



# Contents

Introduction	3
What is Consolidation?	5
Single-Item Consolidation	
Multi-Shipment Consolidation	
Combined Freight/Parcel Consolidation	
Benefits of Consolidation	10
Cost Savings	
Customs Efficiency	
Transit Time	
Visibility	
Reduced Damage	
Reduced Environmental Footprint	
Selecting Your Logistics Provider—Essential Questions and Considerations	14
Shipment Preparation	17
Conclusion	19
References	22



### "You can have it fast, cheap, or good. Choose two."

For decades, this phrase seemed to define the rule of the road for U.S. shippers, especially among those that shipped regularly to Canada. It seemed that higher shipping costs were inherent to cross-border transactions; that extended transit times were unavoidable; and that businesses had few options beyond accepting the rigid, "one size fits all" solutions offered by logistics companies that serviced Canada.

Not so anymore. As logistics capabilities have advanced and technology-based solutions taken root, the crossborder landscape has changed. Shippers today have more options, can expect more from their logistics provider, and can often eliminate the border as a disadvantage for U.S. shippers.

One option in particular—consolidation—is proving to be a gamechanger. Although the concept of consolidation—combining multiple smaller shipments into a single, larger unit for improved efficiency—is not new, recent improvements allow even greater levels of efficiency and cost savings.

However, within the logistics industry, "consolidation services" can mean different things. And not all of them good. In some instances, consolidation refers to combining shipments to reduce costs, but at the expense

of multiple additional stops and days in transit. Or it can refer to consolidating only LTL shipments, or only parcel shipments, but not both. Zone consolidation can be used as a method for limiting the number of pricing zones a shipment crosses while in transit. Consolidation can be a customs-efficiency strategy in which shipments are combined as a way to simplify the U.S.-Canada clearance process and reduce related fees. Still others might refer to initiatives within the warehouse to consolidate processes.

But a new, fresh approach is taking hold which takes an "all of the above" approach to cross-border consolidation. Depending on a logistics provider's capabilities, it is possible to utilize a consolidation strategy with unprecedented capabilities that include:

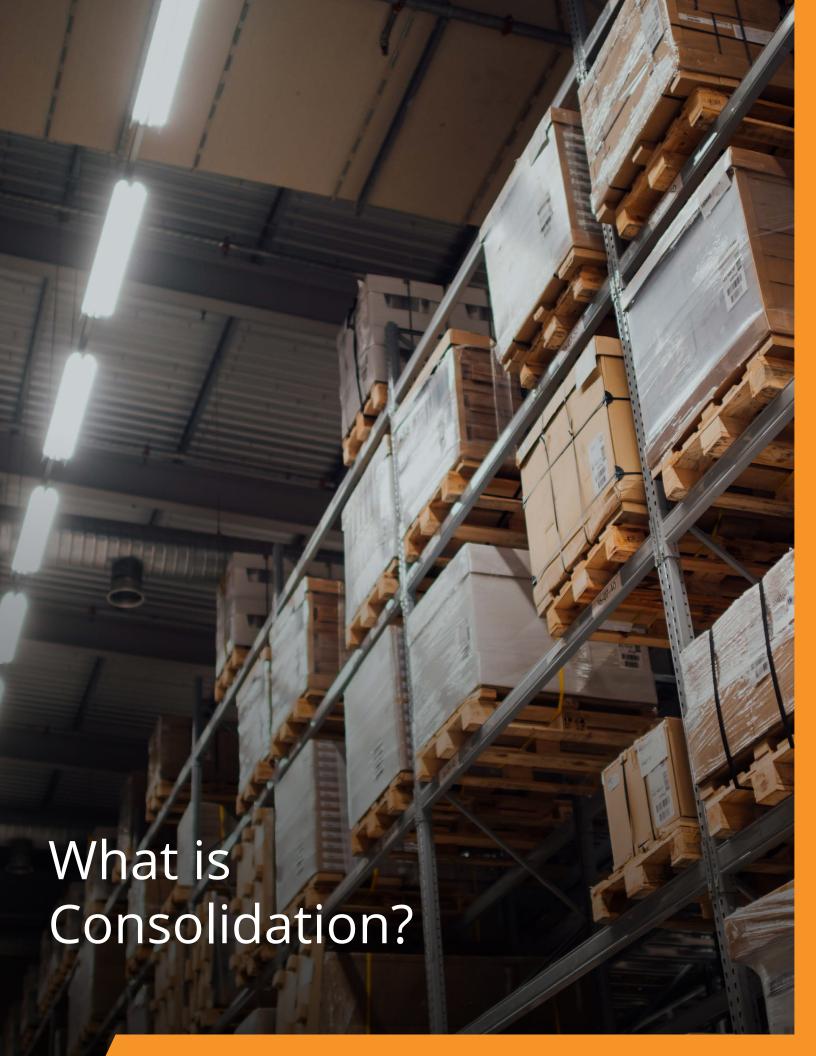
- Consolidation of all shipment types—LTL and parcel—into a single shipment. Such an approach simplifies a shipper's logistics strategy and improves warehouse efficiency. All Canada-bound shipments can be kept in a single staging area, with all shipments picked up at the same time.
- Direct linehaul to the border. The consolidated shipment moves directly to the border, with no additional stops. In many cases, a shipment can arrive at the border on the same day as its U.S. pickup.
- Customs efficiency. An entire consolidated shipment, which can sometimes include thousands of smaller units, can clear customs as a single entry. This reduces paperwork, filing fees, and facilitates review by Canada Border Services Agency (CBSA) agents.
- Direct induction into Canada. Once in Canada, the consolidated shipment is broken down and enters a Canadian distribution network for final delivery throughout Canada.



