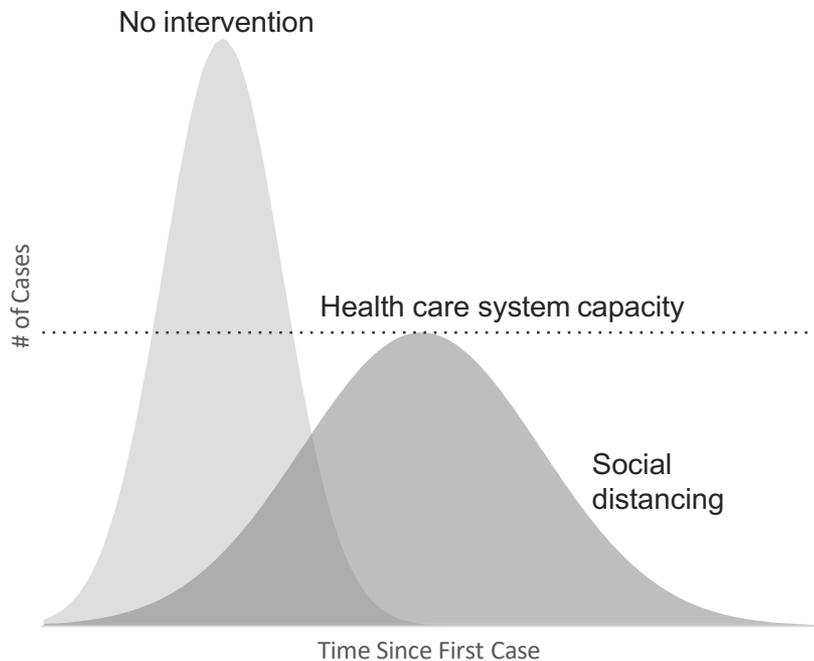


Distribution “Current State” and Implications for Clients

COVID-19 Has “Shocked” the Economy / Supply Chain

1. The same policies designed to slow the spread of COVID-19 have also had significantly negative economic effects.
2. Social distancing and shutdown policies have caused record numbers of people to file for unemployment.

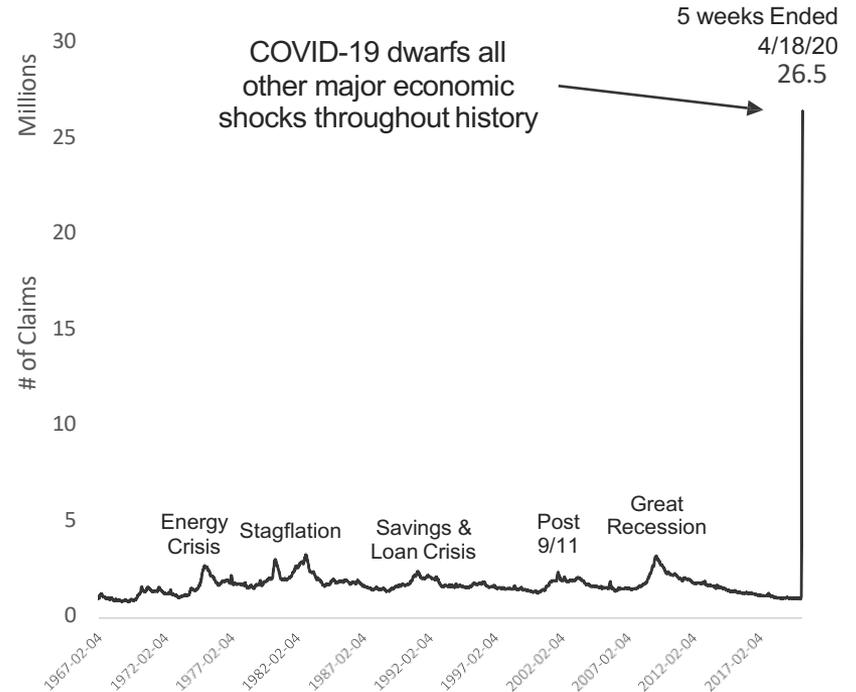
Flattening the Curve



Source: CDC.gov

Initial Jobless Claims

5-Week Rolling Sum



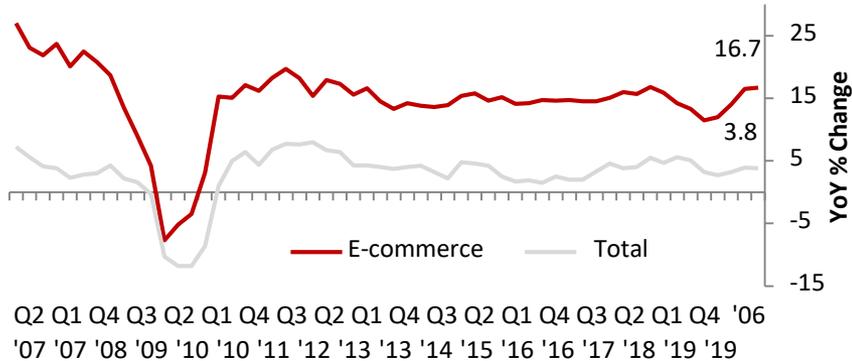
Source: St. Louis Federal Reserve

COVID-19 Will Accelerate Established Trends

E-Commerce is growing rapidly, which is driving growth within warehousing and changing the supply chain

E-commerce vs Total Retail Sales Growth

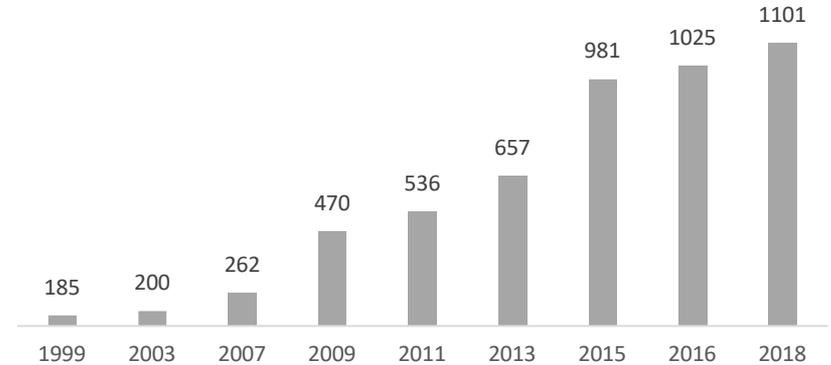
Seasonally Adjusted, YoY % Change
Source: U.S. Census Bureau



E-commerce is driving SKU growth and driving changes in picking methods and other supply chain requirements

