NEW AUTOMOTIVE AFTERMARKET GENERATION

Unriddling Drop shipment for the Automotive Aftermarket

AAMPACT

The International Independent Aftermarket Association

Michael Ruehl, Nils Lueke, Patrick Engel, Bryan Marschall, Daniel Schmat and Aldo Jesus Silva Toledo

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1 Management Summary

The Automotive Aftermarket as a maturing industry is driven by increasing complexity in customer demands as well as a continuous transformation in the marketplace which includes new, digitally driven participants.

Both factors increase the demands on manufacturers and distributors in terms of their supply chain infrastructure and performance.

Drop shipment, if implemented appropriately, fills part of the requirement gap between the existing infrastructure, the customer demands and maintaining a cost-efficient supply chain setup.

More specifically, drop shipment can contribute by allowing the distributor level of the vertical supply chain to extend their product range without the traditional capital investment for stockkeeping and logistical infrastructure. As consequence, the manufacturer can significantly improve the availability of long tail products for consumers with a manageable increase in supply chain complexity.

On a global level, drop shipment as a fulfillment method significantly increases its market value with the expectation of seeing increasing growth rates until at least 2026 as shown in figure 1.

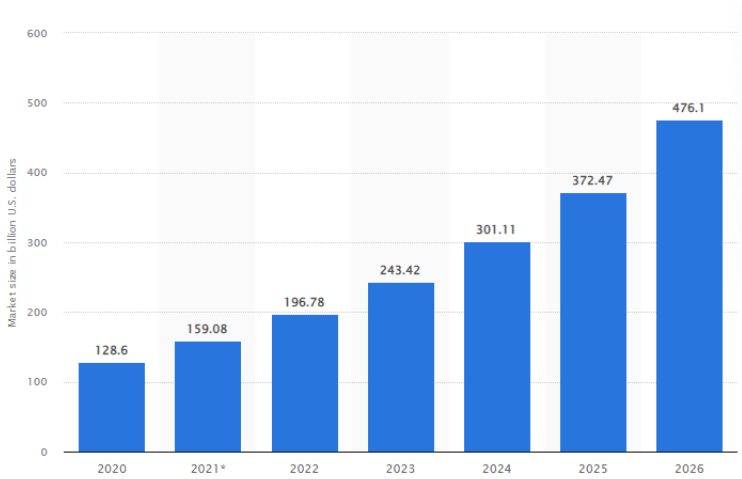

Figure 1: Value of the global drop shipment market size (Statista, 2017)

The results of our survey among AAMPACT member companies have shown that this is not just a development in the overall global market but based on the estimates of our respondents also a reality in the Automotive Aftermarket (see Figure 2).

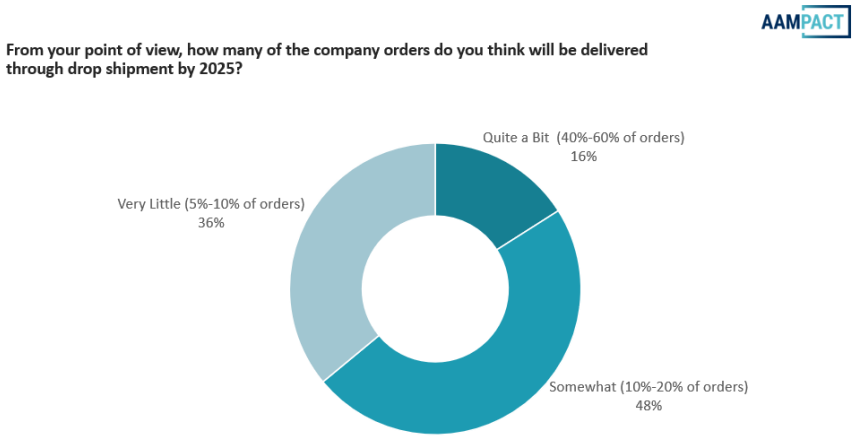

Figure 2: Drop shipment share in order volume by 2025

At the same time, overall confidence of the respondents in terms of their readiness to meet the near-term requirements for drop shipment fulfillment seems moderate at best, with the majority assessing themselves as "Average" or below (see Figure 3) – while scientific studies in various fields of self-assessment consistently show that respondents tend to think themselves better than the average to such a degree that usually about 80% of all respondents would be "above average" based on their own self estimate.

