught some real lessons for retailers who continued to do business during the worst of 2020. We can see this below.

Business Models Your Company Will Continue Or Start To Adopt As A Result Of The Pandemic (select all that apply)	FMCG	GM	FASHION	HARD GOODS
New store designs	76%	50%	22%	50%
Home delivery	67%	71%	67%	57%
Local distribution facilities	64%	36%	44%	21%
Curbside pick-up	47%	79%	67%	71%
Drive-through	40%	50%	22%	14%
Pop-up stores	11%	36%	33%	29%
Facilities for fulfillment only	7%	29%	28%	14%

Source: RSR Research, July 2021

It's interesting that new store designs remain an imperative for all segments *except* the fashion industry - so far. Along with localized assortments, retailers and their suppliers in all other segments expect new store designs to proliferate and be supported and serviced by localized distribution facilities.

Surprisingly, while the fashion industry doesn't think store designs must change, it does recognize that curbside pick-up will be an important part of operations going forward and home delivery will continue to skyrocket. One wonders how operators expect to keep up with the speed and efficiency of other retailers without localized, strategically-placed distribution facilities. We also wonder why they don't see a need to find more efficient ways of getting goods ready for either home delivery or curbside pickup. Yes, they have more margin to "burn" on inefficient processes, but they may not have existing store labor to perform these inefficient tasks. ***We strongly advise a re-think of what a good store design that accommodates these new consumer business models should look like.*** Mall-based stores must figure out where consumer-friendly pick-up points can be placed. Likely this is a collaborative effort between the mall operator and its retail tenants, and one that should be baked into any new leases a retailer signs in any mall, whether it is considered an A, B or C mall customer-wise.

## Retail Winners vs. Product Segment

As we said at the start of this report, 2020 was a true singularity. ***As a result, we have opted to focus far more on product type than we did on comparable sales*** (which is our usual primary metric).

There was, quite simply, nothing in memory comparable to 2020, and we don't believe 2021 will be particularly comparable to any other year either. Pent-up demand, and previously pent-up people are bound to drive sales in stores this year. Will this remain the same in 2022? We believe in general our retail respondents are correct: new business models will continue to proliferate as consumers remember the convenience of "just driving up" to pick up their purchases or having them delivered direct to their door.

Adding to the complexity of the singularity of 2020 is the factor of *migration*. Consumers aren't physically where they were in 2019. The housing market in the US in particular, is booming. To the



surprise of no one, “tiny houses” generally just aren’t suitable for raising a family, and so Millennials are making late, but consequential home purchases. And given changes in the nature of work - where “work from home” has become an expectation for a large part of the work force - we’re seeing a population shift to better climate, lower-tax states. This extends to the corporations they work for. Where people and companies go, consumer goods must follow, and it will take constant vigilance to understand the implications to the industry. It brings new meaning to the term “localization.”

In other words, while we did ask about comparable sales in 2019, and will show one set of differences later in the report, for the most part, this report is about differences across retail verticals.

Since they will appear at least once in this report, it is worth re-iterating the definition of “Retail Winners” in RSR’s world. Assuming industry average comparable store/channel sales growth of **4.5 percent in 2019**, we define those with sales above this hurdle as “*Winners*,” those at this sales growth rate as “average,” and those below this sales growth rate as “*laggards*” or “also-rans.” We know that Retail Winners do have different thought processes from their under-performing peers. A look at Walmart’s earnings increases (for example) show how a set of technology decision-making processes can help a company be far more agile than it would otherwise be. This is a true hallmark of Retail Winners.

## Methodology

RSR uses its own model, called The BOOT Methodology<sup>®</sup> to analyze Retail Industry issues. We build this model with our survey instruments. See [Appendix A](#) for a full explanation.

The BOOT helps us better understand the behavioral and technological differences that drive sustainable sales improvements and successful execution of brand vision.

## Survey Respondent Characteristics

RSR conducted an online survey from April-May 2021 and received answers from 99 qualified retail respondents. Respondent demographics are as follows:

- **2019 Revenue (US\$ Equivalent)**

Less than \$250 million	12%
\$250 million - \$499 million	6%
\$500 million - \$999 million	22%
\$1Billion to \$5 Billion	16%
Over \$5 Billion	44%
  
- **Products Driving The Majority Of Revenue:**

Fast Moving Consumer Goods (C-store, Food & Drug, Health Care Products)	48%
Apparel, Footwear and Accessories (Luxury, Mens & Womens, Kids, Personal Care)	19%
Hard Goods (CE, Hard Goods, Home Décor, Improvement, Automotive)	13%
General Merchandise (Discount, Mass Merchant, Department Store)	15%
Hospitality, Retail Services, Entertainment, Other	5%

- **Headquarters/Retail Presence:**

	<u>HQ</u>	<u>Retail Presence</u>
USA	97%	97%
Canada	0%	25%
Latin America	0%	42%
UK	0%	13%
Europe	0%	16%
Middle East	2%	6%
Africa	0%	3%
Asia/Pacific	1%	9%

- **Year-Over-Year Sales Growth Rates** (assume average growth of **4.5% in 2019**):

Worse than average	2%
Average	51%
Better than average (“Retail Winners”)	47%

- **Respondents Position Within The Organization**

Executive (C-level)	70%
Senior Management (SVP)	11%
Middle Management (VP / Director)	18%
Line Manager	0%
Individual Contributor and Other	1%

- **Functional Area of Responsibility**

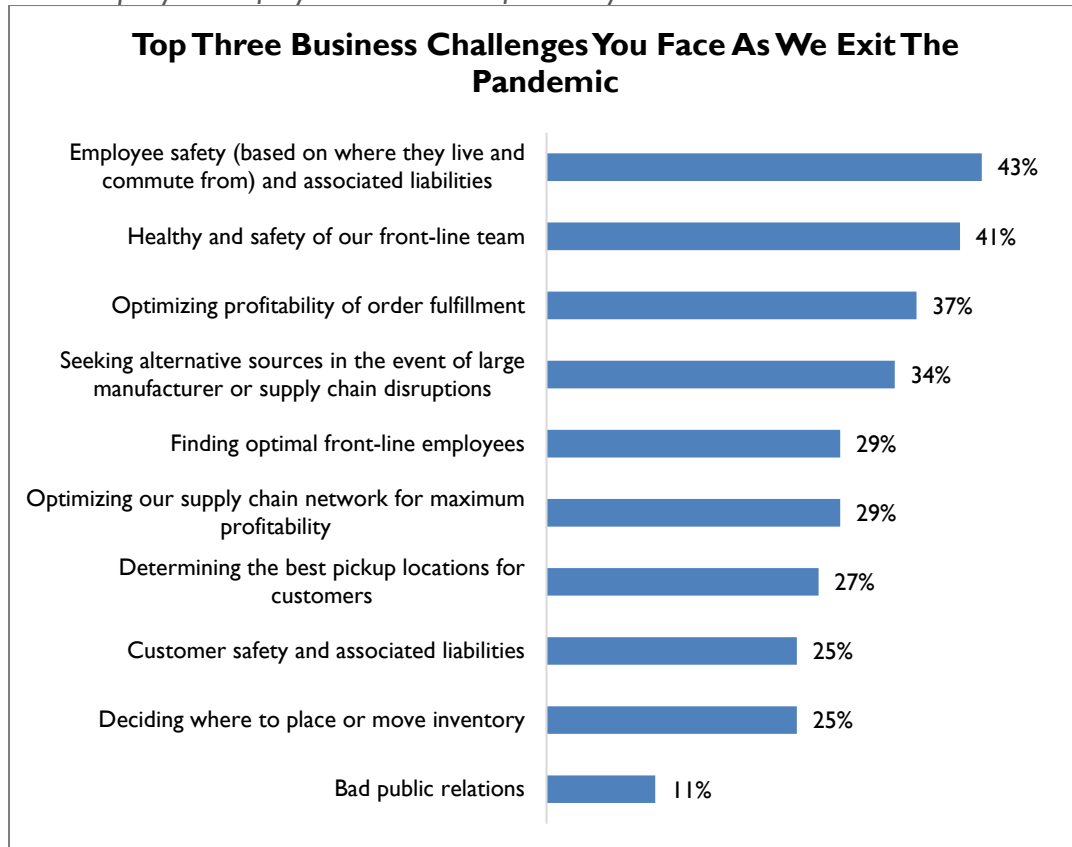
Executive Management	63%
Customer Experience	2%
eCommerce/Direct Operations	4%
Finance, Legal & HR	2%
Information Technology	20%
Loss Prevention	1%
Merchandising	1%
Store Operations	3%
Real Estate / Construction	2%
Procurement, Supply Chain and Other	2%

# Business Challenges

## Employee Health Matters. Profitability And Agility Follow Close Behind

In every survey RSR conducts, we find employees at the center of - at least - the in-store experience. There is ample data in previous studies that tell us Retail Winners walk the walk in caring for their employees. Now, as we can see from Figure 5, that care is taking some very specific forms: the health and safety of ALL employees.