Average Number of SKUs Carried by Distributors

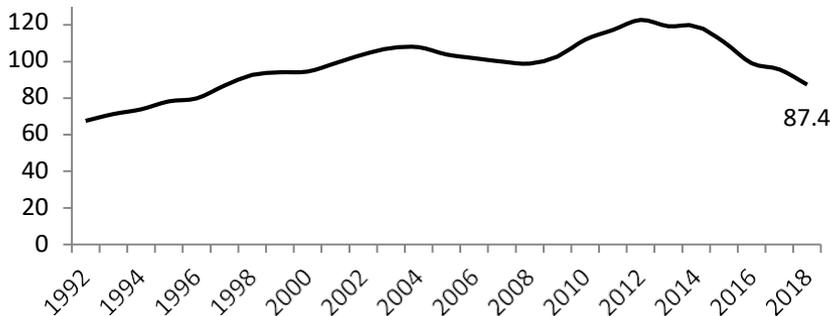
Source: NBWA Distributor Report



Labor productivity is tapering off which, coupled with labor shortages, is accelerating the adoption of automation

Warehousing & Storage Labor Productivity

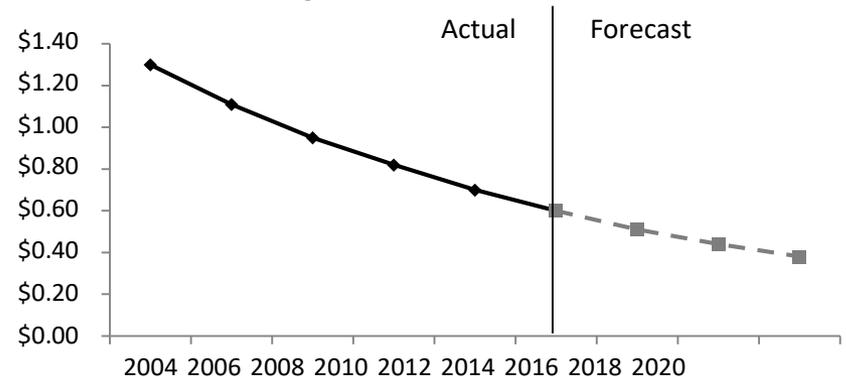
Index (2007=100)
Source: U.S. Bureau of Labor Statistics



Falling costs of technology will accelerate automation, data and predictive analytics, and more

Average Cost of IoT Sensors

Source: Goldman Sachs, BI Intelligence Estimates

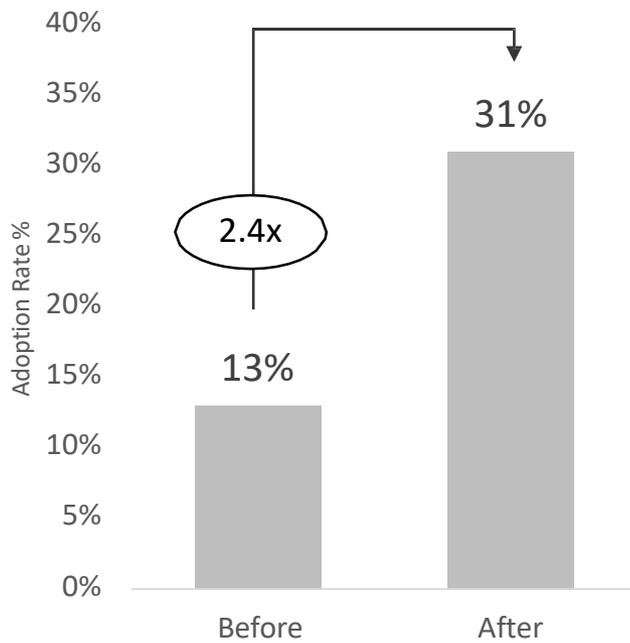


Especially E-Commerce, Which Will Grow Exponentially

1. E-commerce sales had already been growing significantly faster than traditional retail sales and will accelerate further as a long-term side effect of COVID-19.
2. Example: grocery pickup / delivery adoption rate has increased 2.4x since the outbreak, which will further accelerate the shift to e-commerce sales.

