

# Advanced Pool Distribution

**Key Enabler of Retailers' Omnichannel Transformation—Improving Speed, Precision, and Flexibility While Lowering Costs**



*By Bill McBeath*

*In collaboration with:*

DESCARTES™

# Table of Contents

- Achieving Speed, Precision, Flexibility, and Profitability Simultaneously ..... 1**
  - How Pool Distribution Works ..... 1
- Capabilities of Advanced Pool Distribution ..... 5**
  - Networked Pool DCs With Standardized Best Practice Operating Procedures ..... 5
  - Total Precision Visibility ..... 6
  - Flexibility, Timing, and Total Control of Delivery in the Last Mile ..... 8
    - Trap and Hold Enables Metered Deliveries, Precision Slots, and Additional Flexibility ..... 8
    - Split/Intraday Deliveries ..... 8
    - Intact Shipment Delivery ..... 9
  - Surge Capacity ..... 9
    - Forward Positioning to Smooth Out Transportation and Store Space Requirements ..... 9
  - Value-Add Services and Custom Programs ..... 10
  - Advanced Pool Distribution Provides Flexibility and Control ..... 12
    - When Is Pool Distribution the Best Option? ..... 13
- Why Pool Distribution Now ..... 13**
  - Speed + Precision + Lower Cost + Flexibility ..... 13
  - Pool Distribution is a Mature, Reliable, Low Risk Service ..... 14
  - Improving the Shopper’s Experience ..... 14
  - Enabling Omnichannel Transformation ..... 15

## Achieving Speed, Precision, Flexibility, and Profitability Simultaneously

Retailers are under pressure to deliver online omnichannel excellence and maintain the relevance and vitality of their physical stores, all while keeping costs down and sustaining profitability. Transportation costs are an important and growing piece of this equation. Amazon has set a high bar with expectations for 'free' 2-day shipping<sup>1</sup> (Amazon subsidized their transportation costs by \$7B<sup>2</sup> last year). Competing retailers need to match those expectations. At the same time, there are pressures to make smaller more frequent deliveries of inventory to stores. And all of this needs to be done at the lowest possible fulfillment costs.

Pool distribution can be a key part of the equation for retailers trying to achieve those competing objectives simultaneously. It leverages forward-deployed inventory to provide responsiveness (radically decreased transit and replenishment lead times) and can provide surge capacity. Even though many transportation managers have heard of pool distribution, they may not fully appreciate how much it has evolved in recent years from the basic pool distribution they may be familiar with. This paper describes what differentiates advanced pool distribution from basic pool distribution and the benefits made possible when working with an advanced pool distribution provider combining speed, flexibility, precision, inventory control/access, and lower costs simultaneously.

### How Pool Distribution Works

Retailers often have one or two central DCs to serve the entire country (or continent in the case of Europe). Depending on their volumes and the markets they sell into, a large retailer may also have multiple regional DCs. While it is common for a retailer to locate regional DCs near major markets where they have enough stores to justify it, this still leaves many stores that are at a distance from their DCs. Small or mid-sized retailers may only have a single DC serving the entire country. For those numerous stores and markets that are not near one of the retailer's DCs, goods are typically shipped to the stores using some combination of long-haul LTL (less-than-truckload), long-haul dedicated TL (truckload/milk run<sup>3</sup>), and/or parcel deliveries. This is expensive (in the case of parcel), slow (in the case of LTL), and imprecise (i.e. both parcel and LTL have long delivery windows). Dedicated TL and LTL both add processing time and labor costs at the DCs. For stores that are not near a retailer's DC, using pool distribution can be a much better option than dedicated TL, LTL, or parcel.

A pool DC is run by a third party and is shared with multiple other retailers who also have stores in that market. Retailers who could not otherwise justify having their own DC in that market, gain the advantages of a

---

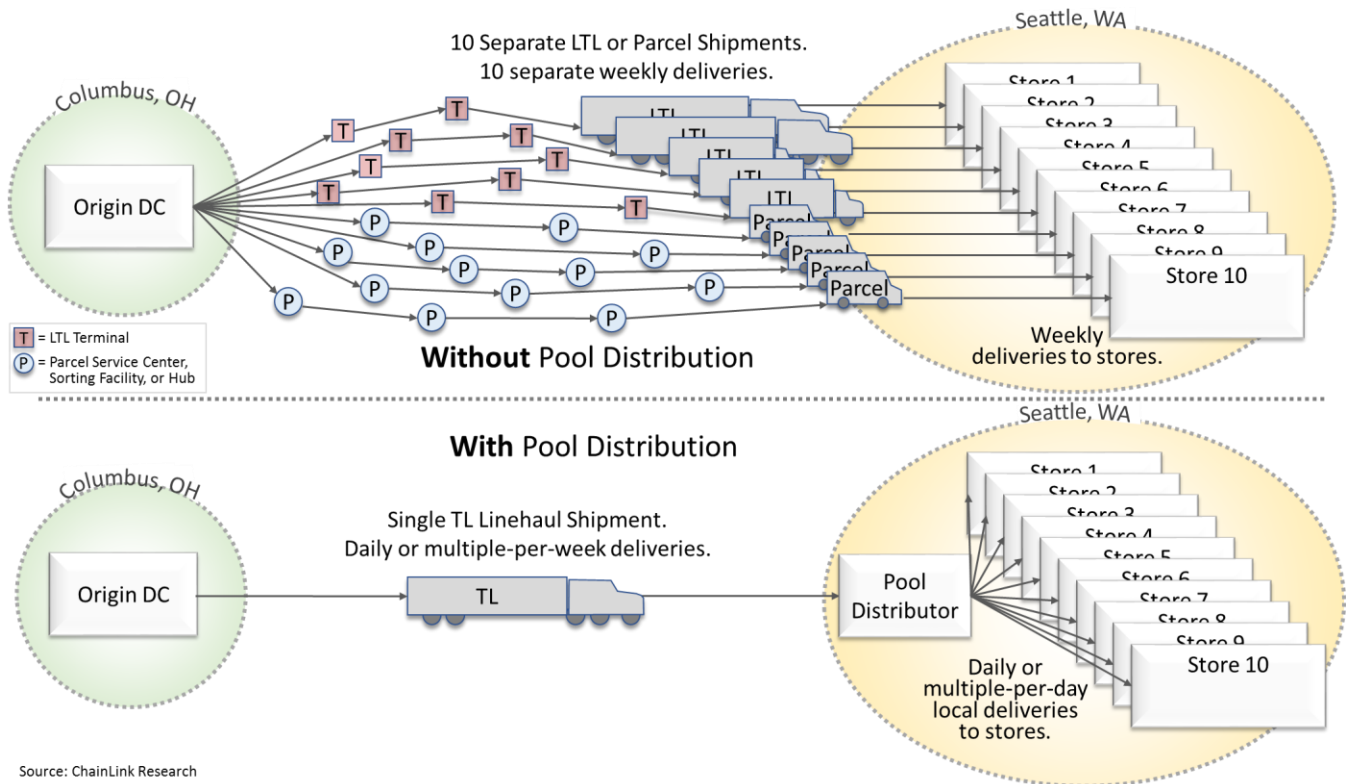
<sup>1</sup> Amazon Prime members pay \$99/year, but since that is a sunk cost for them, other retailers need to somehow match up to the 'free 2-day delivery' expectation that Prime members now have, in order to be perceived as at parity with Amazon (all else being equal).