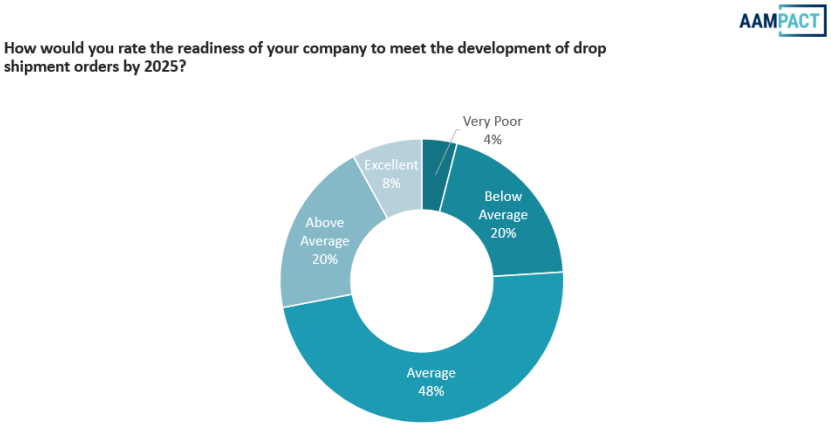

Figure 3: Readiness to meet the growing demand in drop shipment

Further supporting the impression of moderate preparedness, with 85% most respondents were not aware of specific software solutions that support the implementation of drop shipment - even if they had stated that their companies have prior experience with drop shipment (see Figure 4).

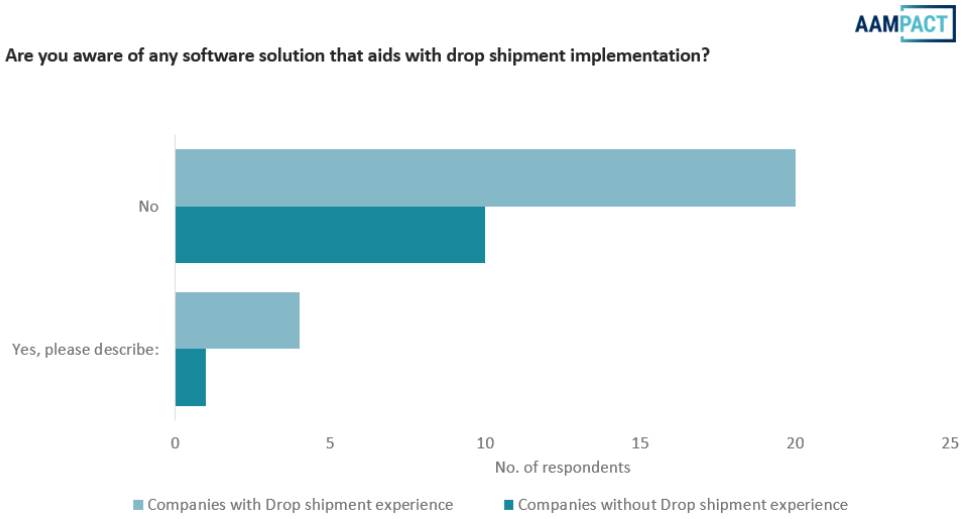

Figure 4: Software solutions that aid with implementation

Meanwhile, better process know-how along with simplicity of IT implementation and more investments in technology and infrastructure make up a major part of what the respondents of our survey expect would help them meet the growing demand of drop shipment deliveries by 2025.

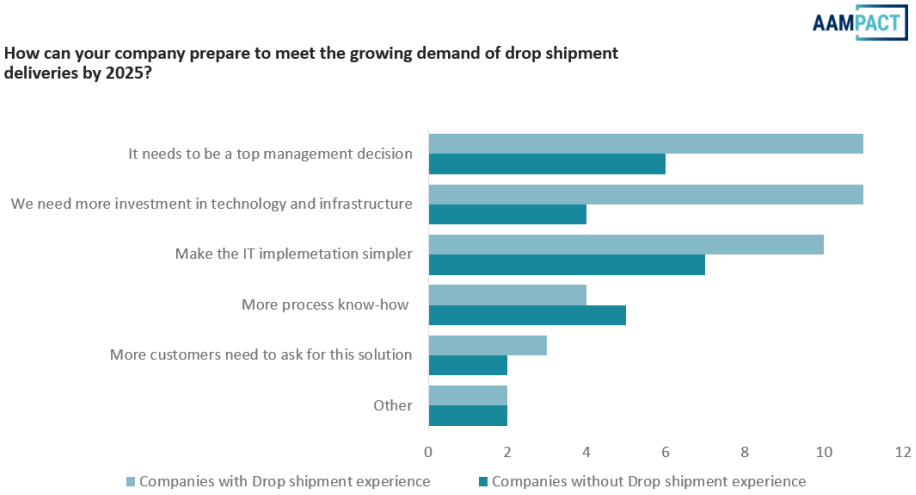

Figure 5: How to prepare for the growing drop shipment demands

While a whitepaper cannot address the topic of top management support for promoting drop shipment, we have done our best to alleviate pain points around: process know-how, simple IT implementation and the need for IT & Infrastructure investments.

Over the course of the following pages, this whitepaper provides a detailed and comprehensive blueprint of the drop shipment process and gives an extensive introduction into how solutions of the established industry standard TecAlliance can support the seamless integration of drop shipment to the existing supply chain landscape of most parts manufacturers.

It is our hope that the lessons from this whitepaper can help inform your most appropriate next steps to stay on track in meeting the increasing demands on your logistic operations and at the same time use this material to become a leader and innovator in the ways this fulfillment method shapes the future of the Automotive Aftermarket.