Key benefits of current consolidation capabilities include:

- Reduced transit time.
- O Delivery guarantees.
- Simpler logistics strategies, with both freight and parcel shipments picked up via the same truck.
- Flexibility, with pickups scheduled to accommodate a shipper's business needs.
- Overall efficiency improvements, including in warehouse operations.
- Facilitated customs clearance, including savings on filing fees.
- Improved visibility from an easier, more direct supply chain.
- Fewer touchpoints mean a reduced risk of damage and thefts.
- End-to-end management by a single provider. It used to be that a significant downside to consolidation was having to enlist multiple parties to execute different parts of the strategy. That is no longer the case. Now, it is possible to have a consolidated solution in which the same logistics provider manages both U.S. and Canadian processes.

The following discussion will delve into the topic of consolidation and help explain its many nuances. A consolidation-based strategy is not ideal for all shipments. But for those shippers that would benefit, the efficiencies and savings can be quite impressive.



## What is Consolidation?

In its most basic form, consolidation is the practice of combining smaller shipments destined for the same region into a single, larger unit. The combined unit qualifies for preferred shipping rates, less onerous customs requirements, and adds efficiency to the shipping process.

In making the case for consolidation, research by the <u>Transportation Consortium of South-Central States</u> noted that "an estimated 15% to 20% of trucks on the roadway are travelling empty." This, the analysis continues, reduces efficiency and "increases shipping prices, greenhouse gas emissions, and traffic congestion."

On paper, the benefits of consolidation seem obvious. It's easy to visualize, for example, how a California manufacturer that uses 12 different linehauls to reach different points across the midwestern U.S. would benefit from having a single truck carry the entire load. Once the combined load arrived at a designated distribution center, it would be broken down for final distribution across the region.

This commonsense solution has, in fact, been in use for years by major retailers including Walmart, Sam's Club, Kroger, and Target, to name a few. Smaller businesses though, that tend to ship smaller volumes, have often been prevented from consolidating due to a lack of resources. The <a href="Transportation Consortium">Transportation Consortium</a> analysis notes that the process of renting a centrally-located warehouse can be a significant obstacle for small shippers. Beyond the cost, many face trouble identifying a location acceptable to all parties. Another critical issue has been the lack of access to freight services. "It's difficult for small shippers to consolidate shipments and find truck routes transporting full truckloads," the research found.

This points to the extreme fragmentation within the U.S. trucking industry. According to the report: "Currently, there are over 110,000 carriers and 350,000 independent owner-operators. Among them, around 97% of carriers own less than 20 trucks and around 90% own six or fewer trucks." This fragmentation "hinders the efficiency of cargo transportation," and effectively complicates efforts for wide-scale consolidation efforts.

In recent years though, certain logistics companies have become much more efficient at offering consolidation services. Non-asset-based companies, for example, that do not own their own fleets or physical assets, have the flexibility to tap into routes offered by multiple carriers. Conversely, asset-based-companies generally do not have this option, since they are beholden to using their own trucks and routes, which often cannot accommodate the needs of a consolidation strategy.





Current consolidation models include:

## **Single-Item Shipment Consolidation**

This refers to the shipment of a particular product by a manufacturer or distributor to retail stores or suppliers. In certain cases, these shipments can be combined and shipped via a single linehaul as a way to achieve efficiency and cost savings.

**Example:** A New York-based costume manufacturer with retail customers located across Canada was fulfilling Canadian orders from its seven U.S. warehouses. Shipments were arriving in Canada from the various warehouses, usually via courier or LTL shipments. Once in Canada, shipments went to the manufacturer's Ontario distribution center (DC) for a second fulfillment and processing phase, before finally being dispatched for end delivery.