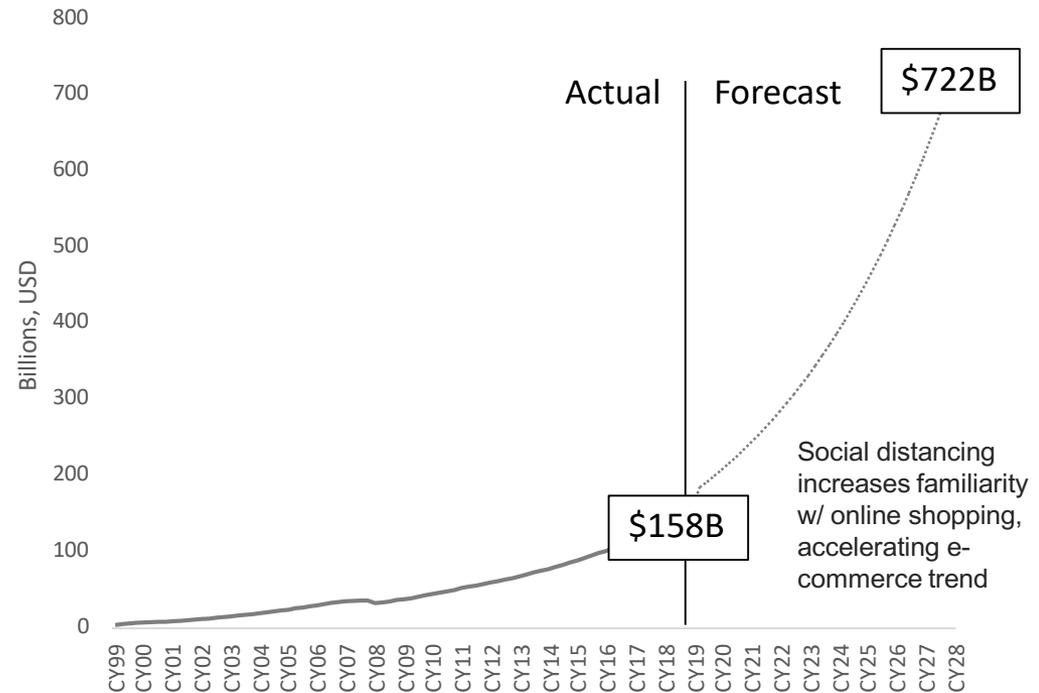
E-Grocery Before & After COVID-19

Adoption Rate by US Households



Source: Brick Meets Click

E-Commerce Retail Sales



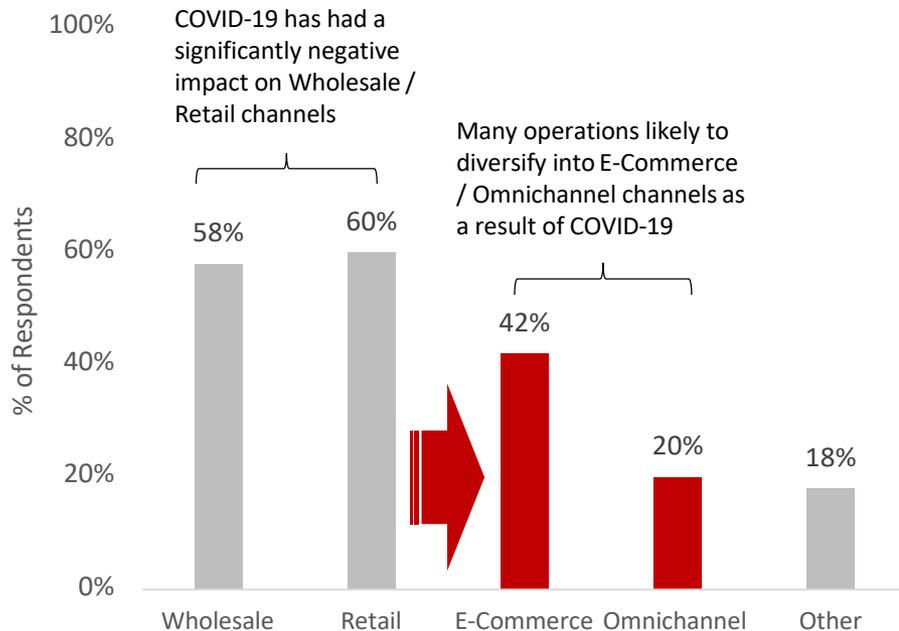
Source: Retail Indicators Branch, U.S. Census Bureau

So Supply Chains Need to Adapt to Serve New Channels

1. Wholesale and Retail operations that were negatively impacted by COVID-19 will seek to mitigate risk by diversifying into E-commerce and Omnichannel fulfillment.
2. Large scale E-commerce fulfillment operations require high levels of automation & proximity to end customers to be profitable, which will drive supply chain changes.

Channels Served by Warehouse / DC

% of Respondents in PRG Study, Multiple Responses Allowed

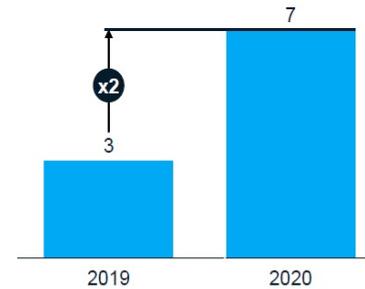


Source: 2019 Warehouse Operations & Trends Study, PRG

A rise in e-commerce is worsening margins, pressuring retailers to re-think operating models

E-Commerce market penetration has doubled from 2019 to 2020

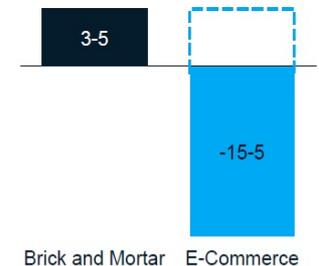
E-commerce market penetration
% of total market



E-Commerce penetration is projected to be as high as 20% by 2025

The economics for e-commerce are still under stress in many cases

EBIT margins
% margins



Main drivers of low e-commerce margin are replenishment (-15-20%) and last mile delivery (-10-15%)

Source: McKinsey & Company

While Those Operations Also Become More Resilient

- 1) In addition to diversifying channels served, supply chains will focus more on resiliency by holding more inventory in more places from more suppliers.
- 2) Automation rationale will expand to include increased worker safety and reduced dependency on labor, not just to cut cost, but also to reduce risk.

Supply Chain Best Practice Evolution Towards Increased Resiliency

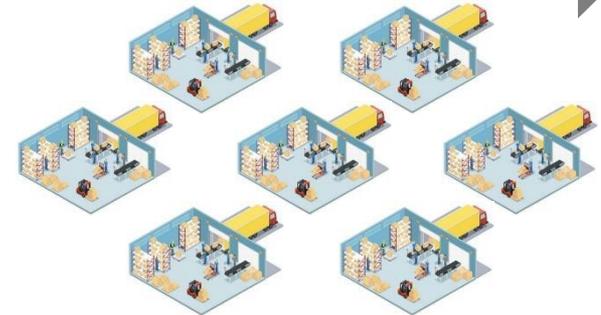
Larger / Centralized DC

Limited inventory is efficient but lack of redundancy poses risk and makes last mile costly



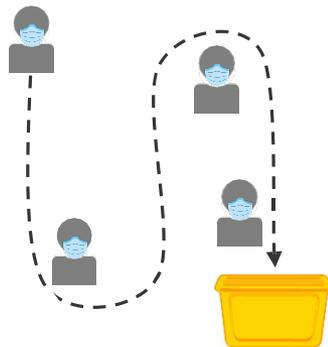
Smaller / "Hyperlocal" DC

Higher inventory costs are offset by last mile savings and improved risk mitigation



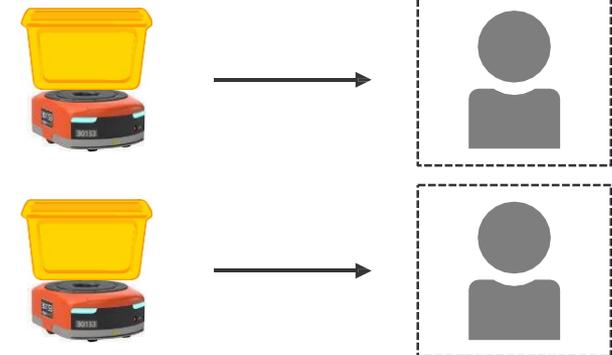
Person to Goods (P2G) Picking

Workers spend non-productive time traveling from one pick location to the next which also increases the number of encounters with other workers