<sup>2</sup> Amazon reports their 'Net Shipping Costs,' which is a measure of how much more they pay for shipping than what they charge in shipping fees and Prime fees. At \$7B, that is about 5% of revenue and represents an enormous impact on profits, which can be viewed as an investment by Amazon to buy market share. Other retailers are generally not in a position to make those kinds of sacrifices to their profits and so have to become very innovative to compete.

<sup>3</sup> A 'milk run' is when a single truck collects goods from several suppliers and drops them off at the customer or (as in this case) a single truck collects goods at the DC and drops them off at several stores serially.

## Advanced Pool Distribution

local DC, with value-add capabilities and controls. By using pool distribution, the retailer can consolidate multiple individual-store shipments into a single TL (truck-load) shipment to the pool distribution provider. The PD (pool distribution) provider then splits the consolidated shipment into per-store shipments. By combining those per-store shipments from all the retailers they serve within a mall or shopping district, the PD provider can now do daily or even sub-daily deliveries.



Source: ChainLink Research

**Figure 1 – Origin DC’s Perspective—Consolidating Multiple Long-Haul Shipments, More Frequent Store Deliveries**

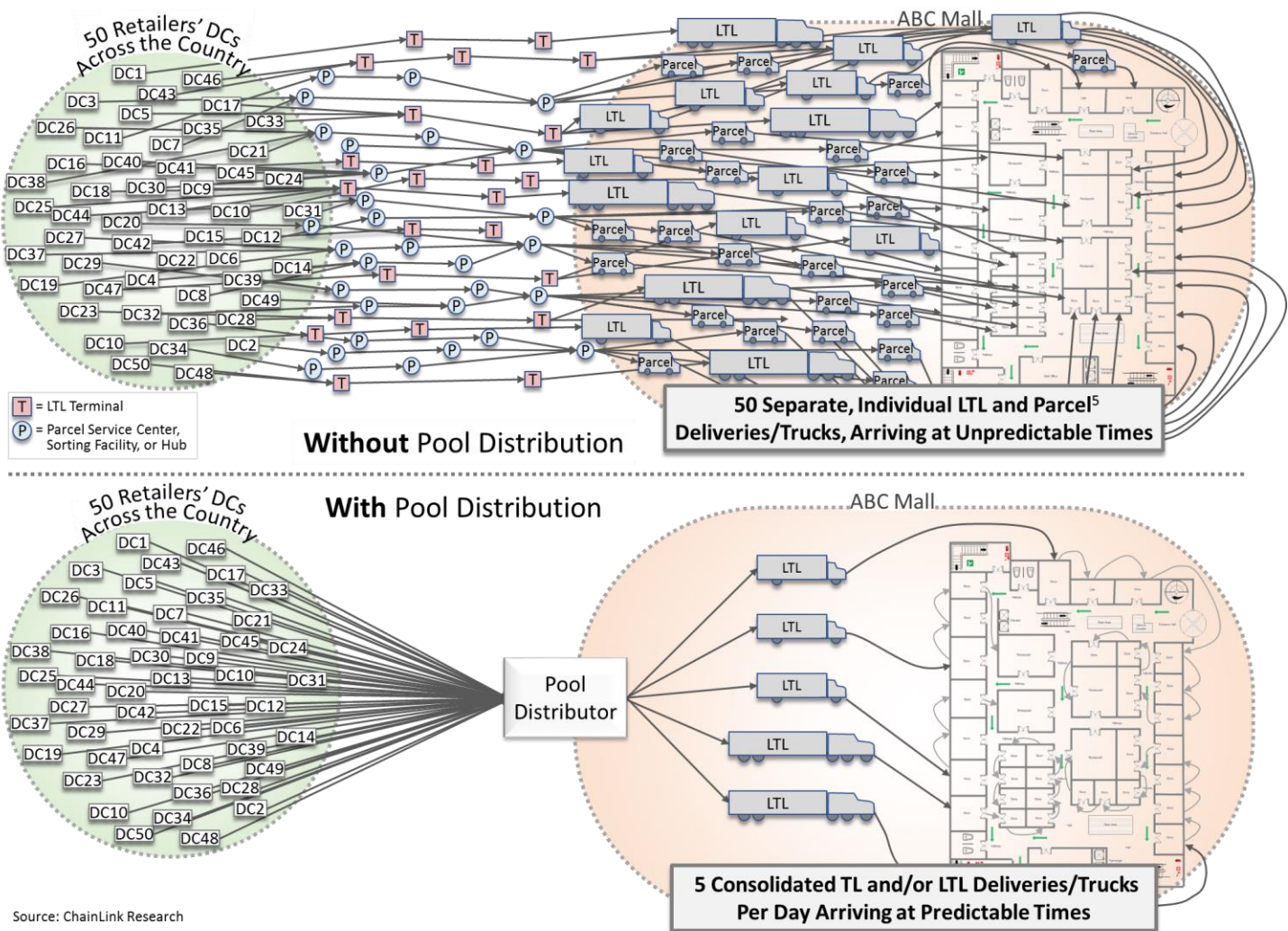
Figure 1 shows the perspective of a hypothetical retailer that has a DC in Columbus, shipping to 10 stores in the Seattle area. Without pool distribution, they are forced to use more expensive, less frequent LTL or parcel deliveries. With pool distribution, they can consolidate all of the deliveries for that market into a single TL or LTL load. This enables more frequent deliveries, especially from the pool distribution point to the stores. It also saves a substantial amount of labor at the origin DC, by reducing or eliminating the store-level sorting, palletizing, staging, or (in the case of milk runs) sequentially loading the goods.<sup>4</sup> Instead, cartons can be fluid loaded in any sequence until the truck is full. It reduces the DC space requirements. Store-level sorting is done by the PD provider who specializes in that process and can thereby do it much more efficiently. For the final mile, there are economies of scale benefits from being combined with other retailers’ shipments.