The inefficiencies of this strategy were glaring. Shipments were taking days just to leave the United States, and once in Canada, were forced to spend several more days in the company's Ontario DC. The extra days were adding up, with Canadian retailers having to wait as long as two weeks for their shipments to arrive.

 The manufacturer turned to another logistics company for help. The second company, it turned out, had extensive capabilities in both the U.S. and Canadian markets, and was able to offer a consolidation-based solution. Key components of that solution, which was adopted by the manufacturer, include:

- Orders are fulfilled from the U.S. distribution center that most directly aligns with the shipment's end destination in Canada. Ontario-bound shipments for example, are fulfilled in Detroit, rather than in Seattle or California.
- This avoids the inefficient practice of having shipments clear customs at a location that can be hundreds of miles off-course. Right off the bat, this adjustment demonstrated efficiency and time-savings.
- All Canada-bound shipments—freight as well as parcel—are picked up via the same truck and consolidated at a nearby processing facility.
- The consolidated unit moves directly to the border for fast induction into Canada.

Once in Canada, the consolidated shipment is broken down, with individual units loaded for end-delivery throughout the country.

The benefits? Canadian customers receive their shipments an average of 2-5 days faster than via the previous logistics strategy. The manufacturer has been able to reduce freight costs and has closed its Canadian distribution center, relying instead on a U.S.-based distribution model.

#### **Multi-Item Shipment Consolidation**

Multi-shipment consolidation refers to small shipments, or orders, that come from different product categories. According to analysis offered by the <u>University of Waterloo</u>, this often involves industrial-based shipments in which products have different characteristics including weights, components, and values. Whereas a single-item consolidated shipment will consist of pallets of same-sized units, a multi-item shipment will have varying sizes and weights that will need to be considered.

Efficient packaging and vehicle loading are integral to multi-shipment consolidation. This ensures that a truck is packed as efficiently as possible, and that heavier objects are placed below lighter, more fragile units.

**Example:** A Wisconsin-based supplier of motors for a Canadian recreational boat manufacturer found that shipments were frequently arriving in Canada damaged, and days behind schedule. Realizing that its reputation for quality and excellence were on the line, the supplier asked another logistics provider to provide an alternate solution.

That company, which specializes in U.S.-Canada cross-border logistics, immediately identified several inefficiencies in the supplier's existing strategy:

- Little consideration was given to the highlyfragile nature of the parts and components that were being shipped. Packaging was inefficient, and loads were poorly assembled which was resulting in the high levels of damage.
- Too many touches. Shipments had to endure multiple stops during the transit cycle, with shipments handled multiple times along the way, thus increasing the risk of damage.

The supplier was provided with an alternate, consolidation-based logistics strategy that corrected these inefficiencies. Key components include:

 Shipments are picked up at the manufacturer's Wisconsin warehouse and brought directly to the logistics provider's processing facility.



- Once at the processing facility, shipments are consolidated and loaded for uninterrupted transport to Canada.
  - Care is taken to ensure proper packaging and handling. In some instances, components are removed from the motor and wrapped separately. Once the shipment has arrived safely at its final destination, trained personnel reattach the components. Further, each unit is wrapped carefully in bubble sheeting and appropriately-sized cardboard for extra safety.
  - Another important precaution is the minimal number of touches the shipments endure during transit. Since the consolidated shipments move directly to the border, there is less opportunity for damage to occur.
- After clearing the border, shipments are broken down and sorted. Shipments are transported via a Canadian courier company that provides comprehensive service throughout the country. All deliveries are complete within 2-3 days of arrival in Canada.

This solution has all but eliminated shipment damage, which has been an enormous relief to the supplier. And, the consolidated solution has improved transit time by an average of two days.



# Combined Freight-Parcel Consolidation

A third type of consolidation refers to instances in which a logistics provider collects all shipments headed for the same market or geographic region via the same pickup—regardless of size or contents. This allows for simultaneous freight and parcel shipment pickups, with benefits that include:

 Cost efficiency/Reduced number of pickups. All pickups occur via the same truck, eliminating the need—and cost—for separate freight and parcel pickups.

- Warehouse efficiency. A shipper can better manage its warehouse footprint, without having to hold space for separate pickups.
- Improved visibility. Since all shipments travel together, maintaining visibility is easier, with only a single shipment to track.
- Simplified logistics strategy. With a single, consolidated solution, the process of managing diverse shipping needs gets a bit easier. Less shipments to manage, with greater efficiency and cost savings.

**Example:** A few years ago, this Ohio-based manufacturer of industrial tools decided to close a Canadian distribution center, and instead source all Canada-bound shipments from the United States. But in building its new strategy, the company decided to use two separate logistics providers: One to handle small package shipments, and the other for larger freight volume.

