The Role of the Network…
Is Yours Up-to-Snuff?

White Paper

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INTRODUCTION

Apocalypse...or Rebirth?

Year after year the most common question our analyst group has gotten has been, “What’s the state of the industry?” This year the question changed rather dramatically. Starting in February my colleagues and I were bombarded with requests from reporters for comments and thoughts about the pending “retail apocalypse.” Our response, like many in the industry, was, “What apocalypse?” We argue that the industry is entering a time of rebirth and fundamental transformation.

The numbers for retail in 2017 validate our position:

- Retail Sales are up +$162.5B (4.1%) through 10 months of 2017
- Online sales are up ~16%
  - 41% of retail growth, 9.1% of total retail
- Amazon equals ~ $11B of the growth total

Despite these solid numbers, the key to the apocalypse story seemed to revolve around the number of store closings. Multiple media outlets wrote numerous stories echoing a narrative of, “Such-and-such retailer is closing hundreds of stores”. The problem with that narrative is that there wasn’t any serious discussions concerning store openings. So, over the summer IHL conducted an in-depth study to determine the actual number of store openings and closings. Our research turned up a total of 10,168 store closings for 2017, many of which were cited at length in multiple media releases. We also discovered a total of 14,248 store openings, which were seldom (if ever) mentioned in the media. The Retail apocalypse story became the very definition of Fake News. The report, “Debunking the Retail Apocalypse” can be found at: http://www.ihlservices.com/product/debunking-the-retail-apocalypse/.

<table>
<thead>
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<th>Segment</th>
<th>Net Store Growth</th>
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<tr>
<td>Supermarkets</td>
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<tr>
<td>Drug Stores</td>
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<tr>
<td>Superstores/WH Clubs</td>
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<td>Bar / Restaurants</td>
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<td>Fast Food</td>
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Figure 1 - Net Store Count Growth for 2017
The lesson all of us in the retail industry -- retailers, vendors and the analyst community -- need to learn is not to accept false narratives that are foisted upon us. We all need to challenge those ideas in the press or on Wall Street -- wherever they come up. By encouraging a fact-based narrative backed by real statistics, we can help drive a more positive outlook for our industry -- one that will help us attract and retain shoppers of all kinds.

This paper combines numerous IHL research studies throughout the last 3 years as well as retail and vendor discussions. It is a continuation of a discussion that started about five years ago, one that traditional vendors have taken note of and retailers of all sizes should at least review. We are neither advocating for it or against it. Only the retailer can determine if it is right for him/her or not.

**The State of Retail 2018**

What is true about the retail industry as we move into 2018 is that we are entering a time of fundamental transformation. The ubiquitous smartphone that is in the hands of all our shoppers is the catalyst that is driving this transformation. The smart retailers, the ones that will survive, will harness the opportunities this device offers them. They will engage in a one to one conversation with their customers while they are standing at the point of decision, the shelf edge. They will have amazing insights into their customers shopping journeys throughout their stores. But for other retailers, it will be their demise. They will choose not to invest in these and other technologies, and most likely become irreverent to their millennial and Gen Z customers. The free market will pass judgement on their strategies.

The other key question being asked this year is this, “Is the store still relevant to a long-term retail strategy?” Perhaps there is no better answer to the power of the store then observing that Amazon, the ultimate etailer has acquired Whole Foods, thus joining the challenging world of multichannel retail. This acquisition now gives Amazon a convenient location where customers can not only buy a six pack of Organic Raw Kombucha Gingerade, but also, execute a return or access other Amazon services. It’s a fascinating if not wholly expected strategy that has put the entire retail industry on notice. Everyone is asking about the plan to battle Amazon with its market cap of 542.8 billion? Increasingly the industry has realized the key strategy is to improve the customer experience -- whether in store or on line. The store needs to be highly connected with consumers. Those consumers need to be able to interact seamlessly with physical products as well as inventory and order information. They must be able to buy online and pick up in the store, as well as have the ability to return orders. And it all needs to operate seamlessly. The key to retail success in 2018 and beyond is not to create a big uberchannel -- but rather to highly tune each individual customer touchpoint. All the channels a customer interacts with -- store, online, catalog and call center -- need to have the same
access to inventory and order information. This is the dream and promise of a unified commerce strategy.