<sup>4</sup> When goods are loaded for a milk run, the last stop has to be loaded first. If other cartons are ready first, they have to be temporarily stored in a staging area, which takes up more room and also means additional handling of the goods.

## Advanced Pool Distribution

Another advantage is a reduction in transportation management complexity. Pool distribution simplifies outbound shipping from the DC. What formerly required multiple shipments (and potentially multiple modes and different carriers) is now handled in a single shipment to the pool operator. A retailer might have 20 or more carriers servicing stores in a single region, which can be replaced with a single carrier, making transportation management much more efficient and cost effective.

Keep in mind, there will typically be many dozens of retailers sharing the same pool distribution provider (that's the 'pool' in pool distribution). Therefore, pool distribution helps as well from the perspective of the destination mall or shopping district where all those retailers' stores are located. As shown in Figure 2, without pool distribution, the mall receives separate shipments from each retailer. With pool distribution, these shipments are consolidated into TL or LTL shipments. This substantially reduces traffic and congestion at the mall's delivery areas. This can help to lower costs (such as in locations where there are fees for delivering to congested urban areas), as well as to comply with ordinances in places that restrict access. Deliveries can be more precisely timed, so they arrive at the desired time slot and avoid too many vehicles arriving all at the same time.



**Figure 2 – Destination Mall's Perspective—What Changes with Pool Distribution**

## Advanced Pool Distribution

Pool distribution can provide the speed and visibility of parcel at the cost of LTL, with granular visibility and control better than both. Figure 1 and Figure 2 illustrate some of the benefits of basic pool distribution. However, the advantages of pooled distribution can go far beyond saving money on transportation, especially when the right PD providers and underlying infrastructure are used. This is where *Advanced Pool Distribution* comes into play. Table 1 below outlines the key capabilities comprising advanced pool distribution and compares and contrasts it with parcel and LTL.



	Parcel	LTL	Advanced Pool Distribution
Cost	\$\$\$	\$	\$
Speed	Next day to several days	Several days	Same day (for inventory at the PDC) <sup>6</sup>
Delivery Window Precision	½ Day to Several Days	Several Days	15 Minutes to a few hours
Tracking Unit Granularity	Carton/Package	Shipment/PRO Number <sup>7</sup>	Carton/SKU
Tracking Scan Location and Status Granularity	Order received, Pickup, Destination Hub, Delivered	Pickup, Delivered	Scans at each step in the process: Inbound, Integrity, Outbound, Delivery
Standardized Operating Procedures Across Different Providers	No	No	Yes
Metered Delivery	No	No	Yes
Intact Shipments	No	No	Yes
Precise sortation load sequence	No	No	Yes
Trap and Hold/Virtual Backroom	No	No	Yes
Offsite inventory/local surge capacity	No	No	Yes
Floor-ready merchandise preparation	No	No	Yes
Store shelf restocking	No	No	Yes
Pickup in Store	Yes	No	Yes
Fulfill-from-Provider’s DC	No	No	Yes
Kitting	No	No	Yes
Returns processing/refurbishment	No	No	Yes
Suitable for low store-density markets	Yes	Sometimes	Sometimes <sup>8</sup>
Typical damage/claims rates	1% - 2%+	0.75% - 1.5%	0.5%

**Table 1 – Comparison of Parcel, LTL, and Advanced Pool Distribution**

<sup>5</sup> Some factors reduce or increase the number of trucks. A parcel truck may make deliveries to multiple retailers on one visit, reducing the number of trucks, but may also make multiple deliveries per day to one retailer, increasing the number of trucks. In any case, a mall without pool distribution has many more trucks than one served by pool distribution.

<sup>6</sup> PDC = Pool Distribution Center. Inventory held at the PDC can usually be delivered to stores on the same day.

<sup>7</sup> PRO number is a 7 to 10-digit freight bill number, unique to each shipment, typically printed on a barcode sticker affixed to each pallet. The entire shipment has the same PRO number.

<sup>8</sup> Pool Distribution requires sufficient store-density in a market (enough to fill a full trailer at frequent intervals). Retailers may collaborate and combine loads with other retailers and reach sufficient volumes in lower density markets.

## Capabilities of Advanced Pool Distribution

Not all pool distribution (PD) providers are created equal, when it comes to the kinds of services and value they provide. Here are key capabilities and attributes to look for in advanced pool distribution.

### Networked Pool DCs With Standardized Best Practice Operating Procedures

Many PD providers in North America use Descartes Pool Distribution (specifically [BearWare](#))<sup>9</sup> to run their operations, which has created an interoperable network of pool distribution providers. As of Q1 2017, there are over 125 third party PD providers on the BearWare/Descartes network, with over 150 PDCs (pool distribution centers) between them, covering all major US<sup>10</sup> and Canadian markets. Retailers use the same software with any provider on this network—to schedule shipments, create labels, scan outbound freight (from retailer to PD provider), send ASNs, receive regular status updates (received at DC, putaway, shipped to store, received at store, returns, etc.), and more. They don't have to deal with a different system for each provider.

Just as important, all pool distribution providers in the network use the same mature set of standard operating procedures, which have been developed, evolved, and refined over the last 25 years. When a new PD provider is brought into the Descartes Pool Distribution/BearWare network, they receive extensive operational training on these best practices. This has two important consequences. First, the retailer can use the same software and operating procedures across their entire network, rather than having to deal with multiple different integrations and procedures, one for each different PD provider. The network offers a fungible set of service providers—i.e. providers across the network are interchangeable.<sup>11</sup> That tremendously simplifies things for the retailer, making it easy for them to mix and match different pool providers to meet the retailer's exact needs and geographical footprint.