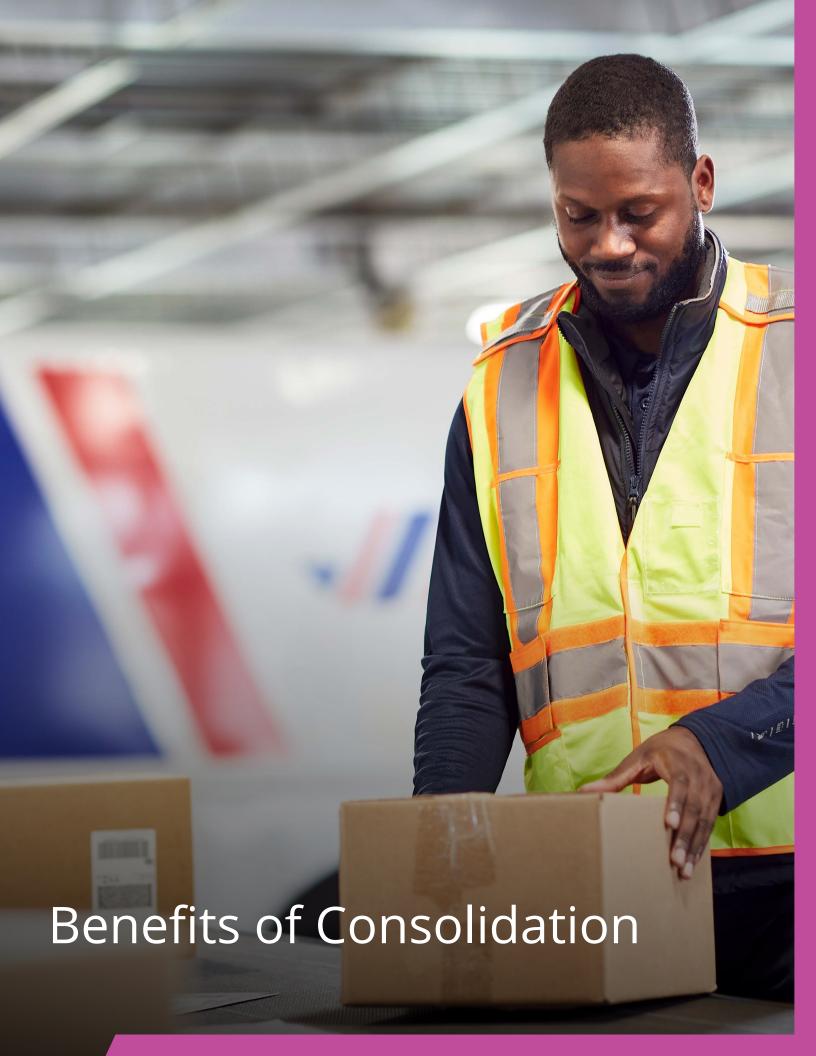
At first, the manufacturer was generally pleased with the results. Shipments were arriving at their Canadian destinations, and the two logistics companies seemed to be meeting the manufacturer's expectations. It wasn't long though, before problems set in, especially with regard to small package deliveries and service levels. Shipments were arriving late on a recurring basis and costs were creeping up. To make matters worse, the logistics company seemed uninterested in offering any service improvements.

The manufacturer was able to replace this solution with a new strategy that consolidated all shipments within a single pickup. Key components include:

- Dedicated full trailer trucks leave the company's
   Ohio manufacturing facility three times each week.

   These pickups include small package as well as freight shipments, which travel together on the same truck.
- Each linehaul moves directly to the border and seamlessly passes through Canadian customs.
   Shipments move directly to the new logistics company's Ontario distribution center.
- Once in Ontario, shipments are broken down, with ground and express shipments directed to the carrier's courier network, and freight directed to the freight network. From there, shipments are delivered directly to the manufacturer's customers.

This unique freight consolidation solution has allowed the manufacturer to dramatically improve its Canadian operations. Shipments arrive in Canada 1-2 days faster, and resulted in meaningful cost savings.





## Benefits of Consolidation

As the above discussion makes clear, consolidation can be a highly-beneficial solution for shipments moving between the United States and Canada. Following is a brief review of key benefits:

## **Cost Savings**

Consolidated shipments save money because shippers only pay for the space they need. One provider cites potential savings of between 10% and 50% of freight spending, but actual savings will depend on each shipment's contents and requirements.

A case study model developed by the <u>Transportation</u> <u>Consortium of South-Central States</u> examined the resulting savings from consolidating shipments of electronics moving from New Orleans to Oklahoma City. The results? A roughly 23% reduction in operating costs.