Figure 5: Employee Safety Matters. Profitability Does Too



Source: RSR Research, July 2021

As of this writing, there are debates among companies about requiring vaccinations for employees. And from state to state (and store to store) mask mandates for customers vary wildly. Unfortunately, just the mere act of asking a customer to put on a mask has created violent situations for employees in our hyper-politicized environment, and as a result, many are leaving the decision up to shoppers.

Depending on consumer sentiment in a particular location, the risk to employees may be higher or lower. We have yet to find out if putting a store or distribution center employee at risk creates a financial liability for the company. It is, however, really encouraging to see respondents far less concerned about “bad PR” than the actual state of their employees’ welfare.

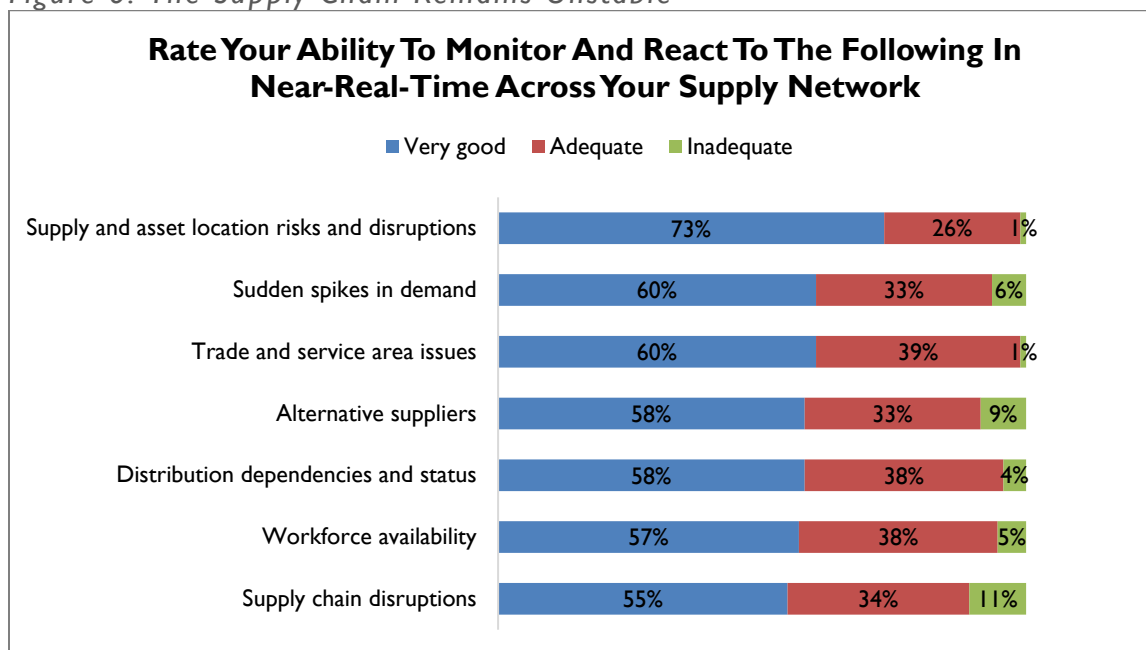
We can also expect the number of respondents citing “finding optimal front-line employees” to rise in specific segments. The restaurant industry in particular, which is notoriously low-paying with

employees depending on tips for their compensation, is having a hard time getting wait staff. It's a lot of risk, with not a lot of reward. And it's a challenge for restaurateurs.

## The Supply Chain

Early in the pandemic, [RSR highlighted the fact](#) that even our domestic supply chain was a mess. It remains, frankly, unstable at best. Yet despite persistent out-of-stocks and unpredictable delivery windows, respondents seem to believe they can generally cope (Figure 6). **This is nothing short of fantasy.**

Figure 6: The Supply Chain Remains Unstable



Source: RSR Research, July 2021

93% of respondents believe that their ability to respond to sudden spikes in demand are at least adequate. The millions who hunted for toilet paper for weeks or are still paying double and triple original prices for sporting goods equipment like kayaks, bicycles and barbells would disagree vehemently.

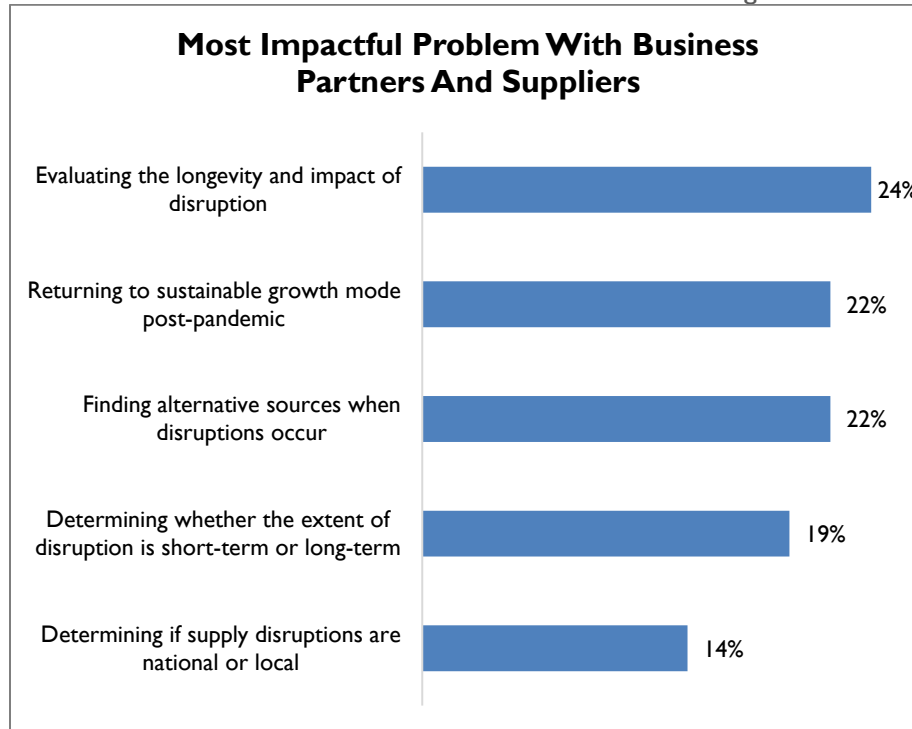
Why does this matter? Because mitigating risks can be accomplished by finding sources in location that remain less affected by the pandemic. Further, finding the fastest way to get product from alternate sources involves analytics. What's happening along the route? What routes are carriers willing to take?

**We strongly recommend that those in the retail ecosystem take a harder, more realistic look at the amount of money they are leaving on the table.** FMCG retailers, in particular, believe they can adapt and adjust. Fully 91% rated themselves “very good” at their ability to deal with supply and asset location risks and disruptions. No doubt, they believe this (as we said earlier) because their supply chains are primarily domestic - yet they can't do anything about product that simply doesn't exist because the manufacturer didn't make it. Collaboration has been almost nil, and consumers have suffered for it.

## Problems With Business Partners And Suppliers

We attempted to address the lack of collaboration by asking respondents the single most impactful problem their company is having with business partners and suppliers. As we can see from Figure 7, answers are all over the map, with no one issue predominating.

Figure 7: No Real Consensus Around Collaboration Challenges



Source: RSR Research, July 2021

The picture changes quite a bit when we examine respondent challenges based on the products they sell.

## Different Segments Show The Illusion In The Aggregate

As we can see below, in Figure 8, all those tidy averages (not a single issue was called out by more than a quarter of respondents) dissipate when we delve into product details.

Each issue revolves around communication, but each has a different twist.

- Those selling **General Merchandise** need to know if disruptions are local or national. This should be a lot simpler to ascertain and communicate than they are experiencing. Since most of these retailers are very large, the answer matters – a LOT.
- **Fashion** by its nature is short life-cycle product. It also, paradoxically, tends to have the longest and slowest supply chain. It's therefore not terribly surprising that this segment's biggest concern is determining the duration of any disruption. After all, by the time the disruption is over, what was "hot" may have fallen out of style.
- Both **General Merchandise** and **Hard Goods** retailers are most concerned about finding alternative sources when disruptions occur. This is easy to say, and theoretically, particularly with General Merchandise, alternative sources should be easy to find. In

practice, we've been finding inertia takes over, and those retailers just wait for the disruption to end.

- Those selling **Fast Moving Consumer Goods** wonder and worry: can they sustain the growth they experienced during the pandemic? As the hospitality industry, like restaurants, in particular, reopens, many fear the gains they made during the pandemic will be lost.

*Figure 8: Significant Challenges Perceived Depending On Product*

The Most Impactful Problem You Anticipate Having With Your Business Partners And Suppliers	FMCG	GM	Fashion	Hard Goods
Determining if supply disruptions are national or local	11%	36%	11%	14%
Determining whether the extent of disruption is short-term or long-term	20%	7%	33%	14%
Evaluating the longevity and impact of disruption	22%	21%	28%	29%
Finding alternative sources when disruptions occur	16%	29%	11%	29%
Returning to sustainable growth mode post-pandemic	31%	7%	17%	14%

*Source: RSR Research, July 2021*

These challenges are not insignificant and will likely be blurred and fall into the background in the first blush of consumers “hitting the stores” and children going back to school. We expect Holiday 2021 to be explosive across all segments. The big question retailers ask themselves is, “Is this a permanent shift, or is it just a rebound romance?”