Secondly, the common operating procedures ensure not only interoperability, but a consistent level of service and quality across this network of independent PD providers. The retailer is ensured that they will always get the same best practices, the same fine grained, case-level, near-real-time tracking, and at least the same level of core service, regardless of which provider they are using.



---

<sup>9</sup> BearWare was [acquired by Descartes](#) in 2015.

<sup>10</sup> Including Alaska, Hawaii, and Puerto Rico

<sup>11</sup> While all PD providers in the network offer the basic core services, some providers will offer specialized value-add services that others do not provide. The network's common operating procedures ensures that these value-add services are provided in a consistent way, whenever more than one provider offers those services, regardless of which provider is providing the services.

## Advanced Pool Distribution

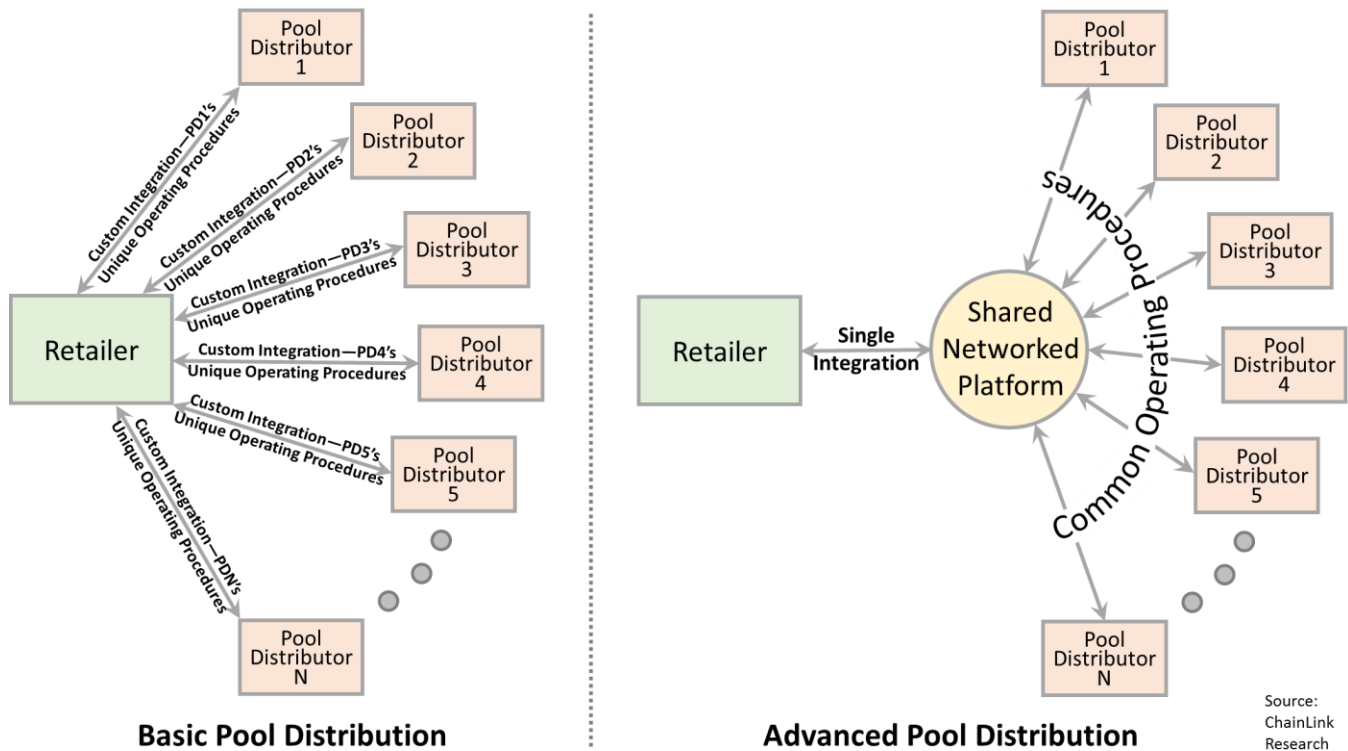


Figure 3 – Integrating with Multiple Standalone Pool DCs vs. Networked Pool DCs

## Total Precision Visibility

When all pool distribution providers in a network are following the same standard procedures (as described above), they will be scanning every move or change of status of every carton/SKU. That provides consistent, network-wide, precise, granular, near-real-time visibility—from the time a shipment leaves the retailer’s DC<sup>12</sup> up to receiving it at their store, even if the retailer moves to a different PD provider. Without this, there is a significant blind spot after merchandise leaves the retailer’s own DC. If shipped via LTL, the status is typically unknown until it is delivered and even then, there is the challenge of dealing with different carriers’ methods of notifying status. Parcel carriers provide scans at more points during the trip (pickup, destination hub, delivery), but the retailer still has to deal with multiple different parcel providers and has no single centralized source of visibility.

When using Descartes Pool Distribution/BearWare, retailers gain a single source of visibility across the network. It combines all scan and status updates, not only from all the various PD providers they are using, but also from all the parcel carriers, the retailer’s own private fleet, and other non-pooled delivery using other carriers. These are all combined together, with the pooled delivery visibility, into one unified visibility system,

<sup>12</sup> Alternatively, when orders are drop shipped from the supplier directly to the PD and the supplier participates by scanning each carton loaded onto their truck, then visibility of these drop ship shipments is also possible.



providing the retailer's planners and store managers and associates with a single interface for checking the status of all shipments to the stores and to the end customers, no matter which mode they are shipped by.

Advanced pool distribution providers provide more granular scans than either LTL or parcel. They provide carton-level scans at every step of the way, including receipt at the DC, putaway or transfer to offsite storage, picking, loading into the truck, receipt at the store, or in some cases even replenishment onto the store shelf. They also provide status visibility out-bound from the store for ship-from-store, store-to-store transfers, and returns.

This visibility has a lot of value. On a tactical level, it saves time and phone calls asking where things are. It also reduces chargebacks and disputes between carrier and retailer as they have a common view of what happened. Perhaps the greatest value is the ability to gather rich data for performance tracking and analytics. With unified visibility, the transportation staff spends less time gathering and cleaning up the data, and has more time to analyze it and respond to and fix issues. They are able to get ahead of the curve and be proactive, potentially avoiding expediting, identifying and resolving problems a lot earlier in the cycle. With better visibility into what they actually have in the PDCs (pool distribution centers) and stores, they know when more cost-effective shipping options can be used, and reserve expediting only for when it is truly needed. Ongoing opportunities for improvements can be uncovered and continuous improvement realized.