## **Customs Efficiency and Cost Savings**

Every shipment entering Canada must comply with specific Canada Border Services Agency (CBSA) requirements. This includes submission of "entry" documentation, and payment of a filing fee, among other requirements.

However, a consolidated shipment is considered a single unit, which can mean significant time and cost savings. For one thing, consider that a consolidated shipment might consist of dozens—maybe hundreds—of smaller shipments. This is especially true for eCommerce shipments. Left on their own, every one of those shipments would need to have separate documentation and paperwork filed with CBSA.

But as a consolidated shipment, all parts are accounted for in a single filing entry. Naturally this is a big timesaver for U.S. shippers. Not only does it cut down on paperwork filing requirements, but it also eliminates the need for individual assessments by CBSA personnel.

Another customs-related benefit of consolidation is the cost savings. Every shipment entering Canada is subject to Canadian sales tax and, depending on shipment contents, may also be liable for import duties. The amount of tax and duty owed will vary based on each shipment.

CBSA also imposes a clearance fee that amounts to roughly \$50 to process an electronic filing, and \$100 for a manual filing. For a shipment comprised of 26 pallets, which is the capacity of a standard 53-foot trailer, the savings could amount to \$2,600, if the entries were filed manually.

But once consolidated, all 26 pallets become a single entry at a total cost of \$100.

In this example, consolidation would reduce a shipper's obligation by as much as \$2,500 per shipment.

Depending on the volume a business ships to Canada, it's easy to see the benefit of consolidation.

#### **Transit Time**

Depending on the specifics of a consolidation strategy, improved transit time may be another key benefit. This is especially true for cross-border shipments traveling between the United States and Canada that are transported via a non-asset-based company, at least for the U.S.-portion of the cycle.

As discussed previously, a non-asset-based logistics provider will identify the northbound linehaul that best meets a U.S. shipper's shipping requirements.

- This can include a solution that allows freight and courier shipments to be picked up via the same truck and transported directly to the border.
- Alternatively, shipments can be matched with Canadabound shipments from other shippers, and quickly consolidated and transported directly to the border.
- In these scenarios, shipments remain in near-constant motion, often arriving at the border on the same day as a U.S. pickup.
- The consolidated shipment clears customs as a single entry, with all documentation pre-filed and fees, duties and taxes addressed.

Once in Canada, an experienced Canadian transportation provider will ensure seamless and fast end-deliveries. In enlisting a Canadian provider, a shipper should insist on key capabilities that include:

- Comprehensive courier and freight capabilities that ensure seamless coverage throughout the entire country.
- A wide array of delivery options to meet a shipper's precise needs. Options should range from air and express ground solutions for "same day" deliveries; to "next day/second day" service for less urgent shipments; to regular ground services for routine shipments.

A consolidation strategy that addresses the three legs of a cross-border transaction—intra-U.S., border clearance, and intra-Canada—will provide shippers a "triple crown" of efficiency: Improved transit time, reduced freight costs, and seamless customs processing.



#### **Reduced Damage**

Consolidation can also mean reduced shipment damage. This depends on the specifics of a consolidation strategy, but shippers can expect reduced damage from a solution that prioritizes components that include:

- Palletization: Shipments must be properly packed onto the truck to ensure that all pallets are secure, and that considerations are made for heavier and irregularly-shaped shipments. A well-packed truck will keep pallets in place and minimize in-transit shipment disruption.
- Packaging: All shipments must be securely wrapped and placed in appropriate packaging. As the abovementioned consolidation example illustrates, a Wisconsin-based motor supplier was able to achieve consolidation efficiency AND reduce shipment damage by improved packaging. In this instance, the supplier's logistics provider disassembled-and-separatelywrapped fragile components, which were then reassembled upon arrival in Canada.
- Continual motion/Reduced touches: Consolidation models that avoid excessive idle time and protect against having additional shipments haphazardly combined with previously-loaded shipments, can minimize opportunities for damage to occur.

#### Improved visibility

Under a consolidation strategy, all components of a consolidated shipment move under the same tracking number. This means a shipper can easily track an entire shipment—which can consist of hundreds of units—via a single tracking number. Shipments receive a subsequent tracking number once they are broken down for final delivery, but during the consolidated leg of the transit cycle, shippers have fast visibility via a single tracking number.

#### **Reduced Environmental Footprint**

Consolidated shipments maximize available space on a truck by allowing shipments from multiple shippers, or different types of shipments, to travel together. Thus, by its very nature, consolidated shipments can reduce the number of trucks needed to transport goods. Modelling by the Transportation Consortium of South-Central States identified consolidated routes that used only 67% of the existing number of trucks. Further, the modeling estimated that emission levels could be reduced by approximately 17%.







