

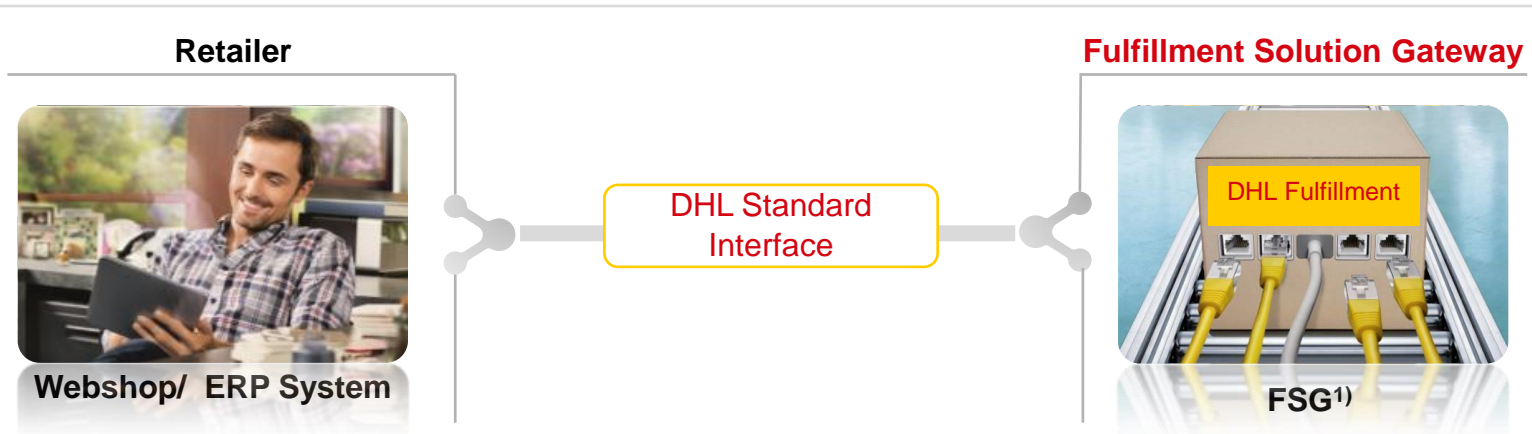
DHL STANDARD INTERFACE – HOW TO CONNECT TO DHL FULFILLMENT NETWORK

DHL Parcel GmbH

March 2019



DSI | Connect to our strong DHL network with one standard interface only



DHL Standard Interface offers

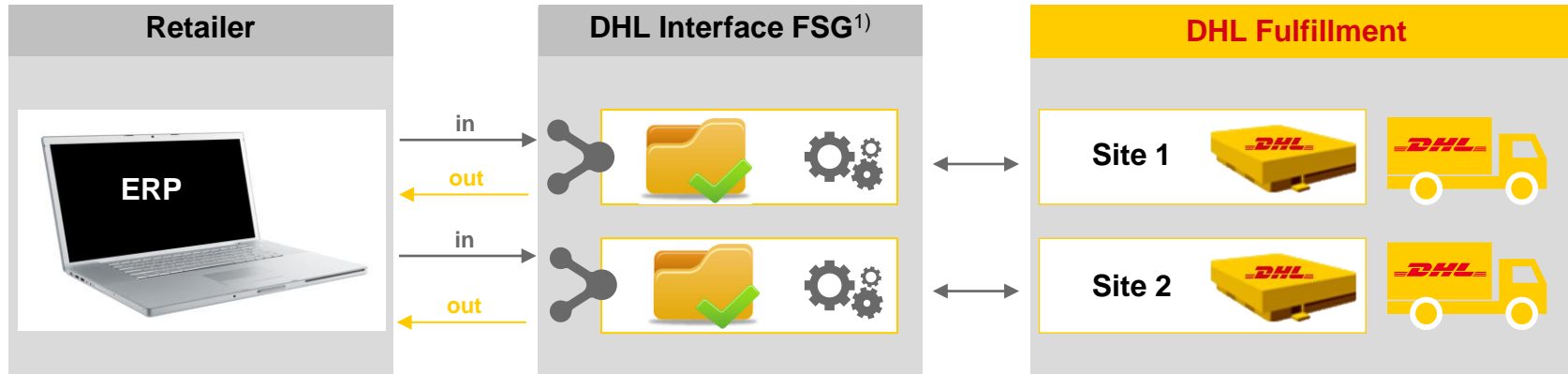
- Easy handling of your customer orders
- One standardized interface (via XML format) – one connection to the DHL Fulfillment Network
- **The full range of functions** (e.g. serial number management, best-before date and LOT number) and quick access to new features
- **Free of charge test user access** to validate the syntax of DSI messages²⁾