Fortunately, that is exactly what we are witnessing. The industry has entered an Era of Intentional Innovation in which legacy systems are being replacing with 21st century architecture that will allow that kind of seamless customer experience. Successful retailers have already embarked on this unified commerce journey.

The Role of the Network

The network connecting stores, headquarters, warehouses and cloud is a key part of this 21st century architecture. And while IHL has spent 20 years studying the technologies and strategies retailers use, one area we haven’t focused on is the role the network plays in driving this fundamental transformation. So together with Citrix, we commissioned a 2017 Store Communications study to better understand the role the network plays in enabling transformation. The online survey was launched in mid-June 2017, and was delivered to hundreds of retailers. This survey contained 20 questions that addressed the following topics.

- Demographics – Retail segment, annual revenues, etc.
- Growth Plans – Store count, warehousing, Cloud hosting, etc.
- IT Plans – IT spend, IT staffing, etc.
- Network Issues – Current bandwidth, communication types, reliability, etc.

Beginning in late July, we began analyzing the data collected from the survey. This paper represents the key findings of that data.

As far as who responded, the results are not all that different from the annual Store Systems Study we do. Half (50% of the responses came from Tier I retailers (annual sales of > $1 Billion), and 22% came from Tier II retailers ($250 Million - $1 Billion). The remaining came from Tier III retailers, who have annual sales of less than $250 Million. Regarding Retail Segments, the results are a reasonable approximation of the North American retail landscape. The segments are defined as follows.

- FDC – This segment includes Food/Grocery, Drug Stores, Convenience Stores, and Mass Merchants / Warehouse Clubs.
- GMS – This segment includes Specialty Softgoods retailers (shoes, accessories, apparel), Specialty Hardgoods retailers (DIY, consumer electronics, books, office supplies, auto parts, etc) and Department Stores.
- Hospitality – This segment includes Restaurants, Lodging and Entertainment (casinos / cruise lines, theme parks, theaters, sporting arenas, museums, etc).

As far as the Titles/Positions of the respondents are concerned, the results indicate that the respondents are those who are “in the know”, who have the necessary insight into operational plans, and who are able to provide the most up-to-date perspective available.
1.0  **IT BUDGETS AND STRATEGIES**

**IT Spend is on the Rise...But is it Enough?**

Enterprise IT spend is up 4.3% in 2017. This data point agrees with two other surveys we conducted earlier in this year. This is a good indicator that retailers understand that the road ahead will require increased budgets targeted at driving a unified commerce strategy focusing on improving both the in-store experience as well as order management.

It’s fascinating to note that successful retailers (retailers with >5% increase in sales) plan on increasing IT budgets 9.3% -- or 2.3 times the rate of average retailers. This difference always raises the question as to whether the IT investment was what drove the success? It’s interesting to note that the question tends to be asked by executives at these struggling retailers. The questions successful retailers ask are, “What technologies are hot?” and “Which ones have game-changing potential?” It is two fundamentally different views of the same data point but very illustrative of which retailers will remain standing in 2025. When we examine successful retail IT budgets we see spend increasingly focused on efforts to transform their siloed systems into a single system that encompasses “one version of the truth” for products, customers, transactions and sourcing locations. Attentionally the aggressive push to the cloud observed in the data should begin to reap savings that will enable additional investment without driving overall dramatic growth in IT spend. We’ll speak more about Cloud in a later section.