---

### **An Example of Flexible Delivery and Rich Array of Services**

[Dicom](#) is a transportation service provider offering a range of services including parcel, LTL, TL, warehousing, cross-border, pool distribution and more. Along with other services, they operate over 20 pool distribution centers in various markets across the US, providing PD services to a large variety of specialty, apparel, consumer goods, and home furnishing retailers. At their PDCs, Dicom sorts and segregates inbound loads, can build loose or palletized loads, do live unloads, provide precise delivery windows, and drop and hook<sup>13</sup> delivery.

They can provide special handling. For example, for stores that can't take pallets, the driver will unload the pallet and do individual carton deliveries into the store. They can provide reverse logistics, outbound special handling, split deliveries, carton transfers, and returns. They can deliver to dock doors, store fronts, strip malls, shopping malls, and make custom deliveries in the early morning, late night, or weekends, with assisted or unassisted delivery. Because of their more precise OS&D<sup>14</sup> process, scanning, and fewer touches (compared with LTL or parcel), claims for Dicom's customers are less than 0.5% on average, and under 0.1% for some accounts.

They can do reverse logistics, pulling back unsold seasonal inventory and seasonal store fixtures to warehouse them for the following year. They can bring in seasonal or promotional displays and provide the reverse logistics for those as well. In accommodating late delivery windows (up to midnight), they can do unattended delivery, so that the delivery is waiting for the retailer first thing the next morning. Dicom offers many other variations and customized services and is a good example of the flexible, customized, customer-service orientation that is characteristic of advanced PD providers.

---

---

<sup>13</sup> Drop and hook is dropping off a trailer and leave it for the retailer to load or unload. This accommodates retailers that have high volumes and/or can't handle specific appointment times.

<sup>14</sup> OS&D = Over, Short, and Damaged

## **Flexibility, Timing, and Total Control of Delivery in the Last Mile**

Advanced pool distribution provides trap and hold (holding back inventory at the PDC), as well as offsite management (holding inventory at a nearby customer-managed site), allowing much more flexibility, precision, and control of the timing of releasing inventory to stores. Retailers maintain total, precise control of their inventory all the way through the last mile, in a way that is not possible with either LTL or Parcel.

### **Trap and Hold Enables Metered Deliveries, Precision Slots, and Additional Flexibility**

In the early days of pool distribution, a 'push' approach was used: all goods arriving at the pool point were pushed to the stores on a regular schedule, typically every two or three days to each store. Now pool distribution providers can do *'trap and hold'*, where shipments are held at the pool DC until the desired timeframe. A PDC can thus provide much more flexible and precise metered deliveries, on an as-needed basis, as well as accumulate inventory for surge delivery.

A pool distribution provider can provide different options for different retailers: one retailer might opt to get the prime delivery slot, an hour before store opening, while the next one gets a late morning slot or afternoon slot. Each retailer can decide what is most important for them: paying extra for the better slot or getting a discount if they have the flexibility to take delivery at a different time. Even paying extra, the cost of precise delivery is *much* less using pool distribution than with parcel or LTL.<sup>15</sup> Precision delivery also enables better store labor planning because the retailer knows exactly when they will need more associates available to receive and put away deliveries.

Trap and hold also provides flexibility for other circumstances and objectives. For example, fast fashion or seasonal items can end up selling faster than planned at some stores and slower than planned at other stores, resulting in out of stocks, markdowns, and/or costly inter-store transfers. Using trap and hold, the retailer can hold back a significant portion of that inventory at the PD or offsite until demand patterns are clearer and then send the right amount, based on actual demand.

### **Split/Intraday Deliveries**

Some stores might have very limited or non-existent back store stockroom space. Instead of two or three large deliveries per week, the pool distribution provider can provide *'split deliveries,'* where a single inbound shipment is split into smaller daily or even twice daily shipments. While the retailer pays a bit more for these kinds of services, that kind of delivery frequency may be essential for smooth operation of the store and is often impossible or prohibitively expensive without a pool distribution point nearby.

---

<sup>15</sup> Standard LTL and ground parcel services have multi-day windows of delivery. Parcel can provide more precise day-specific or even portion-of-day-specific delivery windows, but only at high premium prices. Some LTL providers offer guaranteed delivery windows, even down to hour-specific, but as well for a large premium in price.

## **Intact Shipment Delivery**

Sometimes it is important for an order or shipment to be delivered ‘intact’; that is the entire set of items needs to arrive at the store together at delivery. Intact shipment delivery might be needed for promotions or some other event, where you can’t afford to have displays and merchandise sitting around waiting for the other pieces to arrive. Neither parcel nor LTL can guarantee intact deliveries. In a pool distribution center (PDC), even if the pieces are shipped from different sources or arrive in different shipments, they can be held at the PDC until everything has arrived and then sent to the store intact at the precise desired time.

## **Surge Capacity**

Peak seasons can be particularly stressful for retailers, as they struggle to dramatically increase the velocity and frequency of shipments over long distances just at the time when competition for limited available transportation resources is at its highest. Pool distribution can help smooth out transportation demand, providing capacity to accommodate not just seasonal peaks, but also other holiday-specific surges, big promotions, or special circumstances (e.g. big events or weather-related). Without pool distribution, when faced with these demand surges, retailers are forced to try to make a series of bulk shipments in a short time window, and hope that the needed transportation capacity is available, that the timing is right, and that they will have enough space at the stores to store all of that inventory. When demand is higher than expected, expensive expedited shipping is resorted to and stores can still run out of product just at the point when demand is highest, resulting in major lost sales and disappointed customers. When demand is lower than expected (as often happens), all of the in-transit shipments will arrive and jam up the works at the store, potentially requiring earlier than desired markdowns in order to clear out the excess inventory to make room.