2 Definition of Drop shipment

Drop shipment is a form of goods distribution, in which goods are sent directly from one participant of the supply chain (e.g., the manufacturer) to a customer (e.g., workshop or end-consumer), physically bypassing the actual seller of the goods (e.g., distributor or retailer). In this process the distributor only has a dispatching and administrative function as he bundles the flow orders, invoices, and payment (Kenning & Altmann, 2022). He does not hold the sold items on stock and places a matching order at the manufacturer as soon as it is received from the customer. The financial flow follows the order flow. The purchased goods are sent directly to the customer by the manufacturer. Figure 6 illustrates the flow of orders, goods, and payments between the involved parties.

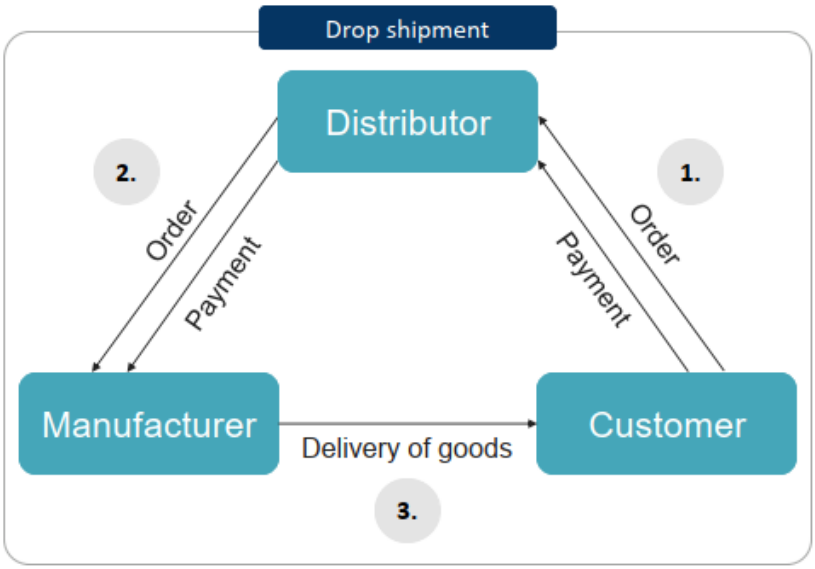

Figure 6: Drop shipment process

For retailers and manufacturers that use a drop shipment process, there are different advantages and disadvantages: Retailers can enlarge their assortment without increasing inventory costs (Tripp, 2021, S. 377). A larger number of customers can be reached, and therefore the retailer becomes more attractive for customers. On the other side there are integration efforts to connect the information systems of both the retailer and manufacturer. For goods sent directly to the customers there is no own quality control possible (Schönsleben, 2020, S. 129).

By participating in a drop shipment process manufacturers can reach a larger number of customers and increase the market presence. Longtail articles can be offered, which

are usually not listed by retailers, if they must be hold on stock (Tripp, 2021, S. 377). On retailer side, integration efforts occur to connect with the corresponding information system.

Drop shipment is a classical way of distribution for capital goods as machinery (Schönsleben, 2020, S. 129) but with a tremendously increasing importance in the field of e-commerce (Tripp, 2021, S. 377). Although Drop shipping is a common order fulfillment method in eCommerce it is not yet being fully used in the Automotive Aftermarket.

However, as the pressure for profits increases and manufacturers push for closer contact with workshops, the companies who master this method can gain competitive advantage. Upcoming challenges that increase the need for drop shipment even more are for example the rise of ecosystems and marketplace as well as new players like Amazon entering the market (BBE Automotive, 2021).

3 Drop shipment readiness in the Automotive Aftermarket

To evaluate the readiness of the Automotive Aftermarket with drop shipment and discover the challenges the industry faces to scale it an online survey was executed between the months of February and March 2022. It consisted of nine questions with multiple choice and free text answers. It was received by around 100 members and logistics managers of the AAMPACT. To comply with the competition rules of the AAMPACT it is not possible to relate the individual responses to an individual or corporation. By the end of the survey 36 single responses were captured. The findings are next described.

As shown in Figure 7, the results of the survey show that three out of ten respondents have not yet implemented drop shipment. The main reasons why it has not been implemented are related to process knowledge and technology/IT limitations.

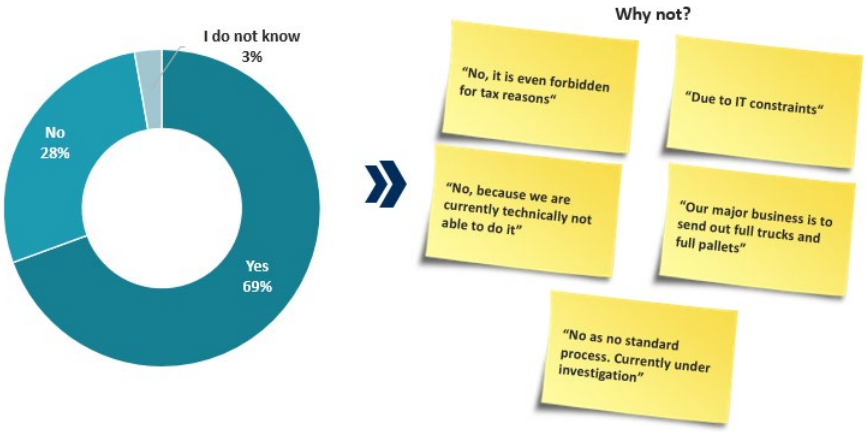

Figure 7: Experience of companies with drop shipment

The respondents that had experience with drop shipment indicated that the fulfillment method means faster product deliveries to their customers Moreover, it gives their customers access to a wider product range while maintaining the capital investments low (see Figure 8).