¹⁾ Fulfillment Solution Gateway with one to one connection (integration of further sites in different countries possible)

²⁾ Warehouse Management System, see next slides for details

DSI | IT-connection in detail

IT PROCESS FLOW



DATA EXCHANGE PROCESS

Transfer of **relevant data messages (folder with exact same structure)** on DHL Interface FSG per site

- **IN:** Supplier, Item Master, Delivery Advice, Order files
- **OUT:** Acknowledgements, Delivery Receipt, Transport, Order Canceled, Order Return, Stock Adjustments, Inventory Snapshots

WMS FUNCTIONALITIES

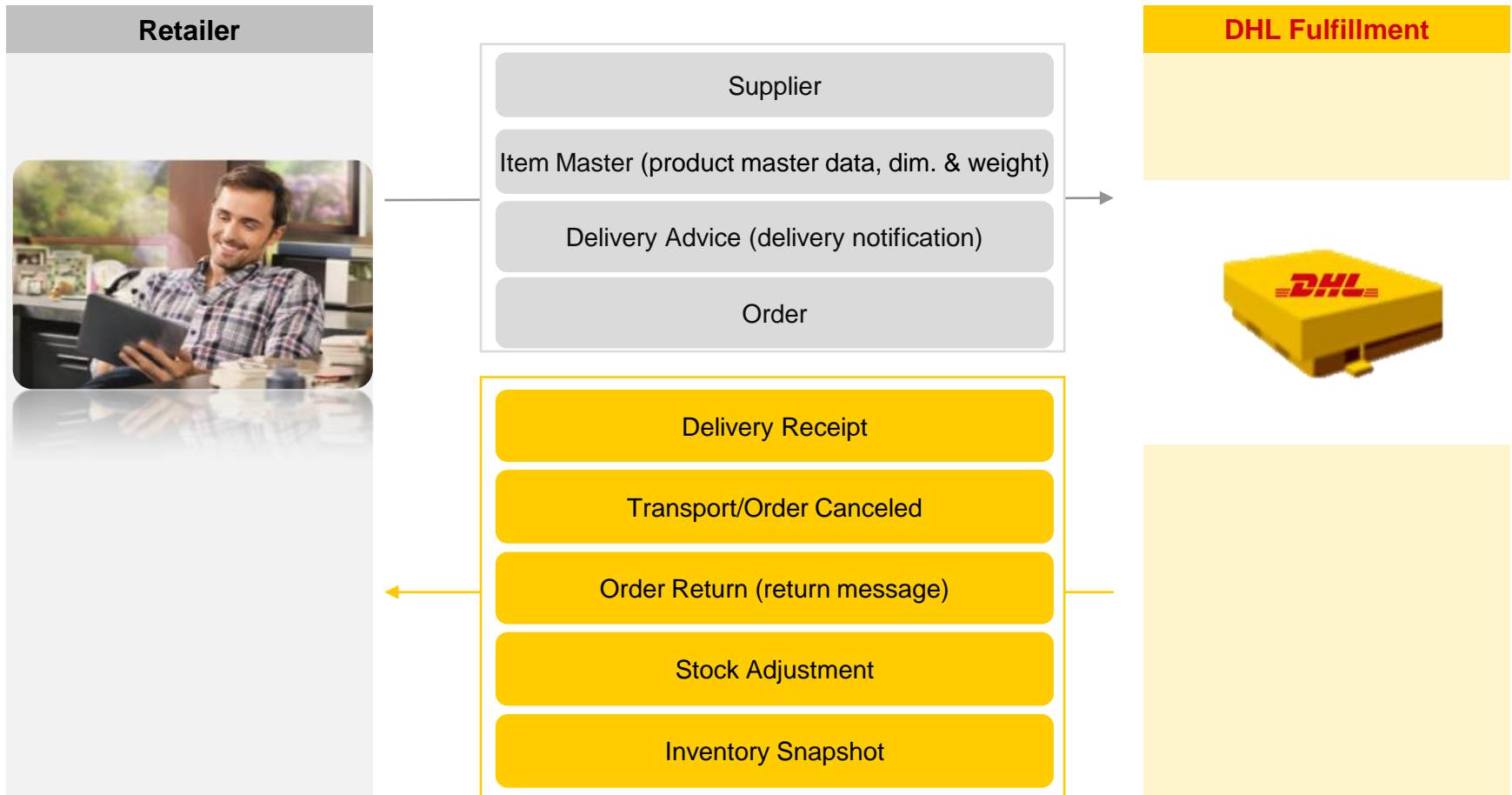
All relevant **standard WMS functionalities** ²⁾