# Selecting Your Logistics Provider—Essential Questions and Considerations

As enticing and beneficial as consolidation may be, it is not for everyone. The solution is ideal for shippers that frequently move a few pallets at a time, but not enough to fill an entire truck. Similarly, the solution is not available to shippers whose products require special handling, such as chemicals, or highly-fragile products.

A shipper's best bet is to consult with a logistics provider to discuss the benefits, and potential weaknesses, of a consolidation strategy. Keep in mind though, not all logistics providers offer consolidation services. As this discussion has made clear, a logistics provider must have access to a range potential linehaul solutions, and the ability to identify service that best meets a customer's specific needs. Logistics companies that are locked in to using their own fleets are often unable to offer the flexibility and capacity needed for consolidation.

Following is a list of considerations to keep in determining whether or not a consolidation strategy would fit your cross-border needs. Key topics include:

#### Do you offer cross-border consolidation services?

- Determine how the company is set up to operate in both the U.S. and Canada
- Can the logistics provider offer comprehensive service from end-to-end, or will shipments be transferred to different out-of-network carriers during the transit cycle?
  - An ideal provider would offer extensive consolidation capabilities in both the United States and Canada. A single-source solution would add efficiency and visibility, and simplify a shipper's logistics operation. However, pay close attention to a provider's U.S. and Canadian offerings, and make sure they are reliable, with a proven track record.
- Consolidation strategies can be complicated. There
  are many moving parts that need to be carefully
  orchestrated. How does the logistics provider identify
  the best solution? Is there any room in a solution for
  special accommodations, or for last-minute changes?
- With many moving parts, you will want to prioritize good customer service. Be sure to ask about a company's commitment to service. Will a service representative be assigned to your account? Will that individual be accessible, and well-versed in the details of your logistics strategy? Or, will customer service consist of a faceless 800-number or chatbot?

#### **U.S.** Considerations

- How flexible can the company be in arranging pickups? Will you have to adjust your schedule to accommodate the pickup, or will pickups be based on your needs?
- Where does the consolidation occur? How long will the process take? Will your shipments have to sit on the truck until all units of the consolidated shipment arrive?
- How many additional stops will be required before shipments arrive at the border?
- Will separate pickups be needed for freight and courier shipments? Or, ideally, can all shipments be collected at the same time, by the same truck?
- How long will it take for the consolidated shipment to arrive at the border?
- Is it possible to have a solution that avoids all stops, and moves shipments directly to the border?

#### **Border Clearance**

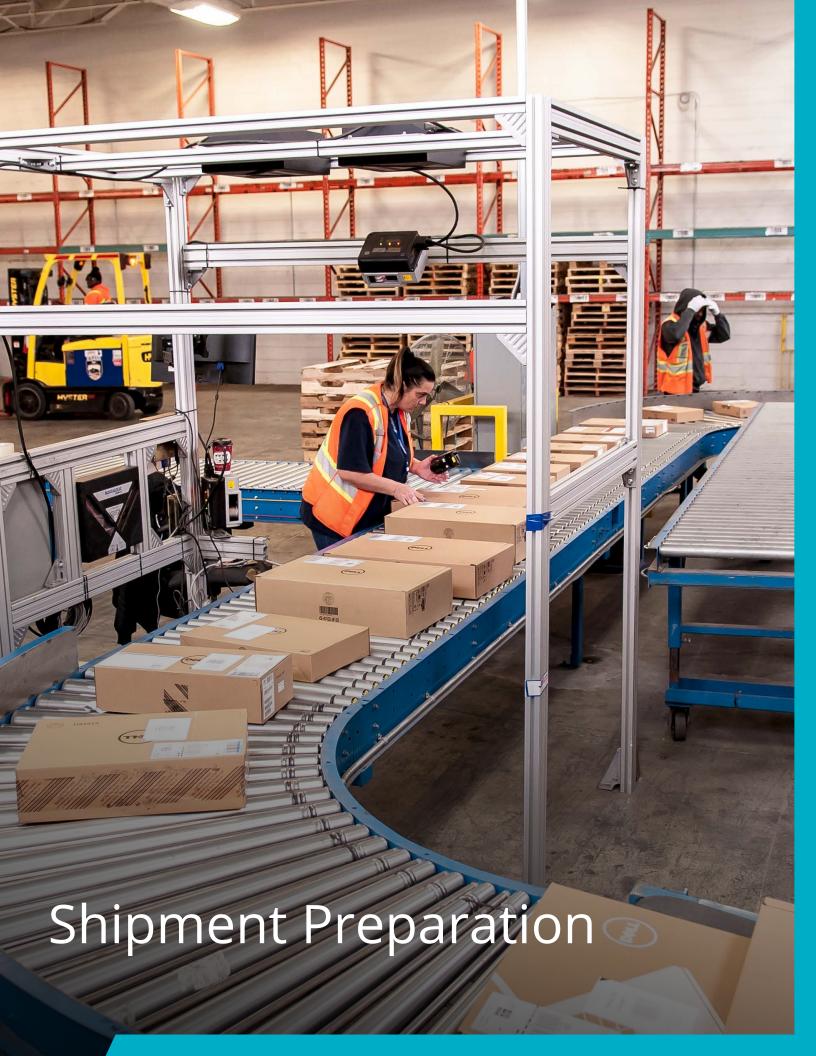
- Where will the consolidated shipment clear customs? Can the logistics company ensure that your shipments will cross the border at a location that makes sense geographically? That your shipments will not have to travel hundreds of miles off-route?
- Where is the logistics company's Canadian processing center located? An ideal provider will have multiple facilities located in close proximity to border clearance points. This will allow options and flexibility in building a cross-border strategy.
- How will the logistics company facilitate a seamless clearance process?
- Will the consolidated shipment clear customs as a single entry? Will there be cost savings?