## **Forward Positioning to Smooth Out Transportation and Store Space Requirements**

With pool distribution, inventory can be forward-positioned at the pool distribution center, bringing in the additional needed inventory over a period of weeks or even months, in anticipation of the demand surge. Inbound deliveries can build up the required stocks of inventory at the pool DC (or an offsite location nearby) at a methodical, cost-effective rate, over time. The replenishment lead time from PDC to store is extremely short (same day, if needed). Inventory can now be brought to stores on very short notice, to meet demand during surges. As the peak season progresses, additional deliveries to the pool distribution can be made or held back, based on actual demand. This surge capacity is provided without sacrificing any of the precision and carton/SKU-level control.

Best-practice standardized operating procedures can also help during peak season, when there is a lot of temporary labor working in the distribution center. For example, large, obvious, intuitive labeling of cartons, combined with corresponding markings on floors and shelves, standardized procedures known and followed by all the workers, and scanning at each step (providing instant feedback at the moment something needs correcting)—the combination of all of these helps to ensure precise compliance with all of the required sorting, sequencing, holding, and other services. Thereby, deliveries are consistently intact, on-time, in-sequence, and with correct quantities and items. In fact, pool distribution providers’ average chargeback rates are about half that for LTL carriers and significantly less than the typical rates for parcel. That type of precision and consistency during surges is only possible with the systems, disciplines, and processes enabled and mandated by an advanced pool distribution approach.

## Value-Add Services and Custom Programs

A pool distribution provider may also provide a variety of value-add services and customized programs for retailers, such as:

- Precise sortation—Some PDs will, for example, presort apparel, in an area near the shipping dock doors, according to which department it will go to: Men’s, Women’s, Children’s, and Accessories. The individual cartons are then fluid loaded onto the trailer in a precise, per-department sequence, rather than the random order they happen to arrive in. This enables rapid unloading and putaway at the store. In addition, the delivery driver and their assistant may have instructions to deliver certain cartons to certain locations within the store, near where those cartons will be stocked. This could be a critical service for some locations, not only for rapid shelf replenishment, but for quicker direct-to-department unloading at space-limited stores, such as a downtown store that has very restricted, limited-time parking and constrained unloading space availability.
- Trap and hold/virtual back room—The PD can hold back portions of a specific inbound shipment until a specific date and time, while other cartons from the same shipment are cross-docked and sent to the store right away. The held-back inventory may be held at the DC or stored at a nearby offsite location (see next bullet), to be later pulled back in and blended with other future cross-docked shipments.<sup>16</sup> This capability, combined with frequent, flexible store replenishment shipments, allows the pool DC to act almost as a ‘virtual back room’ that nearby stores can replenish from for precise resets. A store might place an order late in the day for just the right amount of merchandise to be delivered and restocked right after closing or before the next morning’s opening, so that the store is fully stocked and ready to go at opening.
- Offsite inventory—Sometimes a retailer requires more storage space than is available at the pool distribution center, for example to hold inventory in preparation for the holiday season or for e-commerce shipments. When directed by the retailer, the PD provider sends parts or all of a shipment to an offsite location, which is typically staffed by the shipper themselves. They may do only full case or they may do a blend of full case and SKU-level warehousing. The shipper picks and packs orders and the same pool carrier comes by and picks up the orders, bringing them back to the pool distribution center, and blending them into the day’s shipments bound for the stores. Alternatively, the PD provider may leave room in store-bound trucks and pick up those cases at the offsite location on the way to the store.
- Floor-ready merchandise preparation—Some PD providers offer floor-ready merchandise preparation services, such as steaming, hanging, and sequencing of garments.
- Store shelf restocking—In some cases, the delivery driver and their assistant will unpack and restock the store shelves directly, freeing up store associates to spend more time with customers.

---

<sup>16</sup> The pool carrier is responsible for sorting and temporarily storing carton-level inventory. When released by the shipper out of that held-back inventory, the cartons get added back into the next replenishment shipment going out to the store; or alternatively they may be sent as their own separate shipment to the store later that day or evening.

## Advanced Pool Distribution

- Ship-from-store—While they are there, the driver may also pick up (or even pick from shelf) ship-from-store orders and bring them back to the DC for parcel shipment or to combine with a TL or LTL shipment for zone skipping. They may also put the order onto another of the PD provider's outbound trucks for drop off at the customer's house or another store for in-store pickup.
- Pickup in Store—The PD provider can also deliver individual orders to the store that a customer requested to pick up in that store. These may be an order placed by the customer online or in the store with an associate.<sup>17</sup> The PD provider can be instructed to put the customer's order in a separate specified customer pickup order prep location for store associates to prepare it for customer pickup.
- Fulfill-from-PDC—PD providers may pick, pack, and ship individual e-commerce orders for the retailer, either shipping them directly to the consumer, or to the store for store pickup. If the inventory for the order exists in the PDC and is not already allocated,<sup>18</sup> then that PDC inventory can be used to fulfill the order. If the PDC lacks the necessary inventory, then the items may be shipped from the retailer's DC to the PDC to fulfill the order (see 'zone skipping' below).
- Zone Skipping Parcel Delivery—E-commerce orders that would be normally sent via parcel from the retailer's DC directly to customers in other shipping zones, can now be sent most of the way there on the same truckload deliveries carrying store replenishment inventory.<sup>19</sup> The PD provider then sends those orders via parcel for the last leg to the end customer, at a significantly lower total cost. In some cases, pre-labeled ecommerce parcels are loaded at the retailer's DC into one or more bulk boxes<sup>20</sup> which are sent to the PD provider, who delivers the bulk boxes to the parcel carrier's hub. Some PD providers may even provide direct delivery to the customer with their own vehicles at a lower cost, if they are making other deliveries in that same neighborhood anyway.
- Kitting/Assembly/Installation—Kitting services may be provided, such as building kits of special merchandising fixtures for promotions. Some PD providers have operations for assembling exercise equipment, furniture, or other assembled items. A few provide 'white glove' home delivery service, with installation.
- Returns processing/refurbishment—Some PD providers offer reverse logistics services for things like product returns, promotional display returns, excess promotional or seasonal inventory, and so forth. In a few cases, they will provide value-add return services such as disposition decision-making (refurb vs. return vs. liquidate vs. dispose), refurbishment, and/or repackaging.

Advanced pool distribution providers are in constant dialog with their retailer clients, working closely with them to understand the retailer's needs. The PD provider often demonstrates the creativity and flexibility

---

<sup>17</sup> The inventory to fulfill a pickup-in-store order from the PD may come from a shipment from the retailer's DC that was sent specifically to fulfill this order, or from supplier drop ship for the order, or pulled from trap and hold inventory, or transferred from another store.