Goods to Person (G2P) Picking

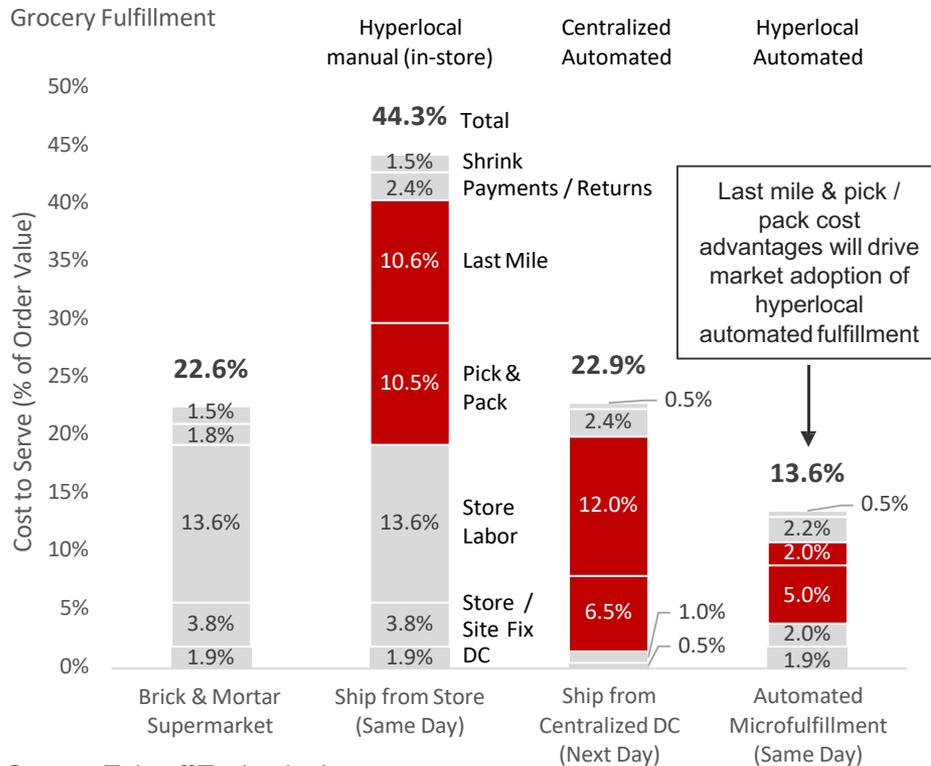
Workers stay in designated pick / pack locations, increasing labor productivity while also maintaining social distancing



Which Will Drive Significant Changes in the Market

1. E-commerce growth and a focus on increased supply chain resiliency will push operations toward “hyperlocal” automated fulfillment.
2. As a result, demand for well-located, small industrial properties exceeds demand for larger warehouses, driven by same-day delivery expectations of consumers.

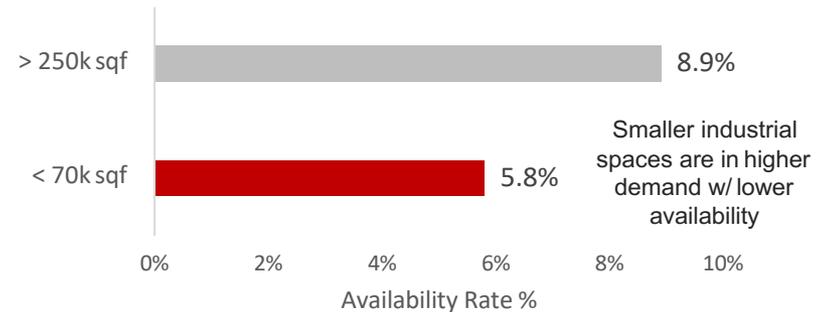
Cost to Serve Comparison



Source: Takeoff Technologies

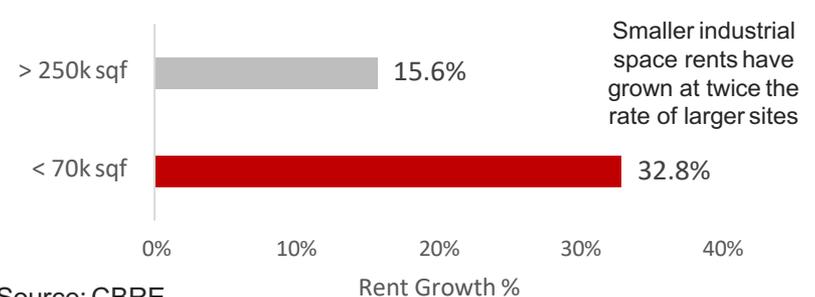
Availability Rates

Industrial Warehouse Space, Q2 2019



Rent Growth (Price per Sq ft)

Industrial Warehouse Space, Q2 2019 v Q2 2014

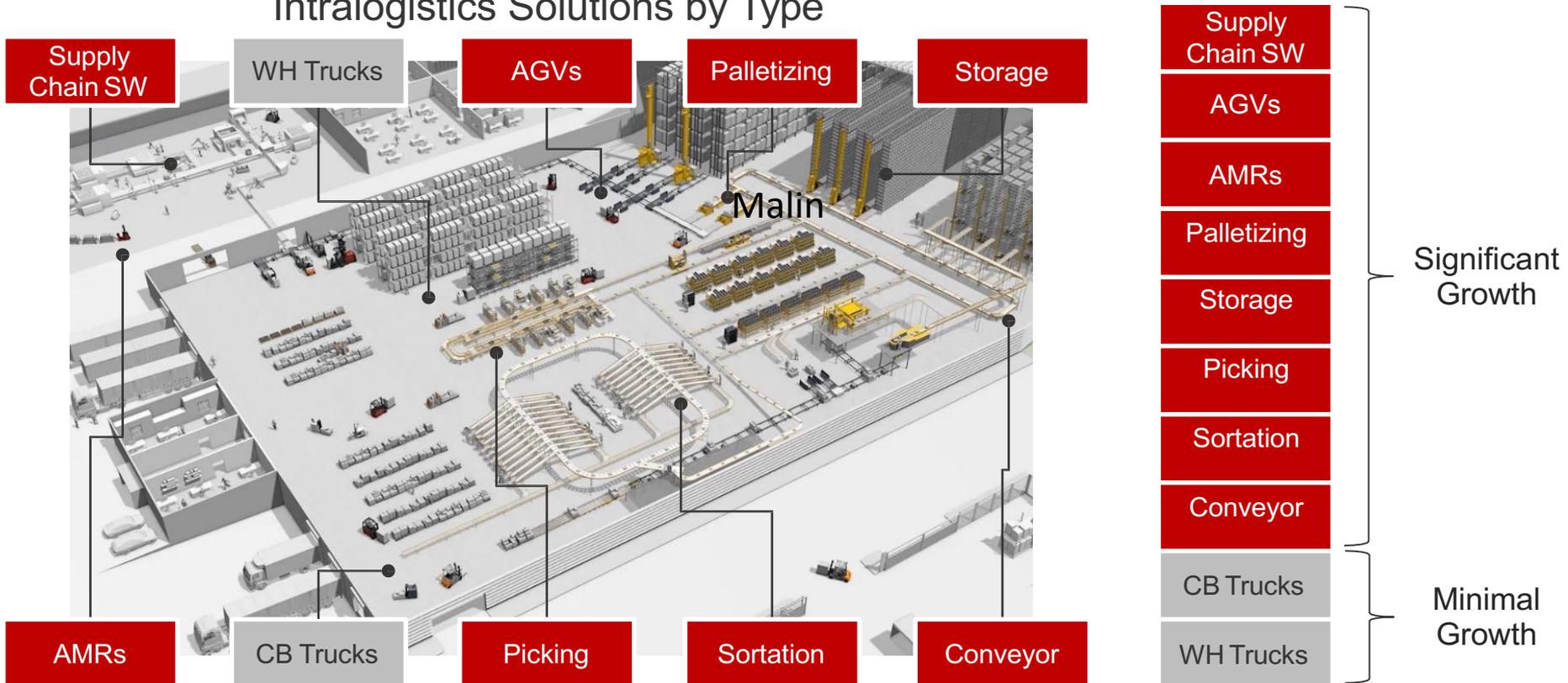


Source: CBRE

And Will Require New / Expanded Intralogistics Solutions

1. Changes in best practices mean supporting systems will need to evolve, with lift trucks being just one very small part of the overall intralogistics solution set.
2. A true, end-to-end intralogistics solutions provider needs to be able to offer much more than just equipment. Software, especially, is critical to integrating systems.