The way to create more permanence is not a mystery, and we’ll delve into some of them in the following sections: the Opportunities location analytics can bring to a post-pandemic world.

# Opportunities

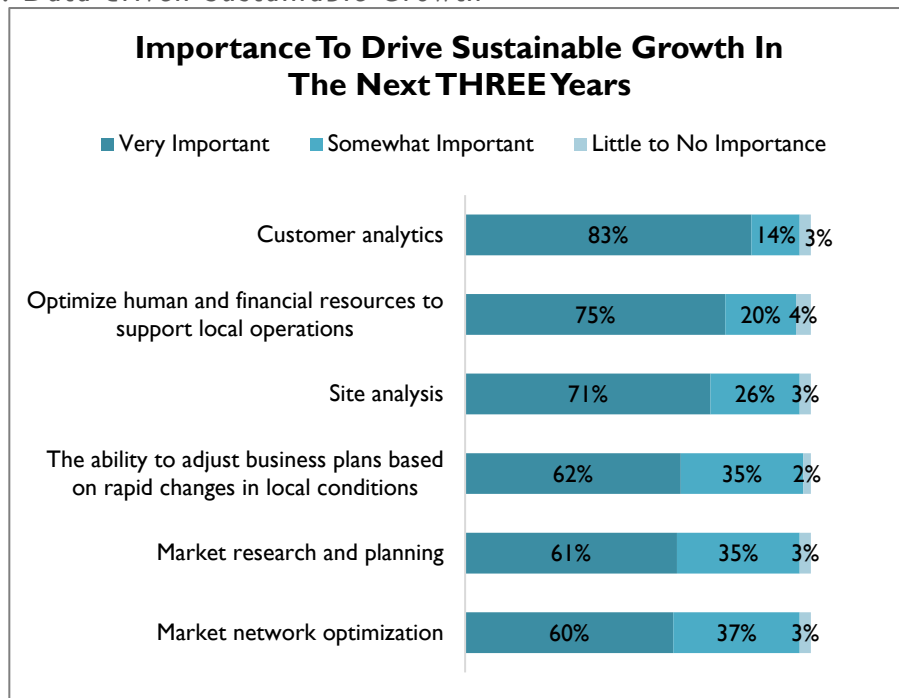
## The Holy Trinity Of Effectiveness, Resilience, And Sustainable Growth

Figure 1 showed us just how important retailers believe operational effectiveness, business resilience and sustainable growth are to their futures. What are the opportunities they see to make these a reality?

### Growth: A Traditional Concern Becomes An Immediacy

“Know thy customer” is clearly today’s Holy Grail. Customer analytics are at the top of the list to help generate relevancy, excitement and repeat business. All other elements presented are also important and beg the question: how can you do these things without a strong location analytics element? After all, consumer analytics must include the demographics of any given trading area. Our respondents’ opinions can be seen in Figure 9.

Figure 9: Data-driven Sustainable Growth



Source: RSR Research, July 2021

Again, the devil is in the details, and when we look at these responses by product segment, we can see just how much those selling Fast Moving Consumer Goods have gotten technology religion.

RSR has consistently and historically called out this segment for their lack of use of technology, and pennywise/pound-foolish technology decision-making. Clearly things have changed (see below).

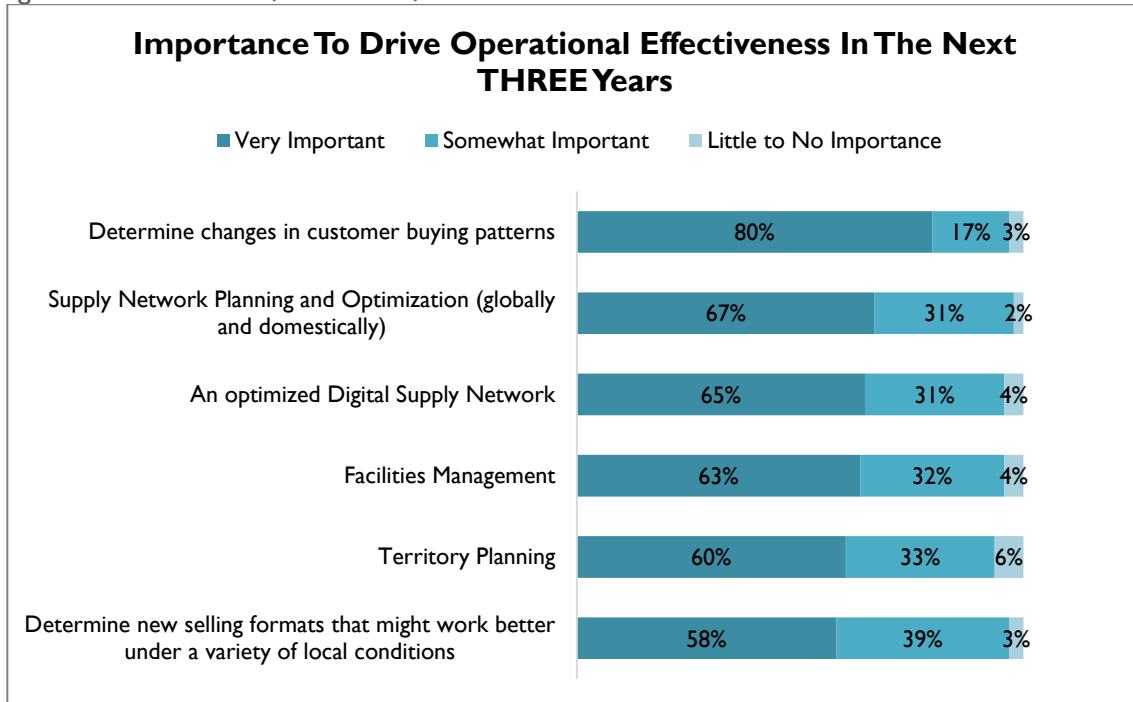
Importance Of The Following To Drive SUSTAINABLE GROWTH In The Next 3 Years	FMCG	GM	FASHION	HARD GOODS
Customer analytics	93%	64%	72%	82%
Optimize human and financial resources to support local operations	91%	64%	61%	55%
Market network optimization	78%	57%	39%	45%
Site analysis	76%	64%	67%	82%
The ability to adjust business plans based on rapid changes in local conditions	73%	36%	56%	64%
Market research and planning	62%	71%	44%	64%

Source: RSR Research, July 2021

## Operational Effectiveness: Eking A Bottom Line Out Of Low Margin Merchandise

Yes, the Fast Moving Consumer Goods business exploded during the pandemic. Still, not all those retailers gained the bottom-line improvements they might have enjoyed. Other segments, whether enjoying a pandemic-era feast or struggling through a temporary famine still need to improve their efficiency going forward. Recognizing this, we can see that while the customer takes center stage (Figure 10), things the customer may never see - like a more efficient supply chain and territory planning - are considered very important in pushing those dollars to the bottom-line.

Figure 10: Location, Location, Location



Source: RSR Research, July 2021



Again, the detail data tells the story of FMCG’s newfound recognition of the importance of data, particularly *location* data.

Very Important To STRENGTHEN OPERATIONAL EFFECTIVENESS Over The Next 3 Years	FMCG	GM	FASHION	HARD GOODS
Determine changes in customer buying patterns	96%	71%	67%	55%
Facilities Management	84%	43%	44%	36%
Supply Network Planning and Optimization (globally and domestically)	82%	71%	33%	64%
Territory Planning	78%	36%	44%	45%
An optimized Digital Supply Network	69%	86%	56%	45%
Determine new selling formats that might work better under a variety of local conditions	67%	43%	50%	55%

Source: RSR Research, July 2021

When Omnichannel selling remained a backwater in the world of FMCG, the segment was able to rest in their hyper-efficient, Just-in-Time supply chain, and then outsource home delivery as necessary to companies like Instacart. Those days are gone. As buying patterns change, localization of the assortment and location of customers, facilities and stores become ever more important.

When planning a territory, it’s important to know the local propensity for different selling channels and traffic patterns from home, to work, and to stores. This is a data-driven analysis, and FMCG is clearly in need of better tools (as we’ll see later in the Technology Enablers section of this report).