<sup>18</sup> The PDC may 'borrow' from store inventory at the PDC to fulfill an order, provided that inventory at the PDC will be replaced/replenished from the retailer's DC in time to meet the stores' upcoming needs.

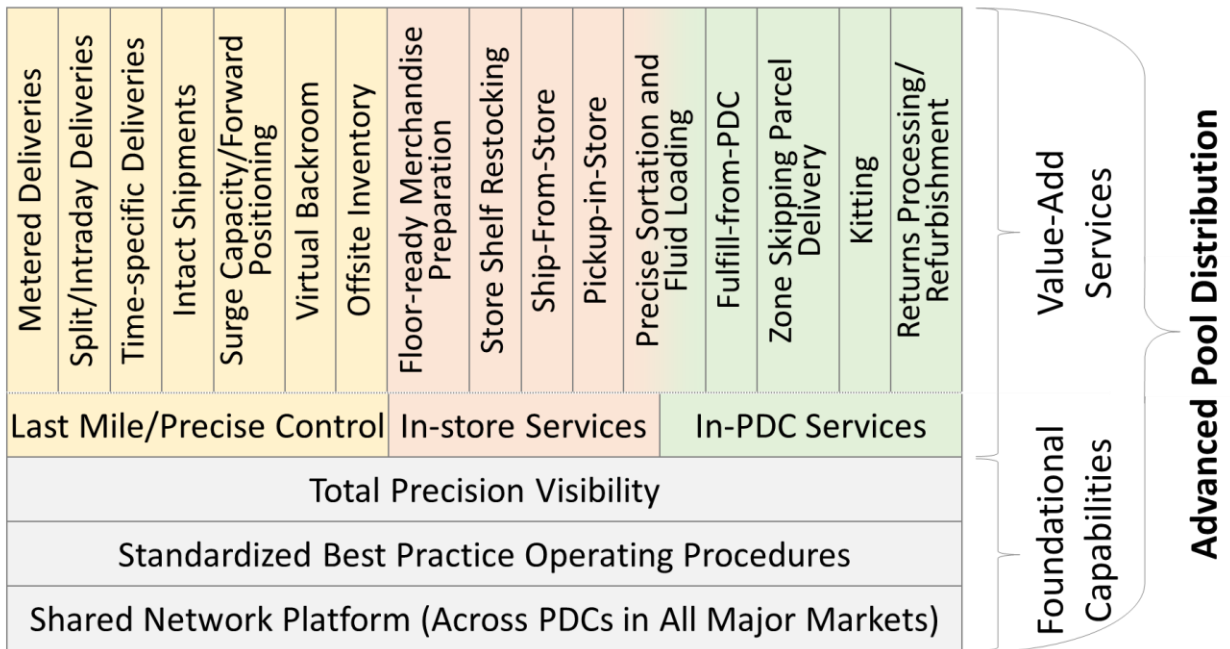
<sup>19</sup> That is, provided the promised delivery window can still be met. If the customer requested next day or 2-day, then this approach often will not get it there on time. However, for standard ground delivery with a wider window, this approach often works, especially for active, high volume pool points where the retailer is sending truckloads daily.

<sup>20</sup> A [bulk box](#) is a pallet-sized box, sometimes referred to as a Gaylord container or Gaylord box.

needed to design and add new value-add services, when it makes sense for both parties. Retailer-specific and even store-specific programs can be created out of combinations of these services to fit the retailer’s unique needs by location. These programs can contribute not only to logistical efficiency, but to an improved shopper experience, for example by decluttering stores, ensuring merchandise is on the shelves on time, and freeing up associates’ time to spend it serving customers directly.

### Advanced Pool Distribution Provides Flexibility and Control

In dynamic, hard-to-predict, interrupt-driven retail store environments, a store may need to change delivery times at the last minute; or they may want the delivery split—deliver part now, hold the rest and deliver it at the end of the day; or any of countless other variations of last minute changes that may be needed. The best practices of pool distribution described earlier mean that the vast majority of cartons are flowing according to plan, without errors. That level of error-free execution, combined with precise granular, near real-time visibility, enables exceptions or changes to be accommodated much more smoothly and easily. That kind of last minute change and precise control is not possible with parcel or LTL where deliveries are going to show up whenever they do, regardless of whether the store is ready or not ... or regardless of whether those items are needed at that time or earlier or later. Pool distribution provides valuable flexibility and control to retailers.



Source: ChainLink Research

Figure 4 – Advanced Pool Distribution Capabilities and Services

Figure 4 summarizes the kinds of capabilities and services that an Advanced Pool Distribution provider offers. This illustrates the additional value provided by advanced pool distribution vs. basic pool distribution.

## Why Pool Distribution Now

In this age of omnichannel commerce, retailers need the fastest service and maximum flexibility, at the lowest possible costs for store replenishment and e-commerce order fulfillment. For many retailers and markets, pool distribution is the best option.

### Speed + Precision + Lower Cost + Flexibility

For retailers and markets where it makes sense (see *When Is Pool Distribution the Best Option?*), pool distribution can provide the speed of parcel at the cost of LTL, with the flexibility like having your own in-market DC, and with much better precision, visibility, and control than LTL or parcel. Both LTL and parcel lack the precise delivery windows in standard services and charge *much* more for precise delivery windows<sup>21</sup> than pooled distribution. Rate audits can also be easier with PD than LTL, the latter having complex rate formulas<sup>22</sup> that are different for each carrier. PD uses TL rates, which are usually much simpler and more standardized (typically based on just weight and miles). Pool distribution can be two times (or more) faster than LTL, depending on the number of legs in the LTL journey. Furthermore, there is less loading and unloading, reducing damages and claims. Error rates and chargeback rates are lower. PD scans are highly reliable. Some retailers use them to check the accuracy of their own store receiving scans. And, a retailer's carbon footprint is reduced due to more efficient end-to-end moves.