Intralogistics Solutions by Type

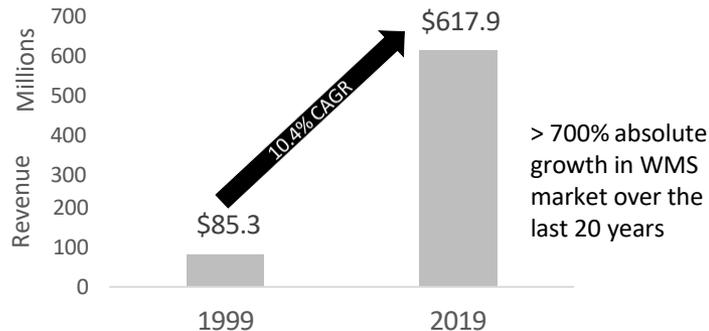


That Need to Integrate Seamlessly with Other Systems

1. The prevalence of other software systems and processes has grown significantly, with WMS nearly ubiquitous today.
2. Customers will require solutions that integrate seamlessly with their existing systems, technologies, and processes.

WMS Market Growth (Manhattan Associates as Proxy for Market)

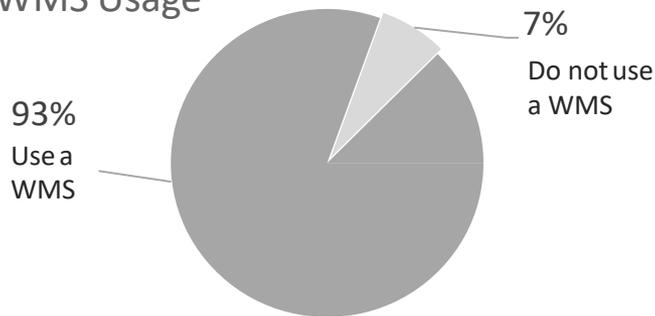
Source: 10-K filings



Walmart Supply Chain Tech Selection Criteria

- Maintaining the stability of its systems and processes is a priority for Walmart. **A new technology should not disrupt this stability.**
- **A new technology should be easy** as possible for an employee to grasp and use.
- Maintain process consistency. **Only change the process when necessary.**
- Preserve clarity with one version of the truth.
- **Leverage mobility and automation** to improve operational effectiveness.

WMS Usage

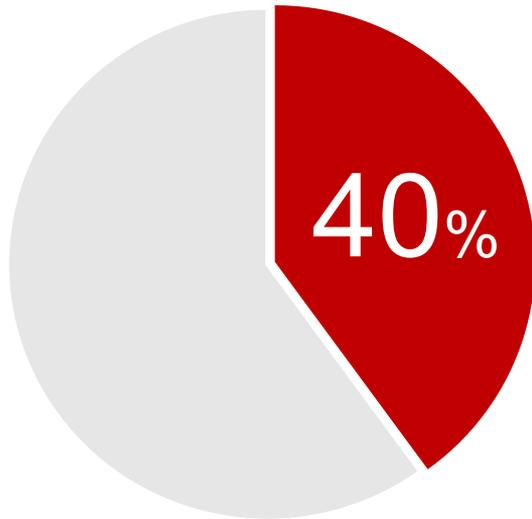


Source: 2019 Warehouse Operations & Trends Study, PRG

Source: Supply Chain Quarterly

Many Businesses Will Fail

1. Small and Medium sized Businesses (SMB's) typically lack sufficient resources to weather significant shocks to the economy / supply chain.
2. As a result, many SMB's and some large businesses will fail or will be bought out.
3. Raymond's average customer going forward will be larger / more complex.



Percentage of businesses that never re-open after closing due to a disaster

Source: FEMA

Retailers are struggling.

Supply chain models likely to be transformed - significantly

Some have already filed for bankruptcy

Apparel and Fashion	 MODEL'S SPORTING GOODS	March
		April
	J.CREW	May
	<i>Neiman Marcus</i> *	May
Department Stores and Home Goods	Pier 1 Imports	January
	 SEARS RETAIL CORP.	February
	 Art Van	March
Specialty	<i>Lucky's Market</i>	January
	EARTH FARE	February

While others have been flagged as at high risk of filing

Lbrands <small>VICTORIA'S SECRET / PINK BATH & BODY WORKS</small>	<i>Michaels</i> <small>MAKE CREATIVITY HAPPEN</small>	CALERES * 5 *
THE CHILDREN'S PLACE *	JCPenney *	<i>Real Estate Express</i>
GNC * <small>LIVE WELL.</small>	at home * <small>The Home Décor Superstore</small>	Party City * <small>NOBODY HAS MORE PARTY FOR LESS</small>
TB TAILORED BRANDS * *	The Container Store	
GameStop * <small>POWER TO THE PLAYERS</small>	ascena * <small>RETAIL GROUP INC.</small>	<i>Tuesday Morning</i> *
DXL <small>DESTINATION XL</small>	RTW <small>retailwinds</small>	

* Indicates some owned real estate

1. At risk: Assigned a FRISK score of 1 or 2 by CreditRiskMonitor, identifying increased risk of filing for bankruptcy in the next 12 months
Source: Company websites; www.spotglobal.com; web search