#### **Canadian Considerations**

- What happens once the consolidated shipment arrives in Canada?
- Where will the consolidated shipment be broken down? How long will it take?
- How will the Canadian leg of the logistics strategy be managed?
- Can a single provider be used for all deliveries, or will multiple regional carriers need to be used.
- This is a very important point. In Canada, most transportation carriers limit service to a specific geographic region. This often results in having to enlist multiple carriers, with each handling a different part of the country. Obvious drawbacks to this chaotic approach include loss of visibility, inconsistent service levels, and an increased likelihood of damage and theft.
- A better option is to identify a Canadian service provider that DOES service the entire country with options for freight as well as courier shipments.
   Purolator, for example, offers guaranteed service to every province and territory, with the ability to reach 99.5% of all postal codes.
- Once inducted into the Canadian provider's network, how long will deliveries take to different regions of the country?

#### **Measurable Benefits to Your Company**

- How much will your company save from a consolidated strategy? This includes savings from reduced freight charges as well as customs savings.
- How will shipment transit time be affected?
   Will your Canada-bound shipments arrive at their end destinations faster than via a nonconsolidated strategy?
- How will your warehouse operations be affected?
   Can you limit space needed for Canada-bound
   shipments to a single area? Will a single, combined
   freight/parcel pickup improve warehouse efficiency?
- How will your overall business processes be improved?