### **Business Resilience: Understanding Where Risks Lie Is Critical**

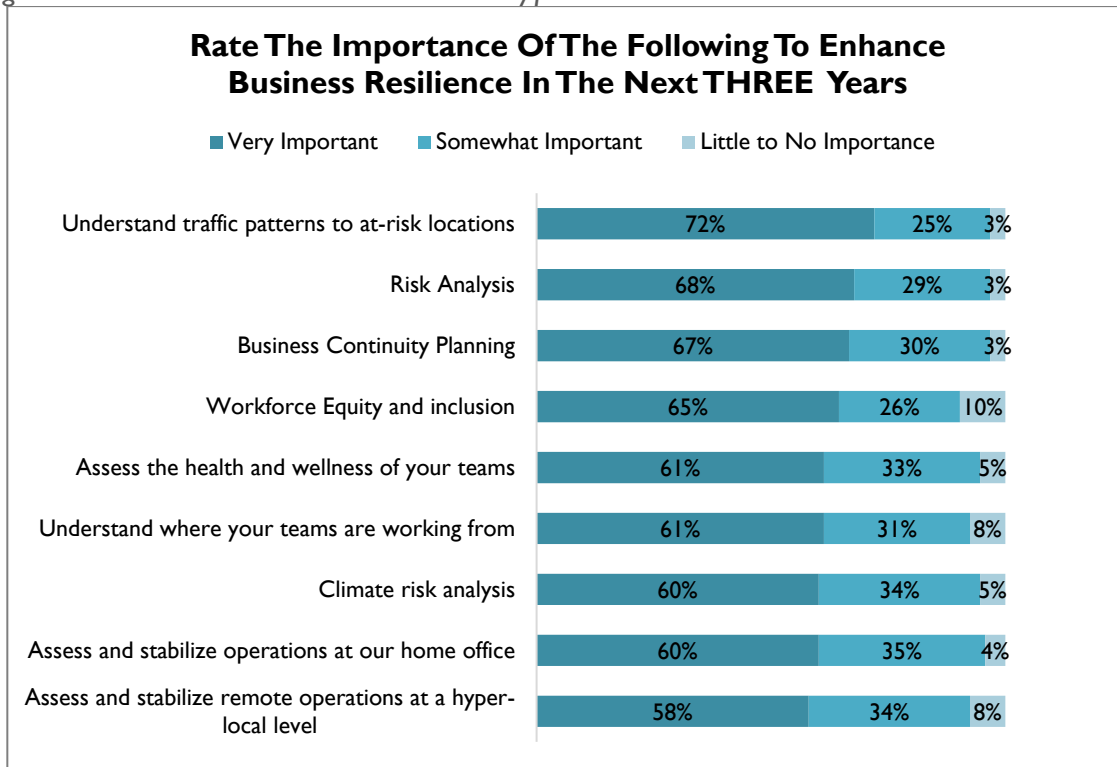
The most important key to business resilience is understanding traffic patterns to at-risk locations.

Any demand forecast for a particular area in current times is tenuous and often subject to sudden new local considerations. In fact, RSR generally believes that any kind of long-term demand forecast in 2021 or even 2022 will be jittery – human behavior is not going to follow long-term predictable patterns, and we have no idea whether climate events will be a factor. Location dynamics seem to be much more critical to success.

We are quite relieved to see that 97% of respondents found Business Continuity Planning rated at least somewhat important. We know that over the long term, more workers will be working from home, at the very least part of the time. But what happens in the event of catastrophe? What of the in-store or distribution center workers?

As you can see from Figure 11, below, location analytics are critical to establishing business resilience in an inter-connected, yet hyper-localized world.

Figure 11: Business Resilience In A Hyper-localized World



Source: RSR Research, July 2021

## What Can Location Analytics Do For You?

Given that location intelligence is mentioned in virtually every aspect of the “holy trinity,” it’s worthwhile to take a general look at the opportunities location analytics bring to the retail industry.

The most interesting way to view this data is when we look at it across product segments (Figure 12, below).

There is consensus around the need for inventory balance. This is unsurprising, as it’s something Wall Street loves to see regardless of segment.

We remain eternally baffled at FMCG’s unwillingness and inability to use the market basket/CRM data they have been collecting for years. This may well be a function of not having the personnel on staff to make sense of the intel that’s been gathered. Data scientists are, indeed, an expensive addition to bring on board, and grocers are notorious for pinching pennies – sometimes to the point of being pound-foolish. Yet if a retailer’s primary concern is evolving customer buying patterns, one would think all kinds of experimentation could be used with this data to help design future offers, and that means investments *must* be made.

As it stands, respondents are interested in customer movement *within* the store, yet don’t seem willing to take the necessary steps to make use of the data readily available to them *right now* that could ultimately help them understand that customer’s movements. In reality, while new tracking technologies exist, one could also interpolate customer movement based on their purchases. FMCG retailers now recognize they need technology, but it’s clear, they don’t always understand how to use it.

Of course, the fashion segment is always hungry for CRM data, and remains so, per this study. General Merchandise retailers, with their already hyper-efficient supply chain, are hoping to use location analytics to become *even more* efficient. We hope they also use this data to become more agile.

Figure 12: Business Resilience In A Hyper-localized World

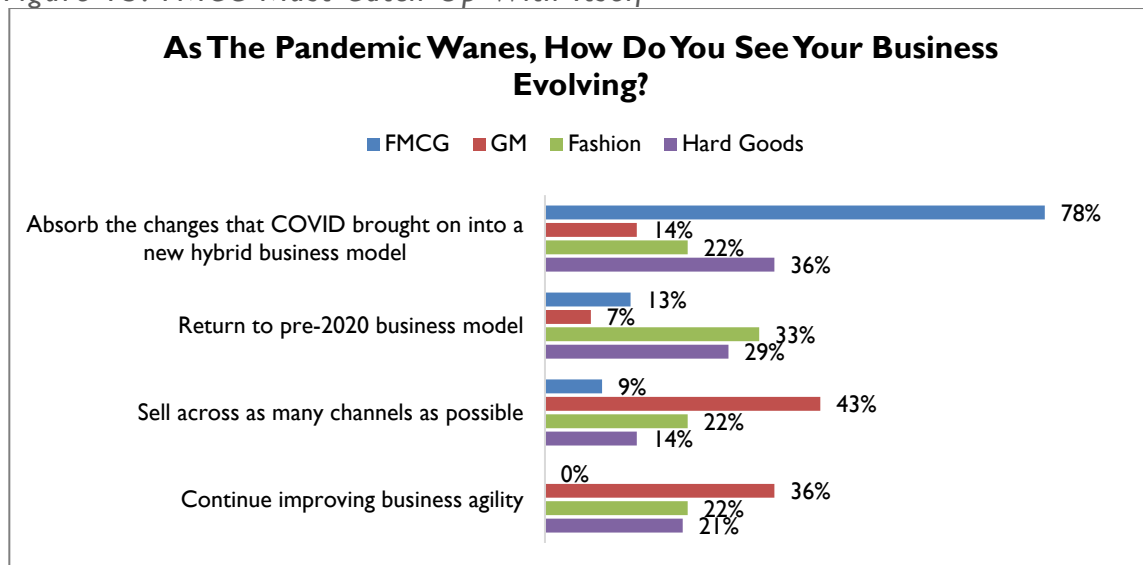
Identify The Top 3 Opportunities You See From Using Location Analytics:	FMCG	GM	Fashion	Hard Goods
Optimized return on inventory investment – better inventory balance	49%	43%	44%	50%
Improved understanding of customer movement within stores	47%	50%	28%	50%
Improved profitability from omnichannel opportunities	40%	29%	39%	36%
Taking advantage of new selling opportunities	38%	21%	33%	43%
A faster, more efficient and resilient supply chain	38%	50%	44%	43%
Improved customer intelligence	36%	36%	33%	36%
Better usage of CRM data	29%	57%	67%	21%
Indoor reconfiguration planning	24%	14%	11%	21%

Source: RSR Research, July 2021

## Where Do We Go From Here?

Clearly the big opportunity in a post-pandemic world is in FMCG – absorbing the changes that COVID wrought (Figure 13).

Figure 13: FMCG Must Catch Up With Itself



Source: RSR Research, July 2021

If this segment can do that, there's no doubt they have bright days ahead. But there's also no doubt things can get in the way. Let's take a look at those situations – the Organizational Inhibitors.