**The March to Unified Commerce is a Journey, Not a Destination**

Retail was relatively quick to see the opportunity that e-commerce could provide. Unfortunately, many saw their e-commerce efforts as a standalone channel independent of store operations. Perhaps that made sense in 2000 but not in 2018. The industry has now come to understand that the customer doesn’t care about a retailer’s perceived channel conflict. Shoppers simply want the same brand experience from whatever touchpoint they choose to use. If that is the goal, then clearly the retail industry is missing the mark with 78% of the respondents describing their unified commerce experience as either “having room for improvement” or “poor.” That is a troubling data point and one that needs to improve dramatically through 2018.
Cloud as the Transformational Element

Today the majority of retail executives understand that fundamental transformation needs to happen in their technology stacks if they plan to have a truly effective unified commerce strategy that is operational in 2025. But it is also clear that most retailers have no plans to significantly increase (>5%) overall IT spend over the next couple of years. That’s not the recipe for transformation unless there’s a new approach to technology adoption. Fortunately, that’s what the data strongly indicates. Cloud adoption is in double digits in all 7 technologies examined. Cloud technology is far faster and cheaper to deploy than traditional enterprise software applications. Retailers tell us that they are seeing 30% savings in integration costs and can go live in months vs years. It is logical to expect those integration cost savings to be used to refresh other systems targeted at improving the customer experience versus using them to reduce overall IT spend -- thus enabling transformation while maintaining realistic IT spend targets.

As expected, workforce management and analytics have enjoyed the widest adoption. Most interesting is the rapid uptake of point of sale and click and collect capabilities. Several years ago, it was widely believed in the analyst community that POS would be the slowest to migrate to the cloud given its mission critical role. Those forecasts were clearly off. Click and collect adoption is a good indicator for the push toward a unified commerce strategy as it requires the ability to take payments, facilitate an order and
manage a customer account. By 2020, over 60% of the respondents expect to have that functionality active.

**The Role of the Network as an Enabler of Transformation**

Tier 1 retailers are far more likely (19% more) to limit access than Tier 2 retailers (at 0%). However, only 25% of Tier 1 retailers don’t provide any access to WIFI versus 43% for Tier 2 retailers. This is a strong indication of how important customer WiFi is to a retailer’s strategy so we can anticipate an expansion of customer WiFi access.

In the unified commerce world of modern retail, the network is probably the least understood but arguably the most important component of a retailer’s technology stack. Those of us from a store operations background just expect it to work, to be always “on.” It enables the connected store to move from theory to reality. The network is the underlying infrastructure that enables the transformation that the industry is embarking upon. Yet how many of us really understand the inner workings of the network? An examination of the data in this section indicates that this lack of awareness is an area of concern.
Fifty-six percent (56%) of the respondents indicated that the WAN is a critical part of early planning for application decisions. Tier 1 retailers (>1 billion in revenue) are far more likely then Tier 2 (at 29%). The vast difference in importance in Tier 1 vs Tier 2 can probably be attributed to smaller IT staffs with less networking experience. But it does raise a red flag if Tier 2 retailers expect to build out a connected store experience or make use of cloud applications.

**The Value of Customer Access to WiFi**

A key component to a retailers unified commerce strategy is the realization that consumers now have the power in the relationship. They have unlimited access to product information and can and do shop your competitors while in your store looking at your merchandise. This is simply a fact of retail life. Attempting to thwart that by limiting access to WIFI is outdated thinking and will lead to customer dissatisfaction and missed opportunities for customer engagement. An IHL study indicated that retailers could expect a 3.4% lift in sales simply by giving their customers WIFI access. Thirty one percent (31%) of the respondents don’t provide in-store customer WIFI. For retailers, this is a missed opportunity to engage with their customers at the point of entry.
Tier 1 retailers are far more likely (19%) to limit access than Tier 2 retailers at 0%. However only 25% of Tier 1 retailers don’t provide any access to versus 43% for Tier 2 retailers. This is a strong indication of how important customer WiFi is to a retailer’s strategy so we can anticipate an expansion of customer WiFi access.

Figure 5 - Retailers’ Provision of Customer WiFi
2.0 THE BARRIERS AHEAD

Network Reliability

In every study, there’s usually a data point that raises significant concerns about retail strategy going forward. For this study, this is the one. Over 50% of the respondents indicate that concerns about network reliability impact moving apps to the cloud. This comes at a time when we are watching the industry prepare for a massive shift to the cloud. The potential for a massive problem two years down the road can’t be overlooked. Network reliability and capacity must be planned before the move -- not after.