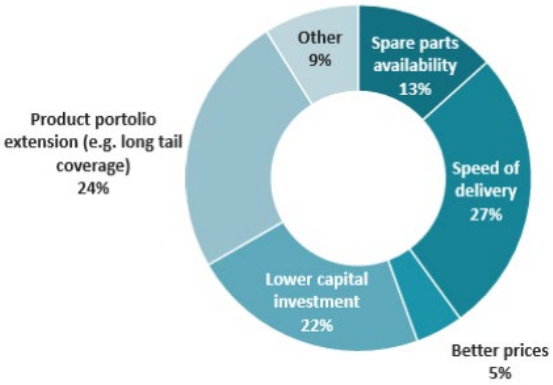

Figure 8: Benefits of drop shipment

Furthermore, respondents indicated that drop shipment orders will be around 10% of their total orders delivered in Europe by 2025. However, they feel moderately prepared to meet this demand as shown in Figure 9.

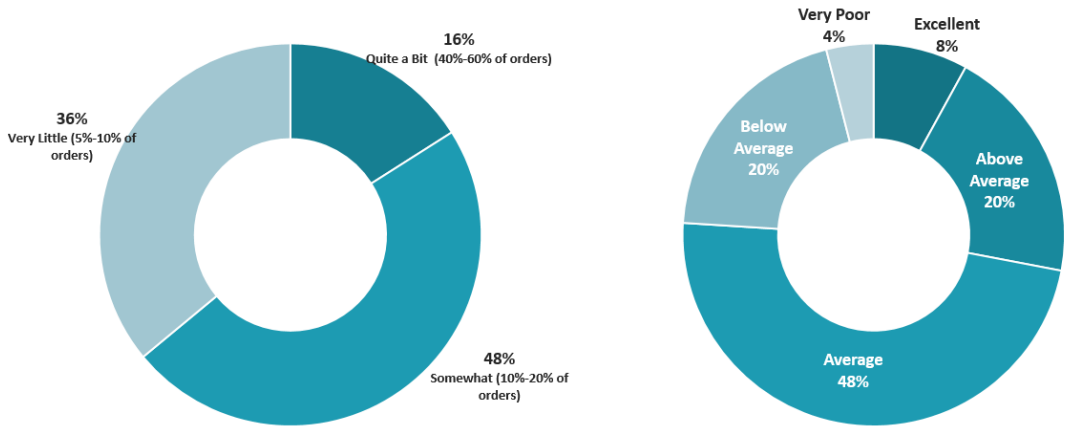

Figure 9: Increase of drop shipment orders by 2025 and readiness ratio

Regardless of the experience or the lack of it with drop shipment, respondents indicated that to increase their readiness more management attention is required. Moreover, as shown in Figure 10, they highlighted that technology/IT and process knowledge are the major drivers of future drop shipment success.

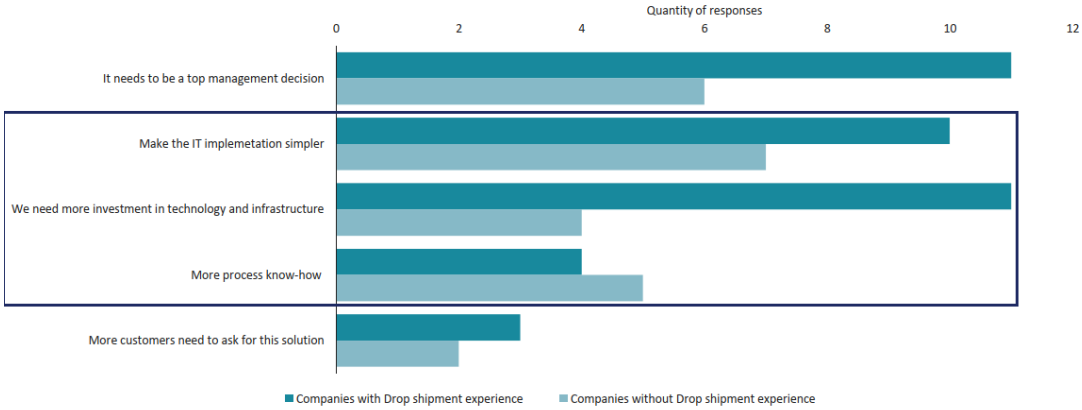

Figure 10: Requirements to meet growing demand of drop shipment by 2025

Since one of the many hurdles to implement drop shipment was process and technology know-how the next sections in this paper elaborate on both.