## When Is Pool Distribution the Best Option?

Pool distribution may be right for your company if any of the following applies to your operations:

- *E-commerce and omnichannel growing in importance*—If you are being challenged to deliver omnichannel performance, with higher service and lower cost, you should consider pool distribution.
- *Shipping steady large volume of LTL/parcel into a market*—You are currently shipping LTL and/or parcel to replenish stores in a market where you have enough store density, volume, and consistency to fill up a line haul trailer at least once a week on a regular basis.
- *Shipping LTL or parcel over longer distances*—The longer the distance being shipped via LTL or parcel, the greater the savings opportunity using TL for linehaul to the PDC.
- *More frequent deliveries needed*—Wherever multiple per week, daily, or even multiple per day deliveries are highly desirable, but volumes to the store only allow once-per-week deliveries using LTL or parcel, PD can help.
- *Capacity constrained during peaks*—You have trouble with DC-to-store capacity during peak demand (seasonal, promo, holidays, events).
- *Need to free up associates' time*—Where store associates are spending too much time in receiving and replenishment activities, and not enough time with customers.
- *Cluttered stores*—Stores are crowded and cluttered with merchandise waiting to be stocked on the shelves.
- *Special delivery requirements*—Store locations with restricted delivery hours or loading space, or requiring specialized delivery equipment, such as smaller delivery vehicles or lift-gate equipped trailers.
- *Limited or no back room at stores*—Limited back room space at stores with the need for more frequent, 'on-demand' delivery.

---

<sup>21</sup> Many LTL carriers don't even offer precise delivery windows as an option.

<sup>22</sup> LTL rate formulas may take into account the number of pallets, weight, dimensions, origin and destination, and other factors.

The savings for PD can be substantial compared with parcel, and in many cases even less than LTL shipments, especially for shippers that are not very high volume, or who have LTL shipments with many legs. A good example of the kinds of savings that can be realized is Stein Mart, who won the [2011 NASSTRAC Shipper of the Year Award](#). They switched from replenishing stores via parcel shipments to using a combination of dedicated and pool distribution lanes, resulting in \$20M of savings. The savings were from both lower shipping costs and from labor savings at stores, due to the more precise and predictable delivery times. That \$20M savings was 1.7% of Stein Mart's revenue<sup>23</sup> at the time, representing an enormous contribution to profit.

### **Pool Distribution is a Mature, Reliable, Low Risk Service**

Pool distribution services have been around for over 30 years. During that period, PD service providers have continually learned, refined, and improved their approach. Many high-performance retailers have been using pool distribution for years and they keep doing it because of the results they achieve. In an established network, like the one powered by Descartes Pool Distribution/BearWare, the providers are proven and the risks are very low.

### **Improving the Shopper's Experience**

Beyond savings, moving to a pool distribution model can impact the shopper's experience in a number of ways. The store is less cluttered, with fewer or no cases of merchandise lying around waiting to go on the shelves—shelf restocking can be done before opening, after closing, and/or rapidly in a very short time period during store hours. More importantly a lot of logistical and replenishment work is taken off the store

---

#### **A Well-Known Fashion Retailer's Use of Pool Distribution**

A well-known and highly respected fashion retailer used to do all store replenishment deliveries via parcel or local courier. Now they use pool distribution for those stores that are in markets with volumes high enough to fill a trailer daily. That represents about a quarter of their store deliveries. The cost savings have been substantial. In addition, damage claims dropped with pool distribution, due to fewer touches in the network. They use Descartes Pool Distribution/BearWare to manage their pool distribution shipments. That has given them a dashboard into day-by-day performance that they were not getting with parcel.

Deliveries from the PDCs are made daily to all stores. The retailer sets carton capacity limits on each store, based mostly on the physical capacity of the stock room. Then the pool carrier manages deliveries according to that capacity. The retailer also finds value in more precise and predictable delivery windows provided by pool distribution. It eliminates guess work, providing store managers the ability to better plan labor hours and manage the cost of payroll.

They have seen a reduction in claims and disputes, due largely to reduced touchpoints. They said pool distribution providers are generally more responsive, quicker in fixing problems that do arise, such as an outbreak in damages.

One indicator of how well pool distribution is working for them: this retailer has explored ways to cost-effectively use pool distribution in some of their other, lower-volume markets, even going as far as discussions with other retailers on the possibility of building consolidated truckloads together to get enough volumes for pool distribution.

---

<sup>23</sup> Stein Mart had \$1.2B in revenue for FY 2010.



associates' shoulders, so they can give more attention to selling and serving the needs of customers. The timeliness and flexibility of delivery can materially improve on-shelf availability, a key driver of shopper satisfaction. Always having what the shopper wants on the shelf whenever they come is becoming increasingly important in today's omnichannel world with so many alternatives and instant gratification expectations. The value of this improved customer experience goes far beyond the value of mere logistical efficiency.

### **Enabling Omnichannel Transformation**

Traditional bricks and mortar retail is under attack as never before from the likes of Amazon and others. Excellence in omnichannel has become critical for survival for most retailers. Achieving higher service at lower cost is required for both profitability and for customer satisfaction and competitiveness. This is a key reason for retailers to seriously consider adopting pool distribution *now*.

Pool distribution, with offsite inventory management, allows retailers to have inventory in each market, without relying on the most expensive space they own (their stores) to carry that inventory and fulfill orders. Compared with shipping from a central DC, pool distribution is much more responsive and cost effective for all delivery windows: same day, next day, 2-day, or ground. Compared with shipping from stores, PD does a better job of pooling inventory and concentrating fulfillment resources at the market level, rather than pushing it all the way out to the stores. It allows a retailer to gain the best of both worlds (centralized pooling and distributed market-level responsiveness). Pool distribution is a key enabler of this fundamental shift in business models. It is a critical part of the transformation of retailers striving to become truly great omnichannel businesses.



Advanced Pool Distribution



*Sponsored by:*

DESCARTES™

#### About ChainLink Research

ChainLink Research, Inc. is a Supply Chain research organization dedicated to helping executives improve business performance and competitiveness through an understanding of real-world implications, obstacles and results for supply-chain policies, practices, processes, and technologies. The ChainLink 3Pe Model is the basis for our research; a unique, multidimensional framework for managing and improving the links between supply chain partners.

For more information, contact ChainLink Research at:

321 Walnut Street, Suite 442, Newton, MA 02460-1927

Tel: (617) 762-4040. Email: [info@clresearch.com](mailto:info@clresearch.com) Website: [www.clresearch.com](http://www.clresearch.com)

© 2017 ChainLink Research, All Rights Reserved. Produced in collaboration with Descartes.