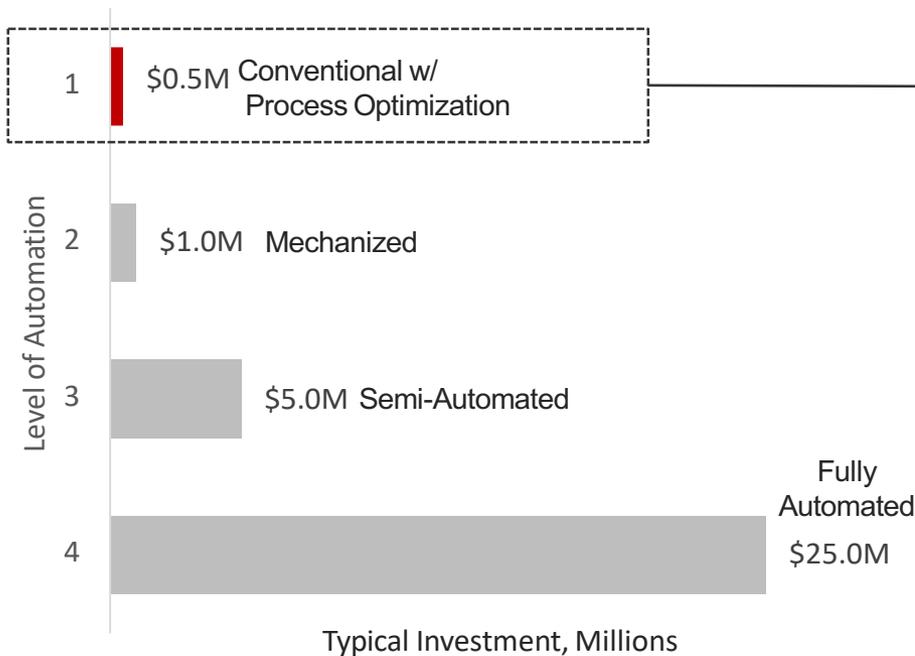
McKinsey & Company 11

Source: McKinsey & Company

Primarily in the Areas of Low-Level Automation

1. Although “automation” is often interpreted to mean “lights out” there are actually multiple tiers of automation, with the lowest levels requiring minimal investment.
2. Moore’s law has driven down sensor / IoT costs, making low-level automation widely accessible, which is significantly increasing demand for logistics robotics.

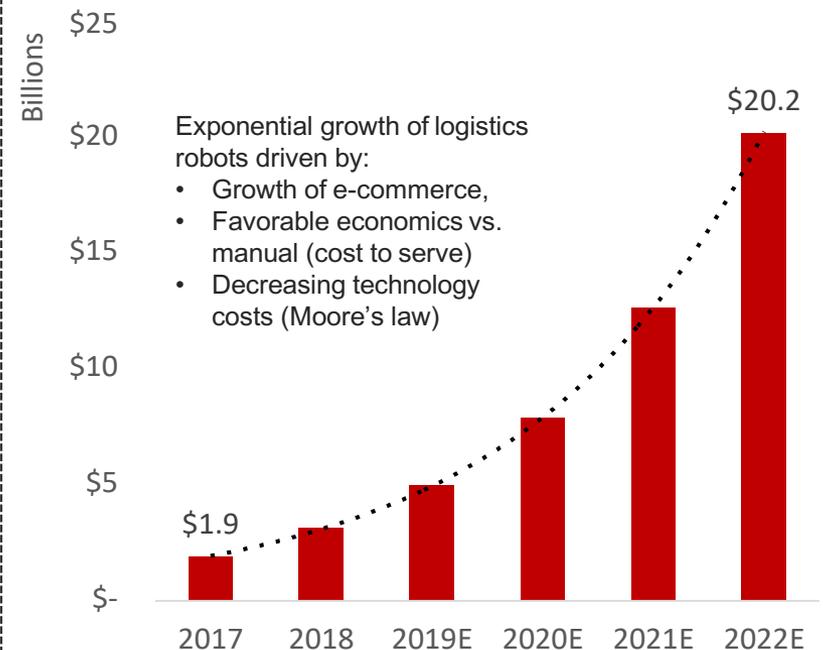
Levels of Automation by Tier



Source: Viastore Systems

Logistics Robots Annual Demand

AGVs (non-manufacturing), Global



Source: Cowen and Company

Where Software Makes Up The Bulk of the Value Chain

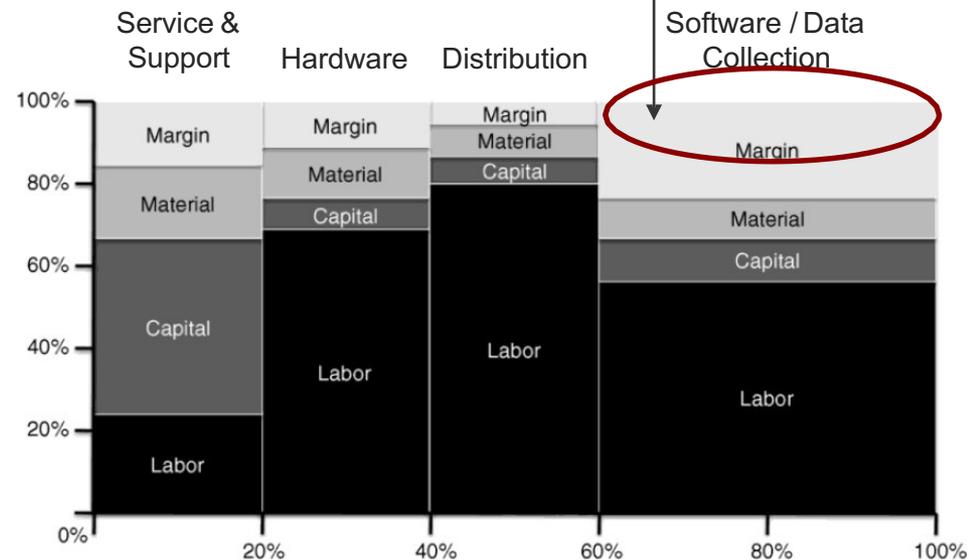
1. Low-level automation often takes the form of an AMR or AGV-type products but the hardware itself is nearly a commodity.
2. **Software / data collection is the “secret sauce” where most of the value comes from and is the most important element when integrating with other systems.**

Outlook from Cowen and Company

- “Longer-term, robots themselves will become more commoditized and the **true value will reside in data management / facility efficiency.**”
- “Companies that demonstrate the ability to **deploy technologies quickly, minimize downtime, integrate effectively with other systems, and track progress to continuously optimize** will be winners.”
- “We expect to see a trend towards **robotics as a service (RaaS) models.**”