4 Business processes involved in Drop Shipment

Many parties and transactions are involved to get some goods drop shipped from the manufacturer to the customer. Below is an overview of the involved parties, the transactions, and the invoicing itself.

Remarks:

- The tables below and the flowchart describe the process that the customer is receiving the invoice after the confirmed delivery by the manufacturer. It is also possible to receive the payment from the customer during the ordering process if instant pay methods are used.

- Flowcharts are modeled in BPMN (Business Process Modeling Notation) Standard

4.1 Parties involved in drop shipment

Party	**Responsibility**
Customer	Customer is placing an order to the distributor. The customer might not be aware of, that the order will be shipped directly from the manufacturer.
Distributor	The distributor is showing availability of goods, where he needs to initiate the drop shipping process. Order will be placed from the customer in ERP system of Distributor. Distributor will initiate a purchase order of the requested items, which will be directly shipped to the end customer.
Carrier	The carrier is providing the Carrier-Shipment-Number and is delivering the goods to the customer.
Manufacturer	The manufacturer gets the order from the distributor and sending the goods directly to the customer.

4.2 Drop shipment transaction flow

Transaction type	Sender	Receipt	System
Availability request	Customer	Distributor	Distributor System
Availability request	Distributor	Manufacturer	TecCom OrderManager
Availability response	Manufacturer	Distributor	TecCom OrderManager
Availability response	Distributor	Customer	Distributor System
Order creation	Customer	Distributor	Distributor System
Order creation	Distributor	Manufacturer	TecCom OrderManager
Order response	Manufacturer	Distributor	TecCom OrderManager
Order response	Distributor	Customer	Distributor System
Shipping No. request	Manufacturer	Carrier	Manufacturer WMS
Shipping No. response	Carrier	Manufacturer	Manufacturer WMS
Dispatch Advice	Manufacturer	Distributor	TecCom OrderManager
Dispatch Advice	Distributor	Customer	Distributor System
Invoice creation	Distributor	Customer	Distributor System
Invoice creation	Manufacturer	Distributor	TecCom OrderManager

4.3 Drop shipment invoicing:

In general, we need to distinguish the two invoice flows:

- Manufacturer to Distributor
- Distributor to End customer

5 Drop shipment process

The complete process has been divided into 3 steps as follows (see Figure 11):

a. Order placement
b. Order fulfillment
c. Invoicing & Payment

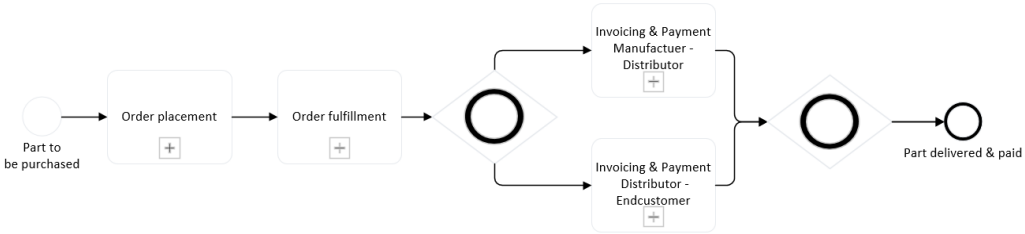

Figure 11: Drop shipment process overview

5.1 Order placement

The end customer is searching for a product on a distributor's website. There the product is shown as available. After adding the product to the basket, the availability is checked. If the distributor does not have the part on stock, an availability check will be sent to the manufacturer and result will be shown to the customer. It can be the case that the delivery time will be than adjusted. The customer is then afterwards ordering the part as usual. The customer does not have the information that the part itself will not be send from the Distributor (see Figure 12).

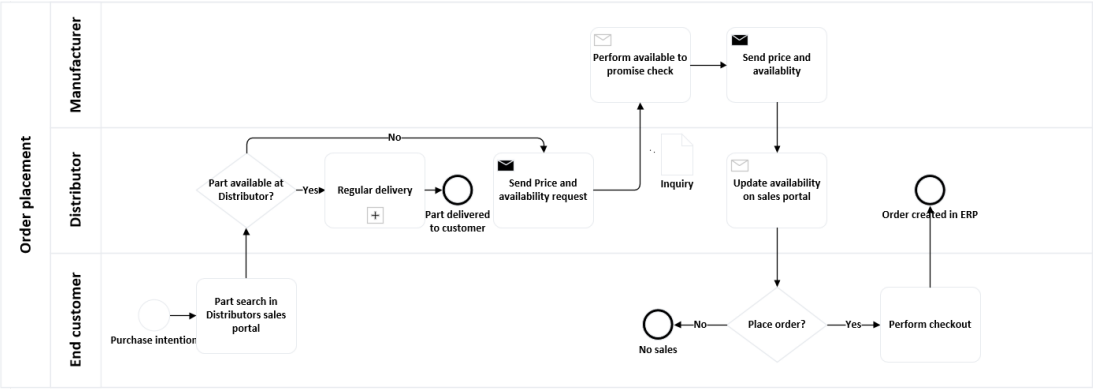

Figure 12: Order placement in drop shipment

5.2 Order fulfillment

The distributor is sending the order to the manufacturer and there the order will be created. An additional order response will be sent back to the distributor with planned delivery date a sales price. This allows the distributor to update the order status in his ERP and if necessary, to forward this information to the end customer.