![Network Reliability Concerns](image)

*Figure 6 – Concerns about Network Reliability Impacting Cloud Migration*

Will Retailers Run Out of Bandwidth?

There’s both good and bad news when looking at bandwidth to the stores. On the positive side, 44% of retailers believe their bandwidth will be adequate for two years or more. The counter is that 47% are already anticipating inadequate bandwidth within two years. What is more concerning is that 50% of Tier 1 retailers are anticipating being bandwidth-constrained within two years. That could have a significant impact on store-focused
digital marketing strategies as well as on basic customer service aspects. This is a very concerning development as it is not an overnight fix. Capacity planning needs to look out years and not months. Retailers need to seriously consider network capabilities before launching connected store initiatives or risking significant service failures leading to customer dissatisfaction.

![Current Bandwidth in Stores](image)

**Figure 7 - Is the Current Bandwidth in Stores Adequate?**

**Do Business Leaders Need to Become Network Engineers?**

In a connected store world, the network is the enabler for the functionality that the consumer will grow to expect. Network outages will lead directly to poor customer experiences. Given the critical nature the network plays in both store operations as well as in marketing efforts, it is critical that senior business leaders understand the limitations of their networks. It is very concerning that 63% of the respondents believe that only some of their senior leadership is aware of the limitations of their networks. Given the loads that their networks will need to support it is critical that CIOs have honest conversations about network challenges.
How to Improve Customer Service

Distance learning is the de facto training standard for virtually every retailer. Gone are the days of sending teams of associates to central training facilities. Most store associates tend to skew younger, so just-in-time learning is the preferred method. However, that requires sufficient bandwidth in the store to handle the size of these training videos. Two-thirds (66%) of the respondents indicate that lack of sufficient bandwidth either is, or could be, a problem. What this means practically is that if a retailer’s stores currently lack sufficient bandwidth to deliver proper training to employees, then that retailer can’t even begin to consider utilizing cloud-based apps for customer engagement and enhancing the overall customer experience. Long story short, the needs of associate training, among other solutions, must be built into the network capacity analysis for long-term retailer success.
When (Not If) WAN Connectivity is Disrupted

The more the network becomes part of the shopping experience, the more downtime negatively impacts customer experience -- and ultimately profitability. Retailers don’t seem to have a persistent challenge with network connectivity based on the survey results. However, 34% report the issue happens “sometimes.” That is a concern that will eventually lead to service breakdowns in the connected store of the near future.

Tier 1 retailers seem to have more resilient networks with 31% of the respondents indicating never having WAN connectivity disrupting store operations. That’s clearly the direction the industry needs to move to. Tier 2 seems to have more network issues but the problems are of a less severe nature. (Seventy one percent [71%] say “Yes but rarely.”).
Importance of Security to a WAN Strategy

To the surprise of no one, security is critical to a retailer’s WAN strategy. There’s also very little difference based on size of retailer where 80% or Tier 1 retailers deem a WAN strategy critical versus 86% for Tier 2. There is, however, a significant difference when examining responses by revenue growth. Successful retailers are far more likely to view security as critical to their WAN strategy (89%) versus average retailers at 69%. Perhaps this is explained simply as a cost control strategy for retailers that are struggling. However, it is clearly a dangerous path if this turns into a long-term strategy.
Figure 11 - WAN Security Importance

Source: IHL Group
3.0 CONCLUSIONS

In order for retail to remain relevant in the 21st century, retail companies need to transform their IT infrastructure to support unified commerce, and networks connecting stores, headquarters, warehouses and cloud are a key part of this architecture. The 2017 Store Communications study highlighted that while many retailers have begun this transformation at the network level and there’s more to do, most companies we surveyed are aware of the need and the issues involved and are committed to this evolution.
Other IHL Reports Available Include:

- North American Retail POS Terminal Market Study - $3,495
- Europe/Middle East/Africa POS Terminal Market Study - $3,495
- Asia/Pacific POS Terminal Market Study - $3,495
- Latin/South American POS Terminal Market Study - $3,495
- Mobile POS: What Reality Looks Like - $3,495
- North American POS Printer Report - $3,495
- Small/Medium POS Sizing - $4,000

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