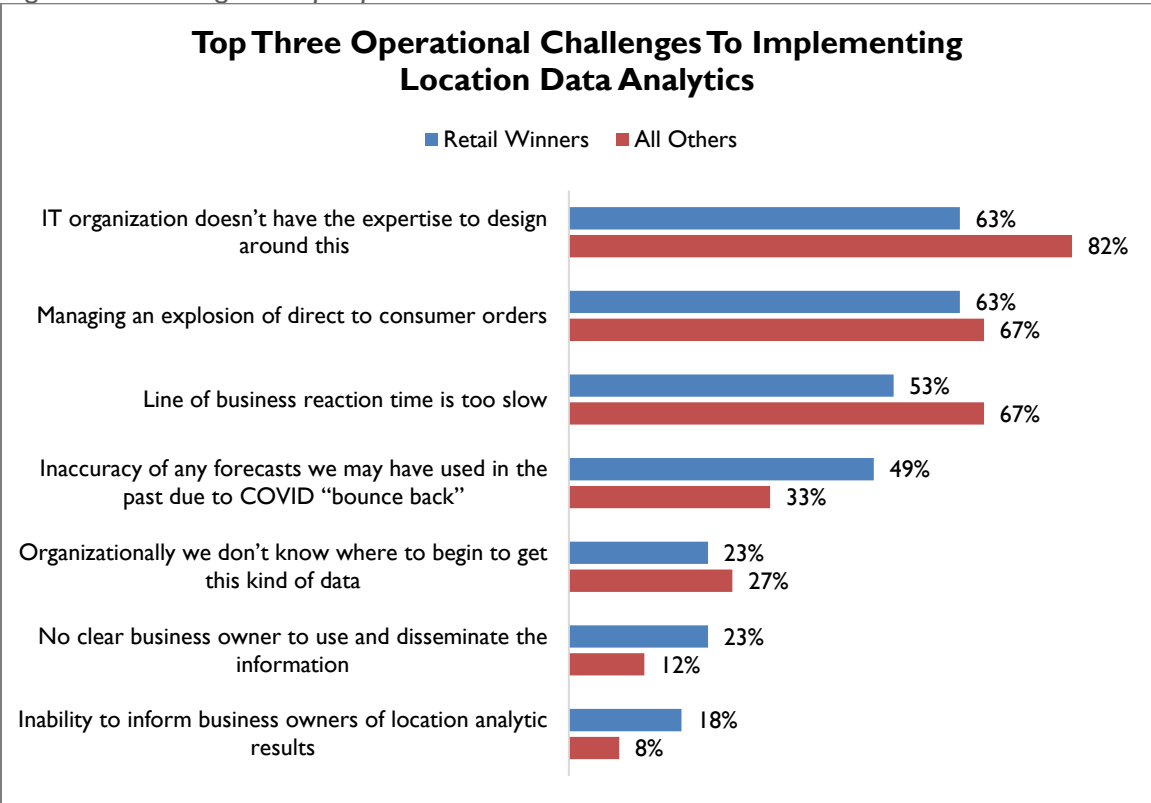
# Organizational Inhibitors

## Ready Or Not

As we've just seen, Fast-Moving-Consumer-Goods retailers expect that once the pandemic wanes, operationalizing the changes that new consumer behaviors required them to absorb in 2020 will be important to their future success. Those changes, which all have to do with omnichannel selling and fulfillment, were already on retailers' list of priorities.

The pandemic only accelerated retailers' need to address these priorities. And early in this study, we mentioned that retailer performance was generally less interesting in this benchmark than product segment. Here, we find our first differences by performance. Since early 2020 Winners *and* all others have been laser focused on doing what whatever was necessary to manage the explosion of direct-to-consumer orders (Figure 14) and the variety of fulfillment strategies that they entailed; sales need to be protected, even if short term operational inefficiencies undermined profits.

Figure 14: Caught Unprepared



Source: RSR Research, July 2021

Now, with 2020 (and hopefully much of the pandemic itself) in the rearview mirror, retailers are ready to turn their attention towards how to realign their organizations, processes, and systems to incorporate what they have learned. That includes how to utilize new data and analytics within the organization. As a result, retailers express a concern about their IT organizations' ability to design the processes and systems to implement location analytics, and also that line-of-business organizations are too slow to react to new insights even when they become available. These are *organizational* rather than *technological* challenges, and they affect average and under-performers to a great extent than Winners.

When we look at these big challenges compared to just one year ago, the urgency surrounding them becomes clear:

Top Operational Challenges Your Company Faces In Implementing Location Data Analytics (Selected Differences)	2020	2021
IT organization doesn't have the expertise to design around this	33%	63%
Line of business reaction time is too slow	40%	53%

Source: RSR Research, July 2021

The ability of the IT organization to rise to the new challenges associated with implementing location analytics comes into sharp focus. Clearly, retailers are concerned. And when we look at this insight by retail vertical, we see that a lot of that energy is coming from FMCG retailers:

Top Operational Challenges Your Company Faces In Implementing Location Data Analytics (Selected Differences)	All	FMCG	GM	Fashion	Hard Goods
IT organization doesn't have the expertise to design around this	63%	82%	57%	33%	36%
Line of business reaction time is too slow	53%	62%	57%	44%	21%

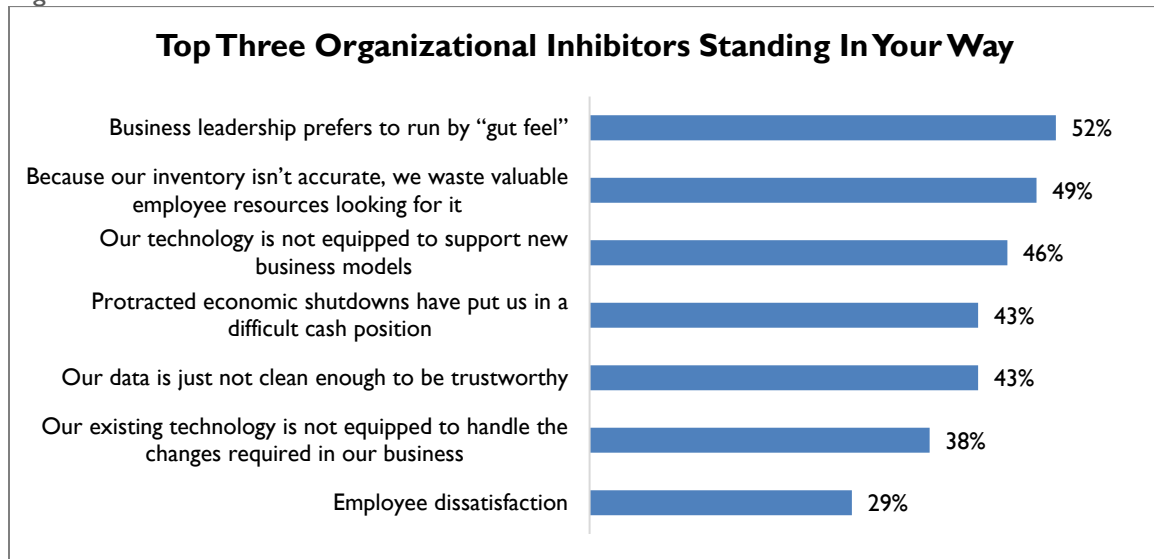
Source: RSR Research, July 2021

As we've seen, those selling Fast Moving Consumer Goods have gotten technology religion. But those retailers also recognize that years of deferred investment in their IT organizations is coming back to haunt them now.

### Old Problems, New Spin

Given that retailers see the operational challenges just noted, the question for retailers becomes, "If you see the internal challenges so clearly, why aren't you addressing them?" RSR calls these obstacles to action organizational inhibitors. And perhaps unsurprisingly, the biggest stumbling block is rooted in an underlying cultural imperative that pervades the industry; there is surprising consistency to the answer that "business leadership prefers to run by gut feel" (Figure 15).

Figure 15: Inhibitors? Or Excuses?



Source: RSR Research, July 2021

Ironically, because of highly volatile and unpredictable demand during the pandemic, the accuracy of forecasts has been undermined, and so retailers may be right to lean on gut feel, at least for now. RSR believes that forecasting systems will be challenged throughout 2021-22 to be able to reliably determine the baseline for demand forecasts.

But close behind that issue, **inventory accuracy and visibility** once again rears its ugly head. This is a top-three problem regardless of retailers' performance or vertical, and it stands in the way of retailers being able to address their earlier-stated desire (in Figure 12) to *optimize inventory investments*. Retailers are also concerned about the amount of time that employees spend looking for inventory to fulfill customer orders. In that context, geo-location data should have a part to play.

We'd also be remiss if we didn't point out that many **retailers believe employee dissatisfaction has become a true inhibitor**. Earlier in this report, we noted that employee safety and health are the top two business challenges that retailers are dealing with as they exit the pandemic (Figure 5). While those challenges may be real, retailers have a more fundamental obstacle to address; in many retail companies across the verticals, *employee dissatisfaction* is a real issue:

The Top Organizational Inhibitors Standing In The Way Of Taking Advantage Of The Opportunities Identified: <i>Employee Dissatisfaction</i>				
All	FMCG	GM	Fashion	Hard Goods
29%	24%	21%	39%	36%

Source: RSR Research, July 2021

If there's any consolation in this insight, it's in that *the verticals that were the busiest during the pandemic (FMCG and GM) also express the least concern about employee dissatisfaction*, while Fashion retailers, who were hit hard by the pandemic, are the most concerned about it. While this might just be a modern instance of the old proverb that "idle hands are the devil's playthings", it's still a big enough problem for retailers to pay attention to.

## Using Data And Insights To Foster Collaboration

One of the biggest problems with establishing the business rationale for investment in any new analytical capability is that decision makers don't know what they don't know – or to put it in a more positive way, the more that managers use new insights derived data analytics, the more value they will see in them. Investment in such new capabilities really requires strong champions to ignite interest.

We see that reflected in the choices our respondents make to overcome the inhibitors identified earlier. Tops on that list is to engage the line-of-business (LOB) leaders most likely to see operational benefits from location analytics, supply chain and operations management (Figure 16).

Figure 16: Kick-starting a Virtuous Cycle



Source: RSR Research, July 2021

But in recognition of the challenge to getting started down the path to taking advantage of location analytics, retailers also emphasize integrating new capabilities with legacy systems. They also are looking to develop rapid reporting capabilities that can alert decision makers to problem conditions in operational processes. Indeed, retailers see kick-starting a virtuous cycle of continuous improvement as the best way to get past inhibitors.

With an understanding of both the organizational inhibitors retailers identify and the actions they prioritize to overcome those inhibitors, let's take a look at retailers' technology status and plans to take advantage of location analytics.