In the meantime, the manufacturer prepares the order in the Warehouse to be shipped to the end customer. During the packing process, the shipment will be announced to the transport carrier and the shipment notification will be sent back. Thus, making possible to track the parcel on its way to the customer.

After finishing the warehouse process the dispatch advice will be sent to the distributor. This dispatch advice also contains the shipping notification which allows the distributor to update the order status and forward the tracking link to the customer (see Figure 13).

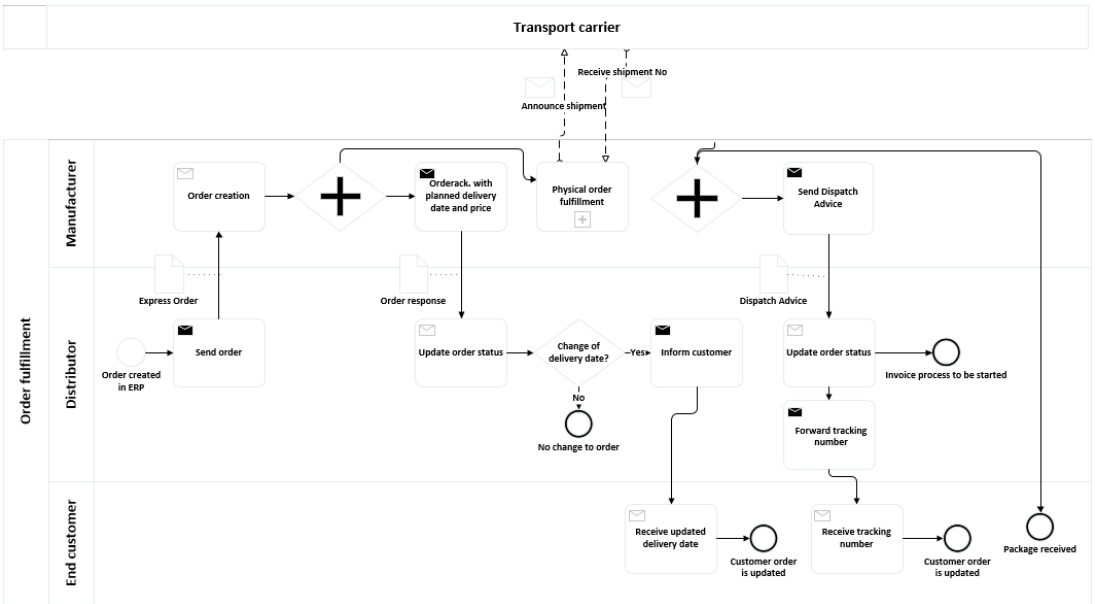

Figure 13: Order fulfillment in drop shipment

5.3 Invoicing & Payment

a. <u>Distributor to Manufacturer</u>

Manufacturer will create the invoice and send it the distributor. After performing the invoice check on distributor side the payment will be released (see Figure 14).

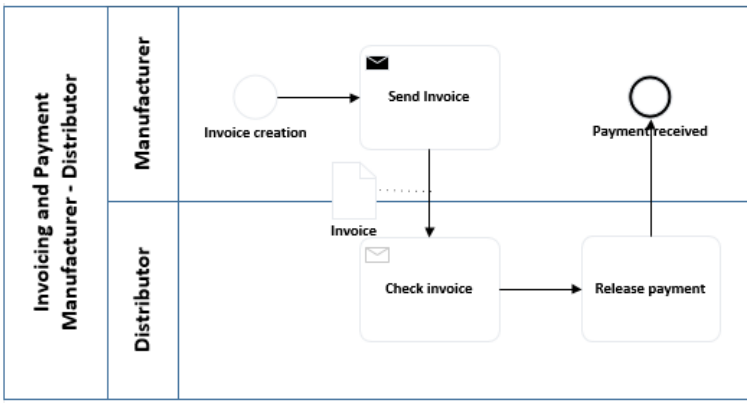

Figure 14: Invoicing and payment (manufacturer to distributor)

b. End customer to Distributor

Distributor will create the invoice and send it the end customer. After performing the invoice check on customer side the payment will be released (see Figure 15). Note: If instant pay methods are used during ordering process, invoice will be generated after the order confirmation.