Source: Cowen and Company

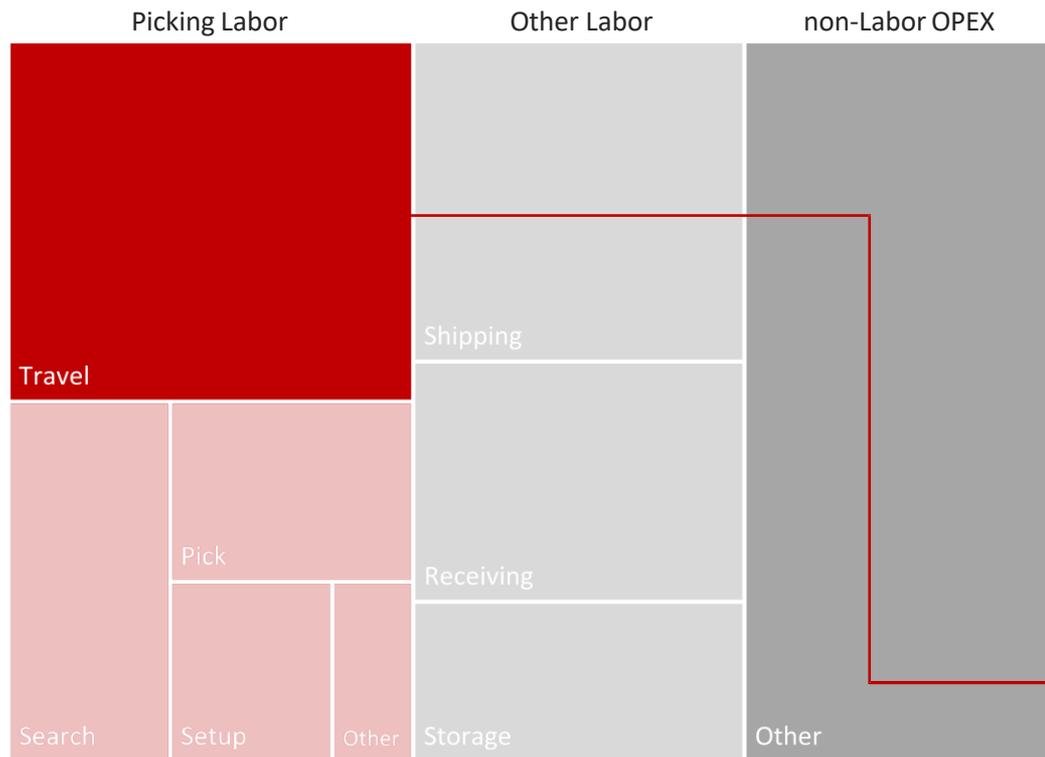
Logistics Automation / Robotics Value Chain (Conceptual)



How much “Time” is spent “Traveling” to pick products?

1. Time spent traveling to pick locations is non-value add and is the single largest component of warehouse operating expenses.

Warehouse Operating Expense Breakdown



Goods-to-man picking removes the single largest component of warehouse OPEX, resulting in significant labor savings and productivity increases, which will incentivize product substitution



Source: Constructed from multiple sources

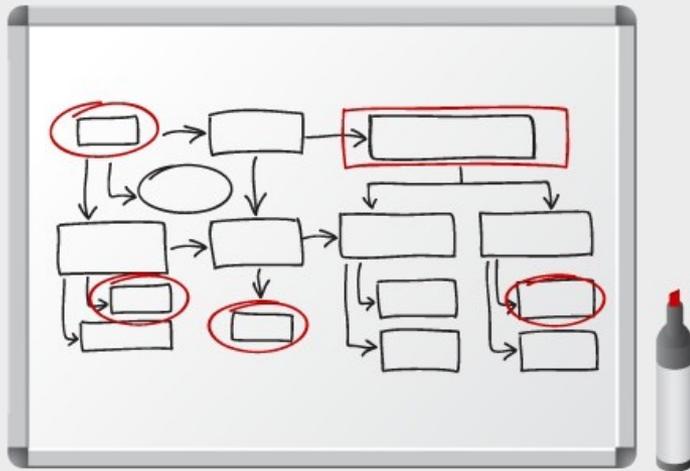
Potential Opportunities for Clients to Consider
Given this “Current State”

“Ruthlessly Prioritize” All Areas of the Business

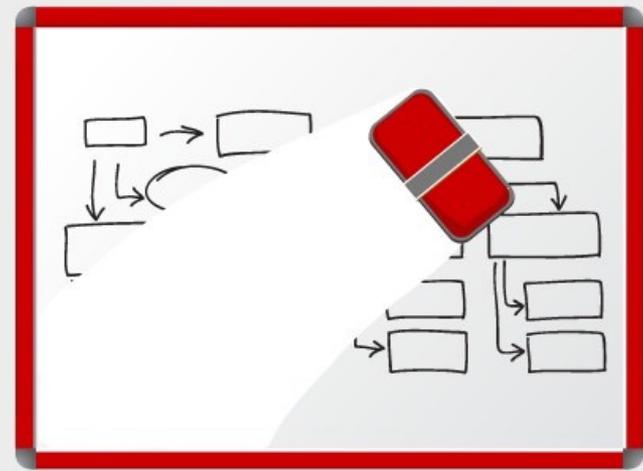
1. In the context of “new normal” market conditions, Companies should consider all of its resource allocations to ensure alignment with expected market needs.
2. Zero-based budgeting forces the organization to evaluate all costs and for each to stand on its own merit relative to new normal, regardless of historical precedent.

Companies rarely trim their way to success. If your industry or market is in the midst of disruptive change, it may be time to reimagine your entire business.