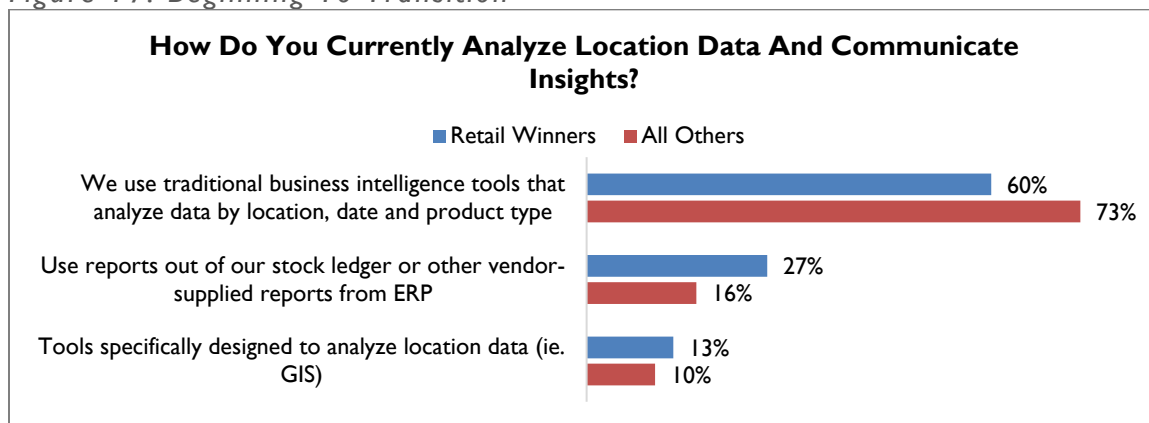


# Technology Enablers

The importance of location data is of course not new to retail. For example, retailers have long used sales analyses that consider the dimensions of **location**, **product**, and **time**. What is new is **geo-location** data, usually created by “internet of things” devices like mobile phones, electronic tags, smart devices, etc., and the new insights these new data create. The distinction is important because legacy location data comes from transactional records (for example, “this item was sold at this location on this day”), but geo-location data is non-transactional and reports “events” (for example, “this item moved from location A to location B on this day and time”).

Geo-location data is still new to a lot of retailers, a fact that is reflected in how they currently analyze location data (Figure 17). While Winners are less dependent on traditional BI than other retailers, by and large retailers still depend on traditional business intelligence tools (for example, data warehouses) that report product information by location and time.

Figure 17: Beginning To Transition



Source: RSR Research, July 2021

But a small group of retailers now report that they are using tools specifically designed to analyze geo-location data. This group is led by general merchants, with 36% of those retailers indicating that they use the new tools. Interestingly, FMCG retailers (grocery, drug, and convenience stores) lag in adoption of these tools, with only 4% indicating that they use them. This may be a reason why FMCGers, in particular, expressed concerns in the last section of this report that their IT organizational are not prepared to help the company use geo-location analytics. But as we’ll see in a moment, FMCGers have a particular sense of urgency when it comes to using new data and new analytics to improve decision-making processes.

Given the new spate of orders delivered direct to consumers’ homes, it behooves distributors and retailers to use location intelligence to determine the best stores and shortest routes to take. Hot summer months can find consumers with de-frosted frozen products, while the inverse can happen in winter.

## Growing Importance

In the last section of this report, we saw that managing through the challenges they faced during the pandemic has triggered two realizations: first, that **informing operational decision-making with geo-location intelligence is critical to their future plans**, and second, that **they have a lot**

**of work to do to make that happen.** When we compare the importance retailers place on capabilities that are enabled by location data this year vs. 2020, it becomes clear that retailers' demand for these capabilities is only growing:

Perceived Value Of Analyses Enabled By Location Data ('Very Valuable')		
	2020	2021
Combining geographic and demographic data for better business decisions	71%	82%
Site analysis and new location selection	53%	65%
Workforce sources and needs	64%	65%
Supply chain network design	59%	63%
Instore mapping	-	61%
Target marketing based on CRM data	-	61%
Re-segmentation on lifestyle and buying choices	51%	60%
Weather analysis	35%	60%
Delivery optimization	59%	59%
Assortment planning	53%	58%
Assortment localization	55%	53%
Cross channel market analysis, pre- and post-COVID	53%	52%

Source: RSR Research, July 2021

While retailers generally place a lot of value on every analysis option we presented, the highest valued choice, “*combining geographic and demographic data for better decision making*” is really an aggregate of all the others. And while combining geo- and demographic data in decision making processes is by no means new, it is certainly gaining momentum as the nature of demographic data itself is changing from static to dynamic information.

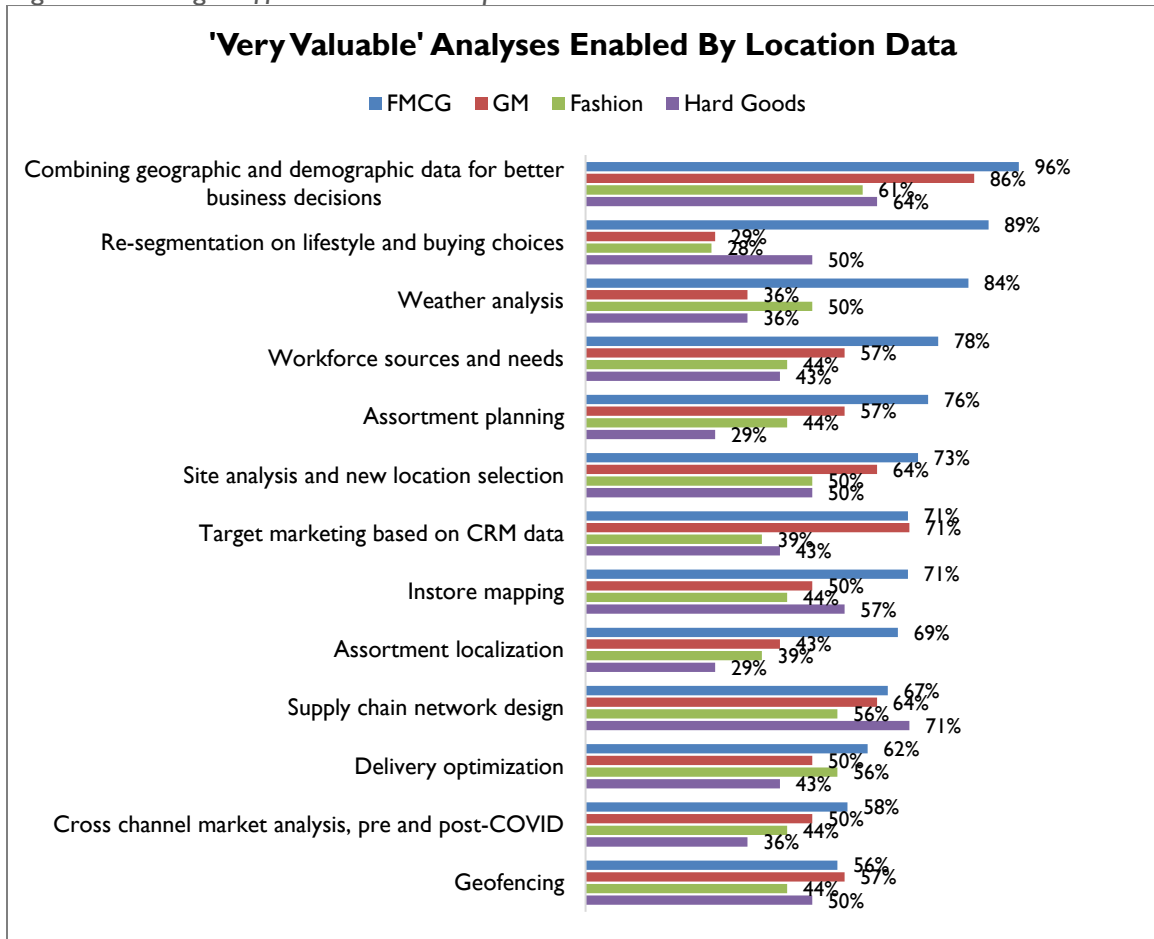
But when we look at the value that retailers assign to location data-enabled analyses by retail vertical, some interesting differences emerge (Figure 18). The most obvious one is that FMCG retailers are more bullish about location analytics than any other group. We've already mentioned several times that FMCGers have really awakened to the value of these new data and analyses in the wake the explosive growth in non-traditional consumer omnichannel order and fulfillment transactions; that new awareness is reflected here. With the big and highly perishable assortments that these retailers typically carry, the emphasis they place on geo-location analyses to help them optimize assortments to increase sell-through and reduce spoilage, and to optimize operational processes is understandable and commendable.

Beyond FMCG's standout responses, there are three types of analysis that are almost equally important to retailers: *supply chain network design*, *delivery optimization* and *geo-fencing*. Clearly, the supply chain network design is important because of retailers' desire for more agile and fast supply chains (COVID certainly highlighted the need for improvements). RSR has written extensively about new imperatives in the supply chain and delivery optimization, most recently in

our February 2021 benchmark report, *Managing Through Disruptive Times With Data Driven Speed And Adaptability*<sup>1</sup>.