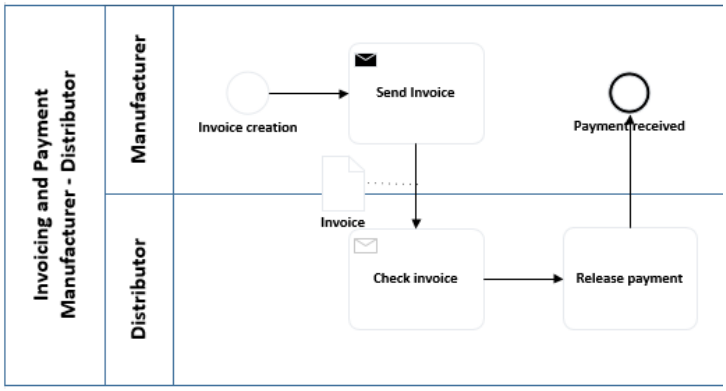

Figure 15: Invoicing and payment (distributor to end consumer)

6 Introduction to TecAlliance

TecAlliance is the global partner in the Automotive Aftermarket for all things aftermarket data related. From parts manufacturers to dealers and trade, to workshops and fleet operators, its products help automotive aftermarket players advance their business through the power of standardized data.

TecCom is a solution that covers the ordering aftermarket parts to digital invoice management and returns of the parts. TecCom consists of four modules that can be used separately or all together based on the business needs. TecCom Order Manager is the most advanced and simplified ordering interface in the market. Based on the extensive process expertise it includes everything companies need for ordering aftermarket car parts in the most successful and easy way.

6.1.1 TecCom order processes

TecAlliance is setting standards in the independent aftermarket community. Wholesalers and suppliers depend on these rules to provide an automated and reliable processing in their software systems.

Order fulfillment implies a couple of processes on both supplier and buyer side. These processes are connected and triggered by the reception of messages, which are sent back and forth between both partners over the TecCom platform. Supplier Suite SAP covers the most important ones on the supplier's side and integrates incoming messages directly in SAP.

6.1.1.1 Inquiries

Buyers can check availability and sales prices of materials at a supplier by an inquiry. This information is provided in real-time by the supplier in a synchronous response.

6.1.1.2 Express Order

Express orders are typically used for customer-driven urgently needed spare parts with limited quantities (e.g., at a repair workshop). Express orders are served by suppliers mainly upon currently available stocks, additional backorders need to be agreed. For express orders, suppliers can offer specific dispatch modes like overnight, express shipping etc.

6.1.1.3 Stock Order

Stock orders cover the need for large scale orders with plenty of materials and large quantities, like for stock replenishments at a buyer. In contrast to express orders, suppliers usually put remaining quantities on backorder and deliver remaining parts as soon as possible. The synchronous response for a stock order is only to confirm the reception.

6.2 Drop Shipment with TecCom

Handling of delivery addresses (drop shipment) is possible, if supported by the supplier. Different scenarios are possible as shown below.

6.2.1 Branch chase with TecCom

The simplest case is the branch case, i.e., the customer orders the goods with a delivery party number provided by the supplier to deliver to a branch of that customer (see Figure 16)

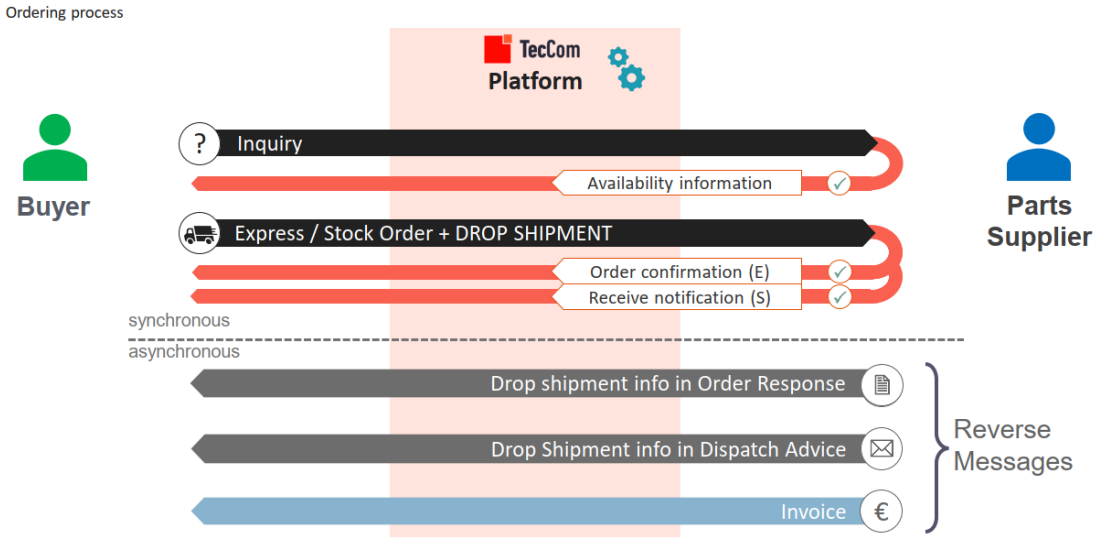

Figure 16: Branch case with TecCom

6.2.2 Classic drop shipment

In a classic drop shipment case, the customer provides a delivery address within the order which is unknown to the supplier (in SAP this is known as CPD address). To support this drop-shipment process the TecCom SAP function modules perform certain checks, e.g., whether the sending and receiving addresses are in the same country (see Figure 17)