Targeted cost-cutting is a tried-and-true method under normal market conditions

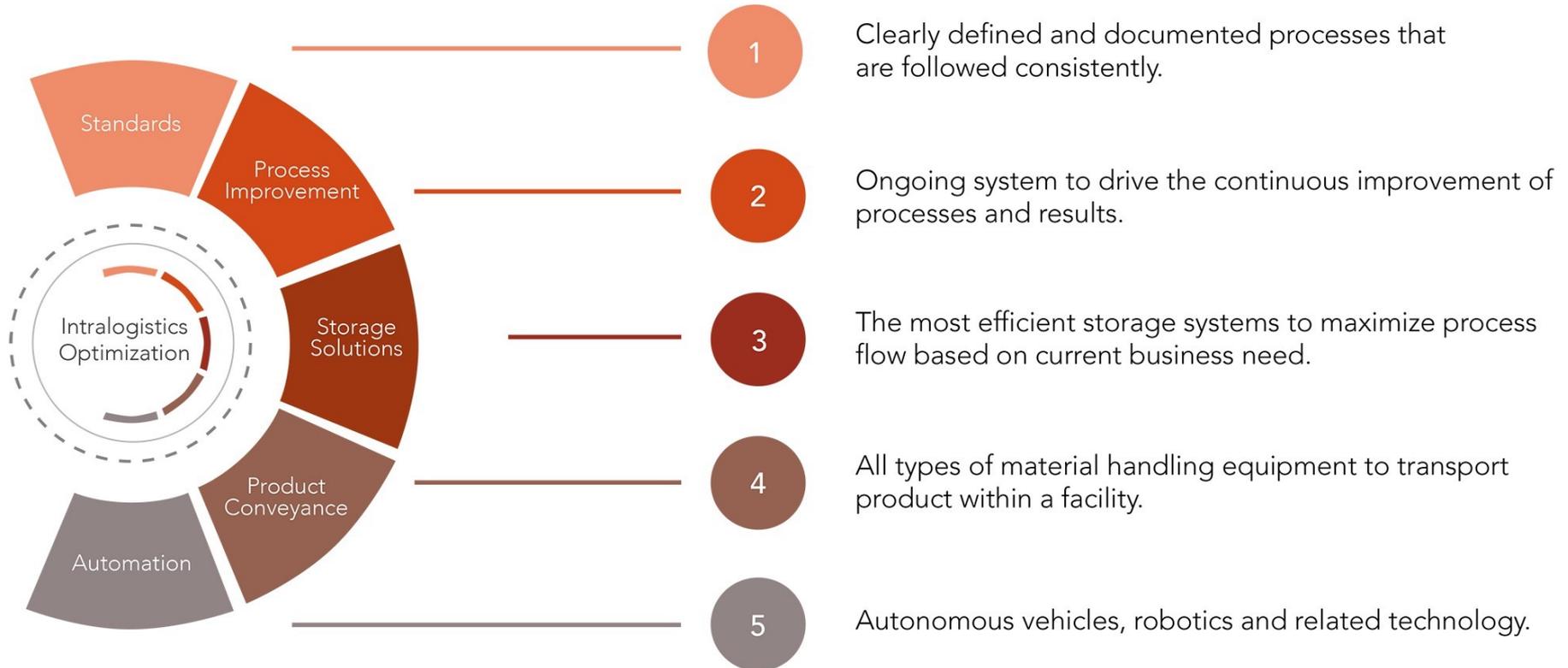


Zero-based budgeting radically redesigns a company's costs to win under new market conditions



How do I keep up with DTC or eCommerce demands - Customer's must start with "Optimization" or Lean Management

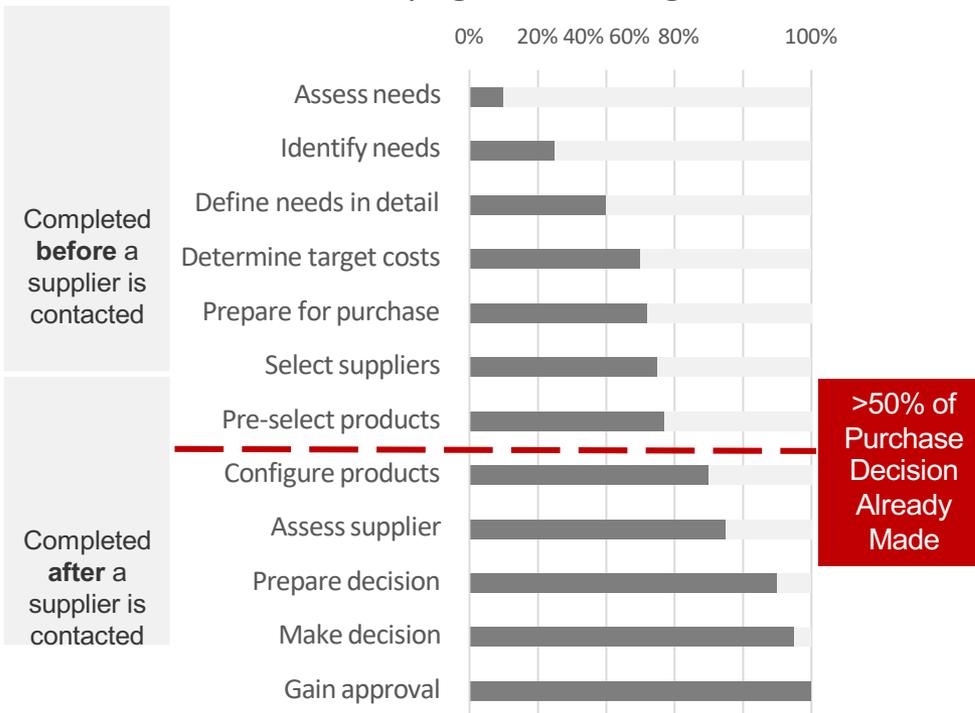
1. Customers seeking to transform their supply chains by adding e-commerce / omnichannel fulfillment will need to first establish optimal processes before jumping into automation.
2. LM / TPS is a Main core-competency and can be sold as a consulting / value-added service to customers in the "new normal" market environment.



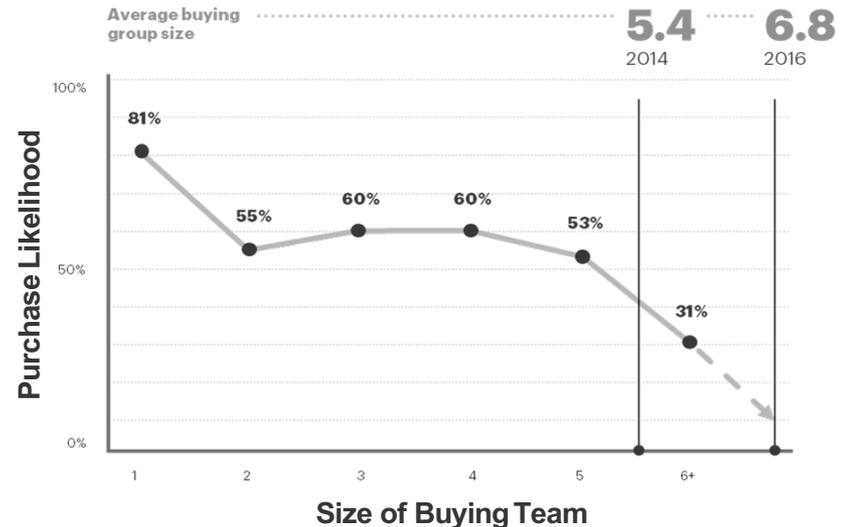
When do I engage partners to “Right Size” Automation

1. Clients typically are >50% down the road to their purchase decision before they engage a partner.
2. As the number of stakeholders involved in the purchase decision increases, the likelihood of making a purchase decreases, especially w/ new products.
3. Given the risk-averse nature of group purchases, value propositions need to be supported by testing, verifiable claims, and proof points to sell internally.

Final Buying Decision Progress



Purchase Likelihood Decreases & Becomes More Risk Averse as Buying Team Size Grows



Summary:

1

COVID19 has shocked the economy / supply chain, which will lead to lasting change and a “New Normal”.

2

E-commerce, and an increased focus on resiliency will spur an evolution in supply chain best practices and drive significant changes in our market.

3

The changes will require a whole host of “Intralogistics” solutions, that will all need to integrate seamlessly with one another.

4

“Optimize” current state, “Connect” data for business intelligence, in order to “Right Size” automation. Better Thinking = Better Process = Better Business and results in navigating the “Current State” to profitably.