- **Inbound**
- **Order processing**
- **Return**
- **Stock Adjustment**

¹⁾ Fulfillment Solution Gateway with one to one connection (integration of further sites in different countries possible)

²⁾ Warehouse Management System, see next slides for details

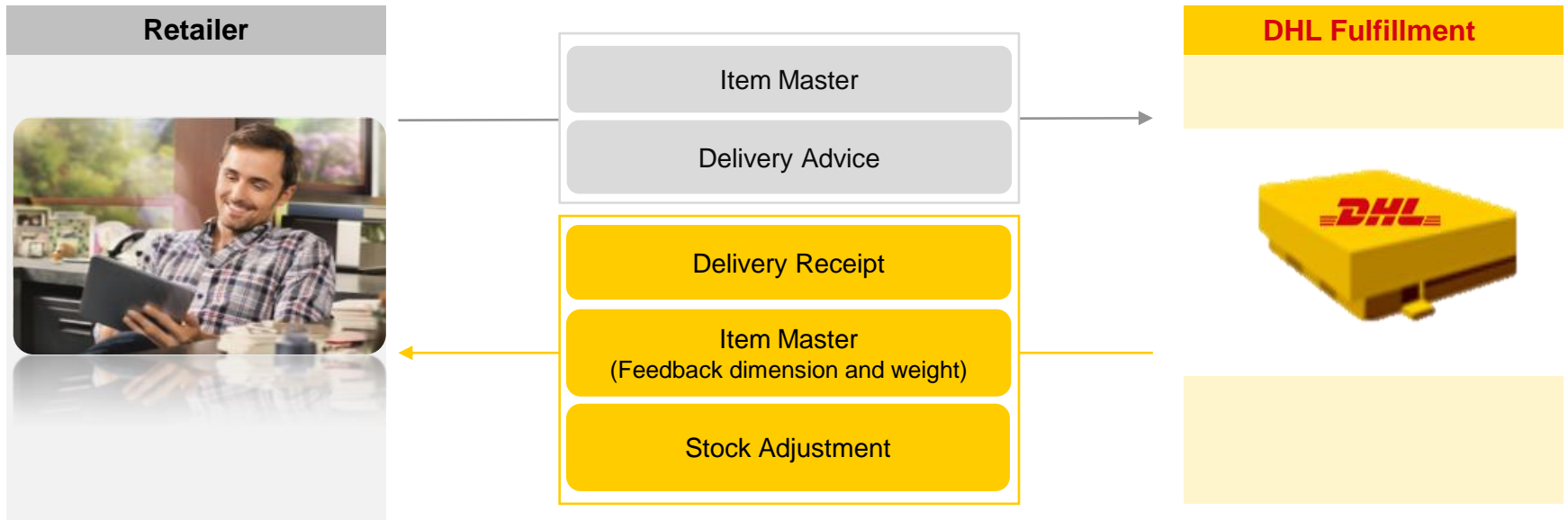
DSI | Message types overviews





DSI | Message types

Incoming goods

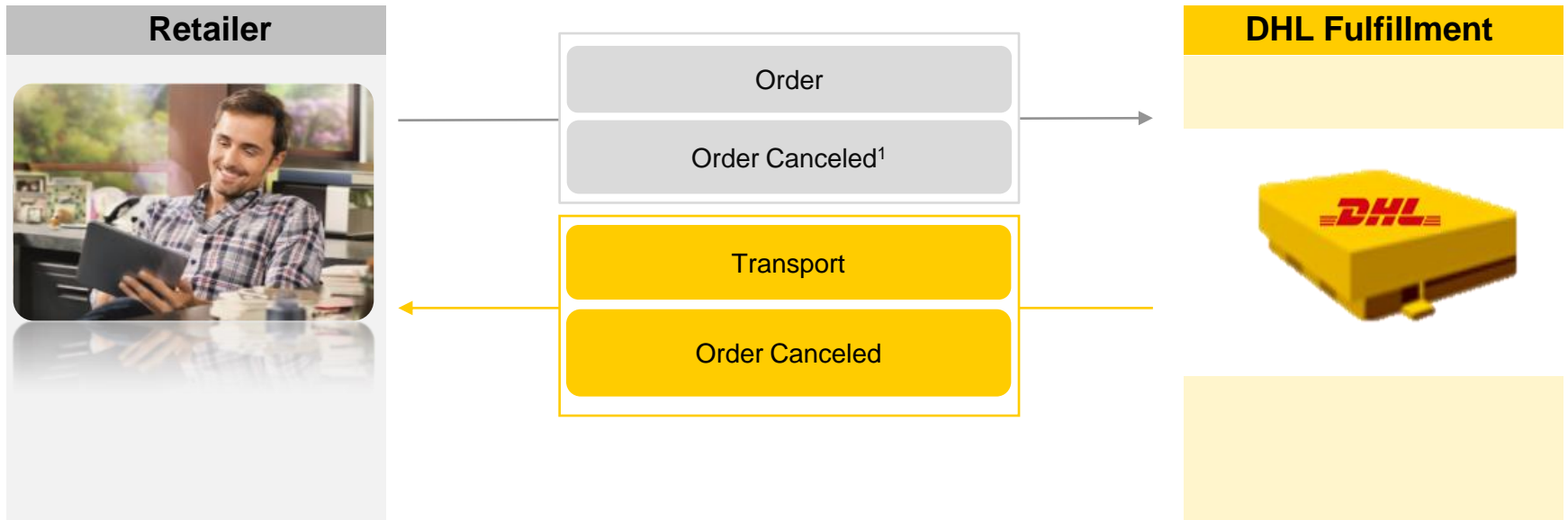


Incoming goods

- Before a new item can be stored in the Fulfillment Center, the **Item Master** must be transferred by the retailer. The retailer then announces the delivery of the goods (**Delivery Advice**).
- When the goods arrive at the Fulfillment Center, they are checked for completeness and the information is sent to the retailer (**Delivery Receipt**). After the storage is completed, the stock status of the goods is adjusted and transferred (**Stock Adjustment**), the goods are now ready for sale.