Geo-fencing is a broad term that may mean something different to retailers than it does to technologists. Many retailers have segmented market areas for assortment, promotion, and pricing decisions for many years, using sales and demographic data to help in the decisioning process. But as with location data itself, marketing technology is making *dynamic* geo-fencing possible.

Figure 18: Big Differences In Emphasis



Source: RSR Research, July 2021

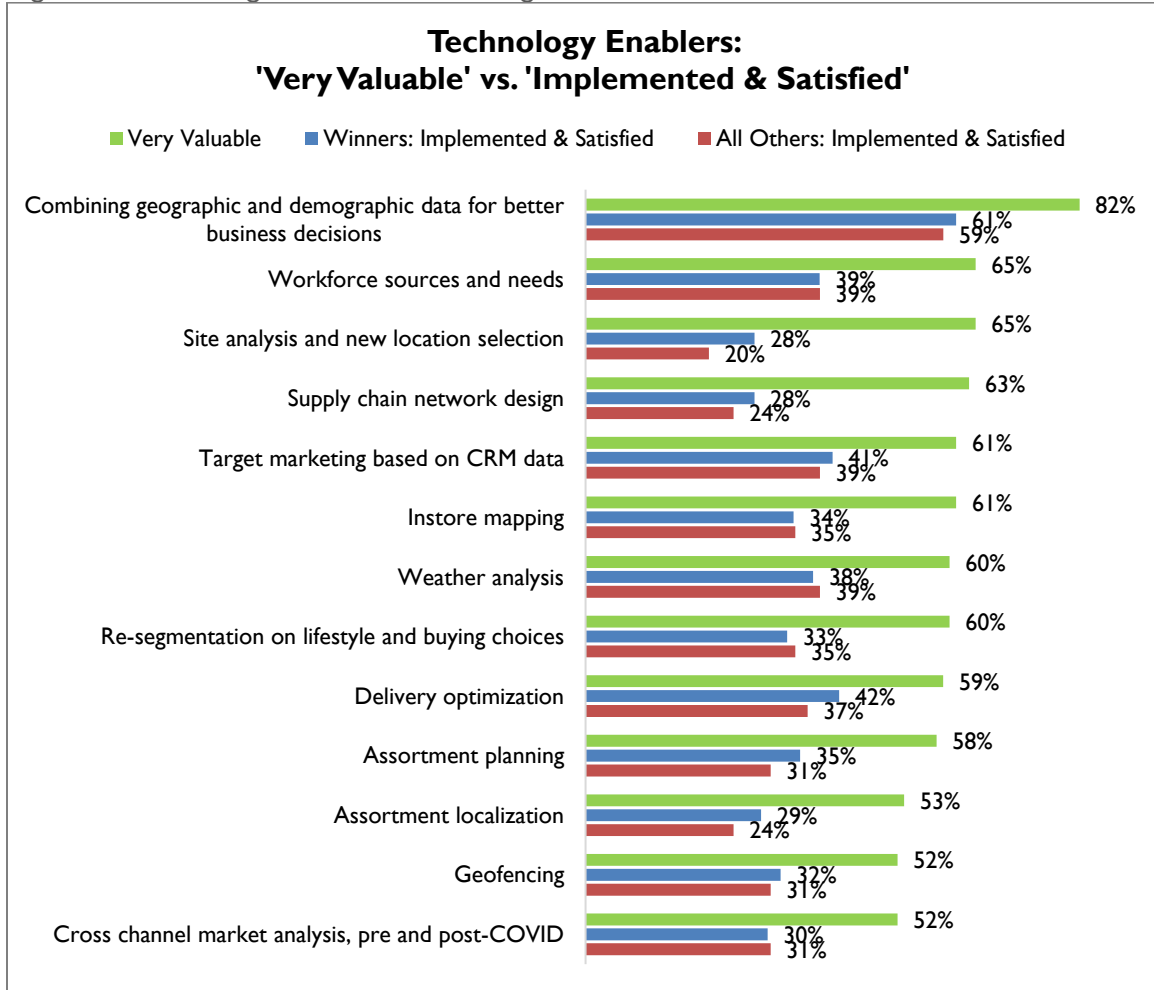
## Geo-Location Data & Analytics: A New Weapon

RSR benchmarks often highlight how over-performing Retail Winners are early adopters of data-driven capabilities. But because of the economic singularity that the pandemic triggered in 2020 - and the new importance that the pandemic placed on developing geo-location intelligence – Winners don't have the advantage of early and successful adoption here. In fact, retailers across performance groups are in close sync when it comes to successful adoption of geo-location analytics.

<sup>1</sup> <https://www.rsresearch.com/research/managing-through-disruptive-times-with-data-driven-speed-and-adaptability>

It is also clear that retailers have a lot of work to do to take full advantage of what geo-location data and analytic has to offer. The gap between the value that retailers assign to the various analyses and the number who are satisfied with their efforts to date is glaring (Figure 19).

Figure 19: A Long Road To Realizing Value

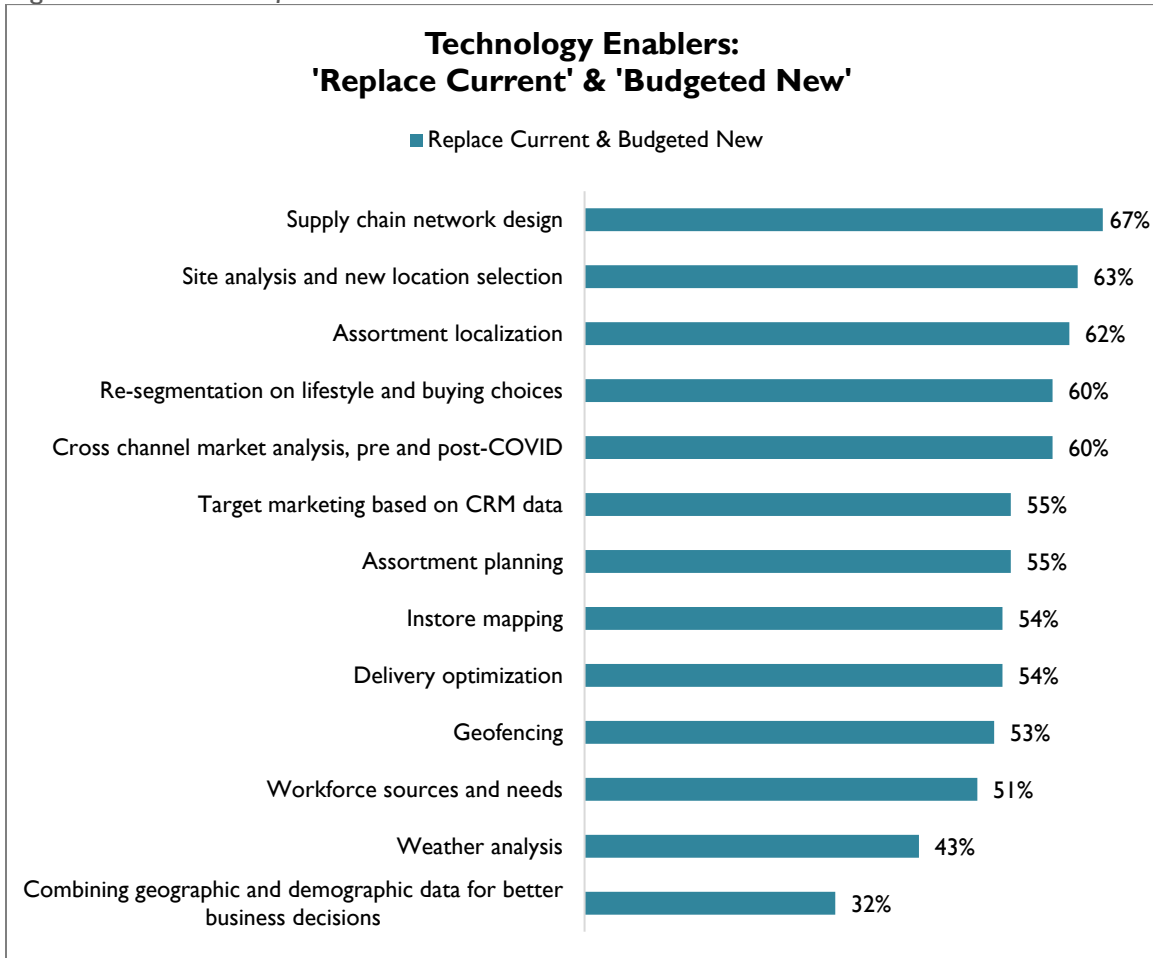


Source: RSR Research, July 2021

### Not Satisfied And Very Impatient

A standout finding in this benchmark is that retailers are definitely not satisfied with their efforts to date with adopting geo-location data and analytics. For example, while it's great that 39% of our respondents are satisfied with their efforts to date to incorporate geo-location insights into understanding workforce sources and needs, 51% of our survey respondents are either considering replacing their current solutions or have committed budget to implementing new capabilities (Figure 20).