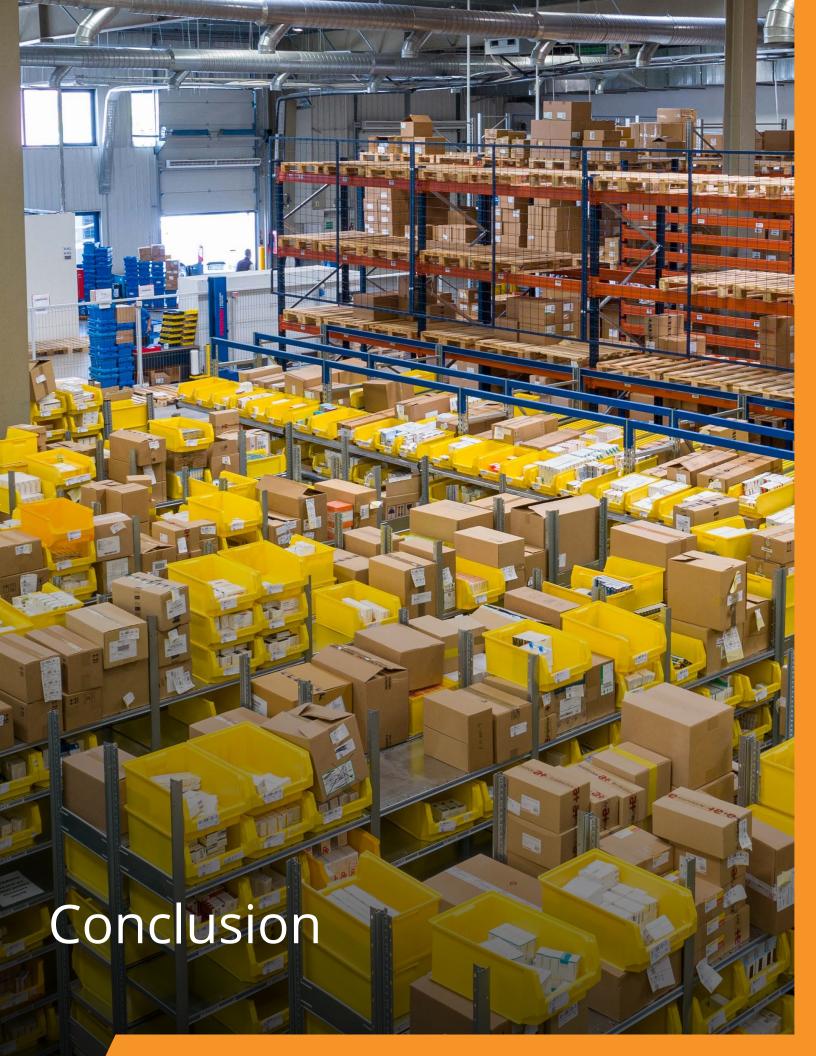
# **Shipment Preparation**

U.S. businesses that decide to proceed with a consolidation strategy will need to follow a few steps to prepare shipments. These steps are necessary to ensure shipments are easily identifiable, will be properly accounted for, and will be configured appropriately when loaded onto a truck. Necessary steps may include:

- Shipment details. A shipper will need to provide precise details for each shipment, including weight, dimensions, contents, packaging details, PO details, and delivery deadlines. This will help meet LTL freight specifications and requirements.
- · Labeling—Shipments and Pallets
  - Shipment Labeling. Shippers must meet specific requirements for label contents and placement.
     Required information will likely include:
    - · Shipper's address.
    - Final destination address.
    - · Shipment's PO order for easy identification.
    - · Bill of Lading number.
    - · Scannable bar code.
    - A transportation provider may require that labels be placed on a specific location, for consistency and easy scanning.

- · Pallet Shipping Labels
  - A label must be prepared for each pallet, which includes the same information as labels prepared for individual cases. However, the pallet label should also include the total number of cases on the pallet.
- · Paperwork—Bills of Lading
  - A Master Bill of Lading must be prepared that lists the contents of a consolidated shipment.
- Customs Compliance—Consolidated shipments clear customs as single entries. This avoids having to complete paperwork for each individual unit, and assessment of multiple filing fees. Since the importer is responsible for all information supplied to customs officials, the shipper will need to ensure that Canada Border Services Agency (CBSA) documentation has been completed accurately, and pre-filed using Canada's <u>Single Window</u> <u>Initiative</u> entry portal.
- Packaging. Consolidated shipments must meet specific packaging requirements, as a way to ensure shipment security and minimize space requirements. In some instances, shipments must fall within specific dimensional limits, or risk being excluded from the consolidation process.
- Pallet-Loading. A logistics provider will communicate specific requirements for pallet loading that must be closely followed. This could include, for example, restrictions on loading multiple POs on a single pallet, and specific requirements for case and pallet labeling.





## Conclusion

"Gamechanger" is the word one logistics manager used to describe the benefits his company realized after adopting a consolidation-based cross-border strategy. The manager's company, a California-based apparel manufacturer, was able to improve transit time by an amazing 10 days, and achieve significant cost savings. The benefits were so impressive, that he told his logistics provider he simply believed the solution was too good to be true.

Cost savings and efficiency are common benefits of a consolidated shipping strategy. So why then, don't more businesses insist on using this technique? For one thing, not every logistics provider has the needed capabilities. Nor can most commit the time and resources required to identify and build a customerspecific consolidation strategy. Which is why truly experienced cross-border consolidators, with proven track records, are really in a league of their own.

Given the enormous benefits though, it'd be well-worth a shipper's time to reach out to an experienced logistics provider, and determine if a consolidation-based strategy would be right for its Canada-bound shipments.

TINE

DNE

Hapag-Llovd





A consolidation-based strategy is a lot more manageable with Purolator on your team.

Contact us





## Resources

- 1. Bentley, Michael, <u>"Carrier Consolidation Services: An Inside Guide to UPS Basic & FedEx Smart Post,"</u> PARCEL magazine, April 10, 2010.
- 2. LaGore, Rick, <u>"Top 10 Benefits of LTL Freight Consolidation and How-to Implement,"</u> InTek Freight & Logistics Inc.™, March 26, 2019.
- 3. <u>"Impacts of Freight Consolidation and Truck Sharing on Freight Mobility."</u> Transportation Consortium of South-Central States, Lead University: Oklahoma State University, April 2019.
- 4. Ulki, Muhammed Ali, <u>"Analysis of Shipment Consolidation in the Logistics Supply Chain,"</u> Thesis presentation to the University of Waterloo, accessed via Canadian National Library Collection, accessed March 10, 2023.the Wilmington, NC StarNews Online, September 1, 2019.