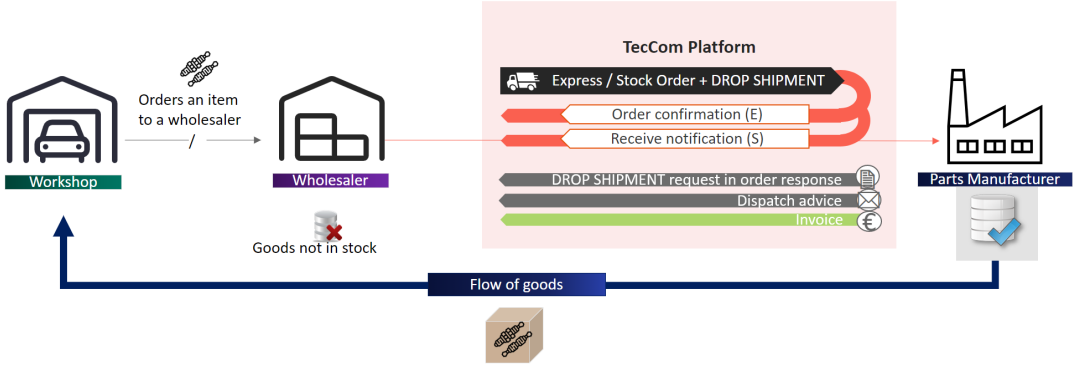

Figure 17: Classic drop shipment with TecCom

6.2.3 Double drop shipment

Double drop shipment increases the complexity in case the goods are delivered to a logistics company who takes care of exporting the goods to a final unknown destination which is not the same as the customer (see Figure 18).

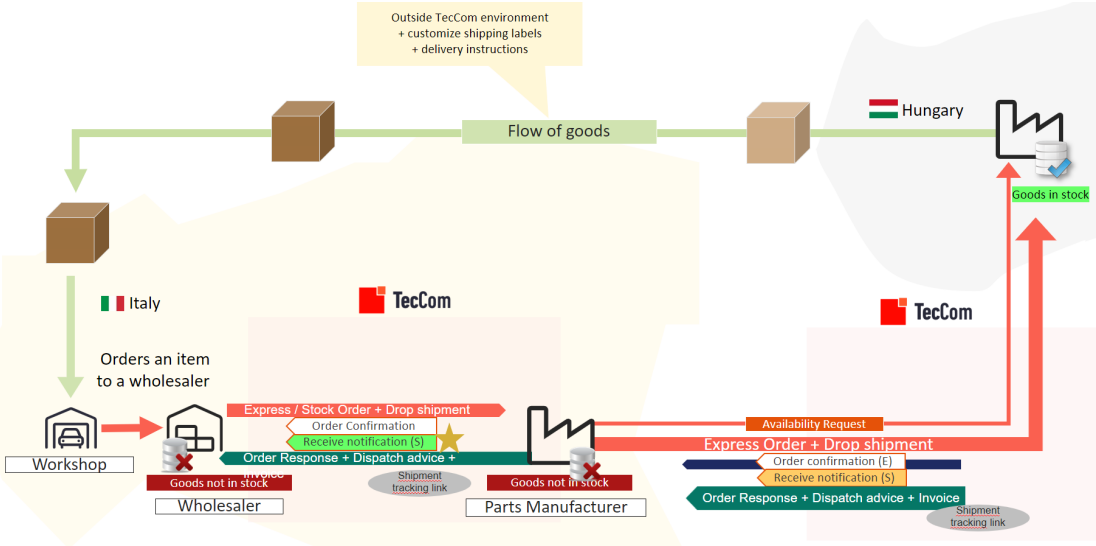

Figure 18: Double drop shipment with TecCom

The subsequent reverse message handling (dispatch advices and invoices) can be tailored within the TecCom function modules so that the above-mentioned processes are supported in an efficient way amongst all involved parties.

6.2.4 TecCom Supplier Suite SAP

The Supplier Suite SAP covers the two components Comfort Supply SAP (TecCFS SAP) and Reverse Messages SAP (TecRM SAP) including e-Invoicing. Comfort Supply SAP is an integrated and versatilely extendable solution for suppliers' SAP systems in the Automotive Aftermarket. It connects suppliers to the TecCom platform and simplifies data exchange with buyers on the other side of the supply chain.

Comfort Supply SAP is designed to act as an automated real-time processing channel for incoming purchase orders and for outgoing messages. Thereby Comfort Supply SAP creates the necessary documents for the SAP order fulfillment standard processes, distinguishing between stock orders, express orders, and availability inquiries. Its functionality also covers the generation of order confirmations, dispatch advices and invoices, the so-called reverse messages. Comfort Supply SAP is an EDI solution, designed for business operators. In contrast to classic EDI solutions, it is completely integrated within SAP, having a comprehensive and easy to use user interface. For example, it provides a Monitor screen for a complete overview of all business transactions.

7 List of references

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