Figure 20: A Lot Of Movement



Source: RSR Research, July 2021

In fact, with the exception of the generic “*combining geographic and demographic data for better business decisions*,” in no case is the number of satisfied retailers (Figure 19) higher than the number of retailers who are considering new or re-investments (Figure 20). Retailers are clearly impatient to improve their capabilities and are putting their money and energy behind those improvements.

In our view, this is one of the most important findings of this study: *retailers have generally been doing something to understand the relationship between location, the supply chain and merchandising*. It’s clear from the figure above that **whatever they’ve been doing is no longer adequate in most cases**. The pandemic has accelerated this realization, both at macro and micro levels.

### What It All Means

In the final analysis, all the new emphasis and sense of urgency that retailers of all stripes put on geo-location data, analytical tools, and the insights that they generate go back to the imperatives they identified as a result of having to navigate through the pandemic. Retailers need to find new ways to drive sustainable growth, strengthen operational effectiveness, and enhance business resilience. They see geo-location intelligence as an important capability to be developed to help them achieve those objectives. And they are impatient to get going.

With those things in mind, we make a number of recommendations for moving forward, in the **BOOTstrap Recommendations** section of this report.

# BOOTstrap Recommendations

The rapid pace of change in the world today underscores the importance of location analytics as a key component in helping businesses achieve *sustainable growth, greater operational effectiveness, resilience*, and ultimately business success. The changes that 2020 wrought were not anomalies; the majority of respondents in this study believe that they will see many more changes within next three years. Successfully evolving business models to accommodate both new consumer shopping behaviors and changes in how products are brought to market will require that businesses can see people, assets, and processes in real time – and then – be able to analyze what they've uncovered to improve both strategic and operational decisioning.

Leading retailers are moving quickly to take advantage of what location analytics can bring to the table, but it is still very early days for adoption of both the data and the analytics. Still, there are areas of concentrated focus that all retailers should be thinking about to realize the value of location analytics. Here are some suggestions based on what we're observed from the Winners in this study.

## Recognize That Change Is A Constant

Retailers cannot assume that “if we build it, they will come.” New business models will continue to proliferate as consumers remember the convenience of “just driving up” to pick up their purchases or having them delivered to their door. We strongly advise that retailers re-think store designs with new consumer shopping behaviors in mind. For example, is a physical location on a morning or an evening commute route? How are consumer buying patterns different during those commute times? What is the best assortment to meet consumer needs? When should employees be onsite and ready to go into action? What's the preferred order fulfillment method for consumers? These are just some of the questions that location analytics can help to answer.

## Location Is A Dynamic Customer Attribute

Location has been a customer attribute in CRM systems for years, but only as a static data point (for example, the customer's home address). In the real world, consumers are in-motion, and depending on where they are their needs may be very different. Understanding where consumers are is important to directing the right real time value messaging to them.

## Employees Matter

It has long been indisputable that employees are integral to the customer experience. But COVID has taught the industry that employee safety - based on both where they live and where they commute to – is also an important consideration. When shocks to the marketplace *do* occur (for example, environmental events), operators need to be able to redeploy staff to meet demand. But that cannot be accomplished blindly. Just as they must do for customers who shop at a store, retailers should think beyond having employees *in* the store and gain an understanding of how employees *get* to the store.

## Supply Chain: ‘What Got Us Here May Not Get Us There’

If COVID proved anything, it is that yesterday's supply chains were designed for hyper-efficiency at the expense of agility. Retailers need to be able to see inventory in-motion throughout the supply chain so that product can be directed to demand much more quickly than before. Disruptions *within* the supply chain are inevitable; retailers need to be able to anticipate risks and disruptions and act quickly if and when they occur. Location awareness is a fundamental capability needed to manage

an agile supply chain. For example, identifying alternative sources for products, determining whether disruptions are short or long term, and determining the locus and scale of any disruption (Is it local? National? Global?), are all facilitated by location intelligence.

### **IT: Develop Or Acquire Needed Skillsets**

Traditionally, retail IT shops have focused on internally-generated transactional and highly-structured data; debits and credits are the meat and potatoes of every ERP system. But new data such as location data is not typically transactional and is often unstructured. Most retail shops are not equipped to support either the new data or the new technologies that processes them. In fact, this is the top inhibitor to implementing location data analytics, according to our respondents. Simply put, retail decision makers cannot move forward until they address this organizational stumbling block.

### **Old Tools Won't Be Enough**

Tangential to the expertise challenge already noted, new data and new analyses will likely require new tools. There is no getting around it; retailers are not satisfied with their current toolsets' ability to get the full value of location data – in fact, there is a strong desire among the respondents of this study to invest in new technology enablers. So it's not a question of "if", it's a question of "when". Senior management needs to understand the imperative.

### **Re-engineer Processes For Real-time Intelligence**

Just as the IT department isn't accustomed to processing event data and supporting the analytical engines that are capable of delivering real time insights, many operational processes are not designed to take advantage of real time insights. Retailers need to examine how real-time location intelligence changes operational decision making.

### **New Insights Foster Better LOB Collaboration**

Siloed information and decision making is a perennial problem for retailers. For example, if a disruption has occurred in the supply chain (perhaps a vendor short-shipped an item), the store only discovers the problem when it receives a partial allocation. But in an agile operating environment, a real-time alert to an exceptional condition should trigger an orchestrated response. Location analytics have a huge part to play in helping retailers to see what's occurring in their operating environment in real time, and that in turn should help break down the barriers between traditional line-of-business management.

There's more good news in this that goes beyond helping decision makers work better as a team. One of the great things about business analytics in general - and AI-enabled analytics in particular - is that the more decision makers ask questions, the greater the insights are that are revealed. When it comes to the value of location-derived insights, the opportunities are huge.

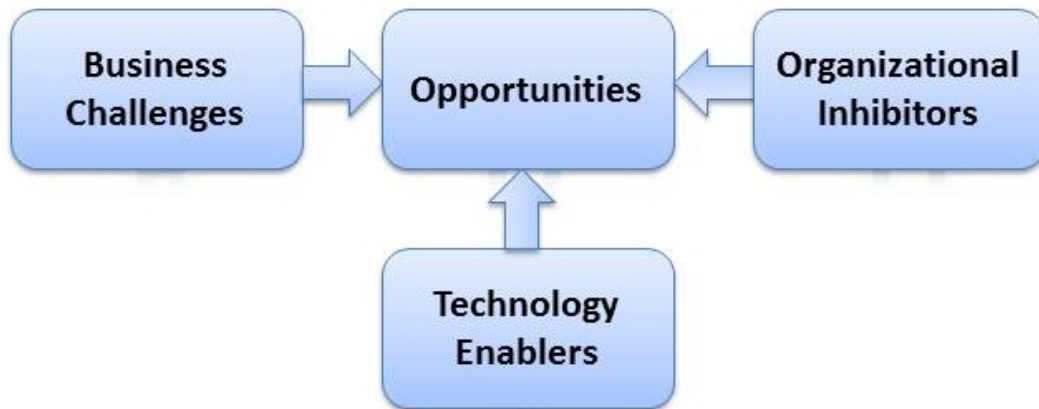


# Appendix A: The BOOT Methodology<sup>®</sup>

The BOOT Methodology<sup>®</sup> is designed to reveal and prioritize the following:

- **Business Challenges** – Retailers of all shapes and sizes face significant **external** challenges. These issues provide a business context for the subject being discussed and drive decision-making across the enterprise.
- **Opportunities** – Every challenge brings with it a set of opportunities, or ways to change and overcome that challenge. **The ways retailers turn business challenges into opportunities often define the difference between Winners and “also-rans.”** Within the BOOT, we can also identify opportunities missed – and describe leading edge models we believe drive success.
- **Organizational Inhibitors** – Even as enterprises find opportunities to overcome their external challenges, they may find **internal** organizational inhibitors that keep them from executing on their vision. Opportunities can be found to overcome these inhibitors as well. Winning Retailers understand their organizational inhibitors and find creative, effective ways to overcome them.
- **Technology Enablers** – If a company can overcome its organizational inhibitors it can use technology as an enabler to take advantage of the opportunities it identifies. Retail Winners are most adept at judiciously and effectively using these enablers, often far earlier than their peers.

A graphical depiction of the BOOT Methodology<sup>®</sup> follows:



## Appendix B: About Our Sponsor



Esri provides the world's most powerful mapping and spatial analytics software. Our product, ArcGIS applies The Science of Where to connect everyone, everywhere through a common visual language. It combines mapping and analytics to reveal deeper insight into data. For Retailers ArcGIS extends the key capabilities retailers need to understand why things happen where they do. Every transaction in retail happens in a specific place for a reason. Using ArcGIS, leading retailers find hidden insights in their data, enabling them to understand their customers and their enterprise.

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## Appendix C: About RSR Research



Retail Systems Research (“RSR”) is the only research company run by retailers for the retail industry. RSR provides insight into business and technology challenges facing the extended retail industry, providing thought leadership and advice on navigating these challenges for specific companies and the industry at large. We do this by:

- **Identifying information** that helps retailers and their trading partners to build more efficient and profitable businesses;
- **Identifying industry issues** that solutions providers must address to be relevant in the extended retail industry;
- **Providing insight and analysis** about a broad spectrum of issues and trends in the Extended Retail Industry.

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