DSI | Message types Order Management



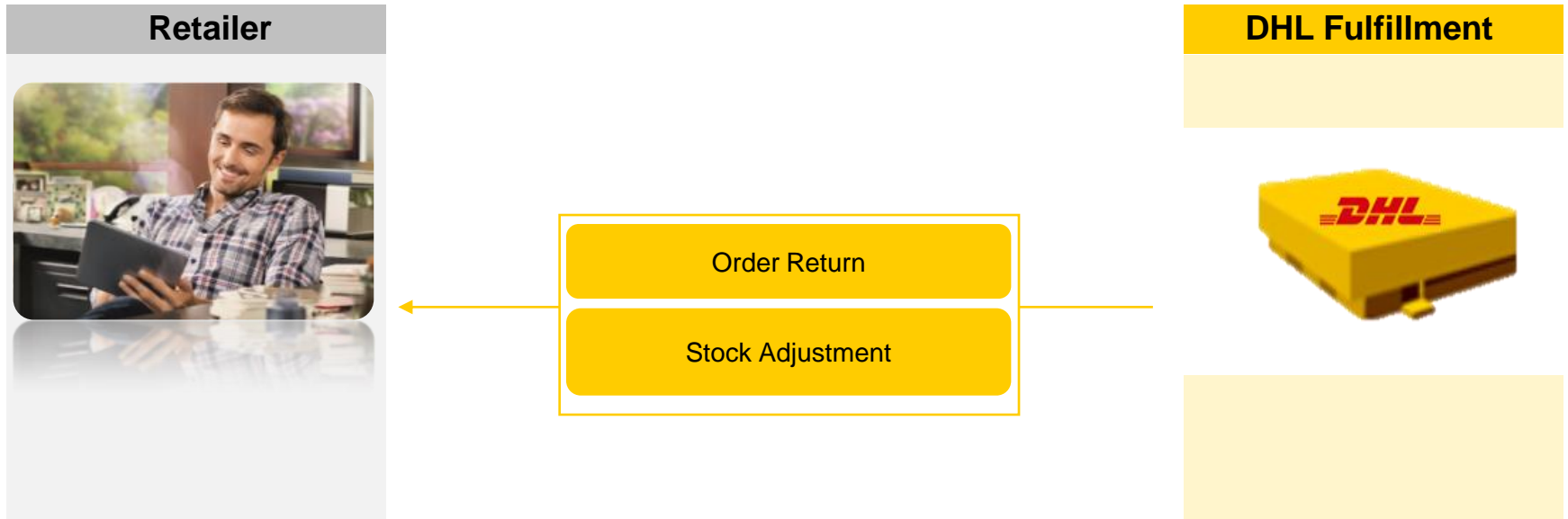
Order Management

- After receiving and checking of an order, the goods are picked in the fulfillment center.
- As soon as the goods have been removed from their storage location, packed and ready for collection by the logistics service provider, the retailer is informed that the order has been completed (**Transport** message incl. tracking number).
- If an error is detected during inspection or picking, the retailer is informed accordingly (**Order Canceled**).

¹⁾ An order can be canceled by the retailer until the picking process has started



DSI | Message types Return Management



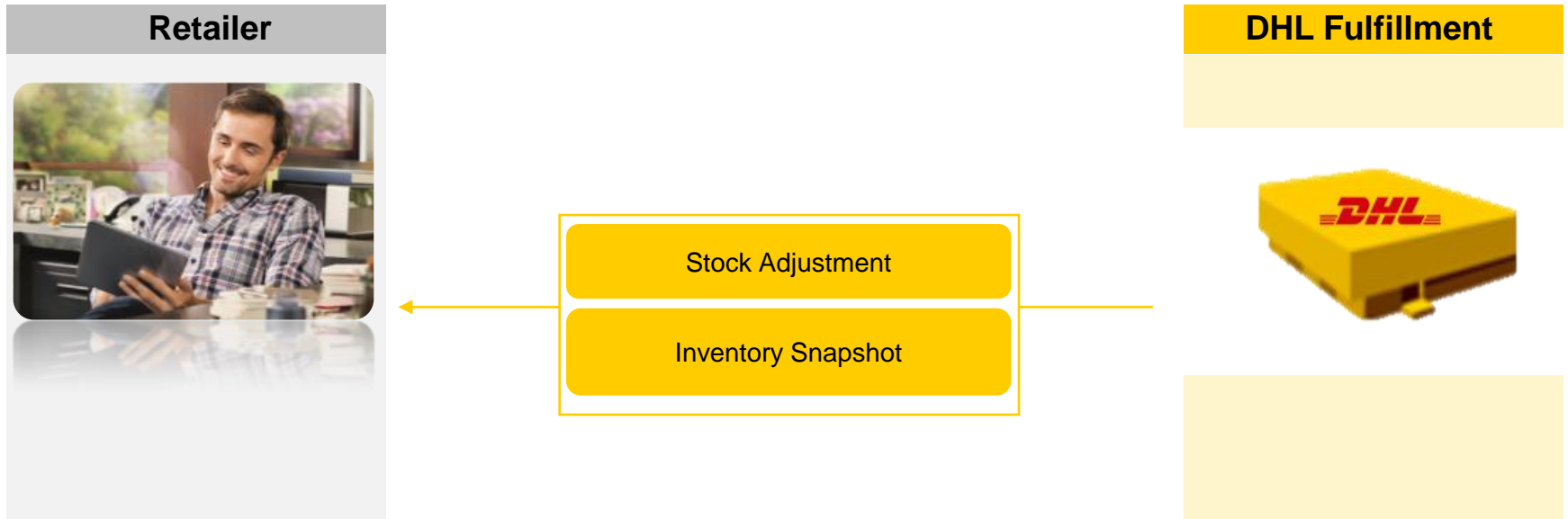
Return Management

- If an end customer returns goods, the fulfillment center receives the return package accordingly and checks the content, reason for return and quality¹ of the goods. This information is then immediately communicated to the retailer (**Order Return**).
- The returned goods are processed in accordance with the contractual conditions and their stock status is transmitted to the retailer after completion of the re-storage (**Stock Adjustment**).

¹) Categories A, B, C (resellable, needs refurbishment, damaged)



DSI | Message types Inventory Management



Inventory Management

- The retailer receives a confirmation for each position movement within the fulfillment center (**Stock Adjustment**). This ensures that the retailer has a complete overview of his goods and their stock status at all times.
- The available stock (current stock minus sales orders) as an overview of all stock is also sent each night via the interface (**Inventory Snapshot**).



DSI | Message types

Acknowledgements

EXAMPLE 1: Positive acknowledgement

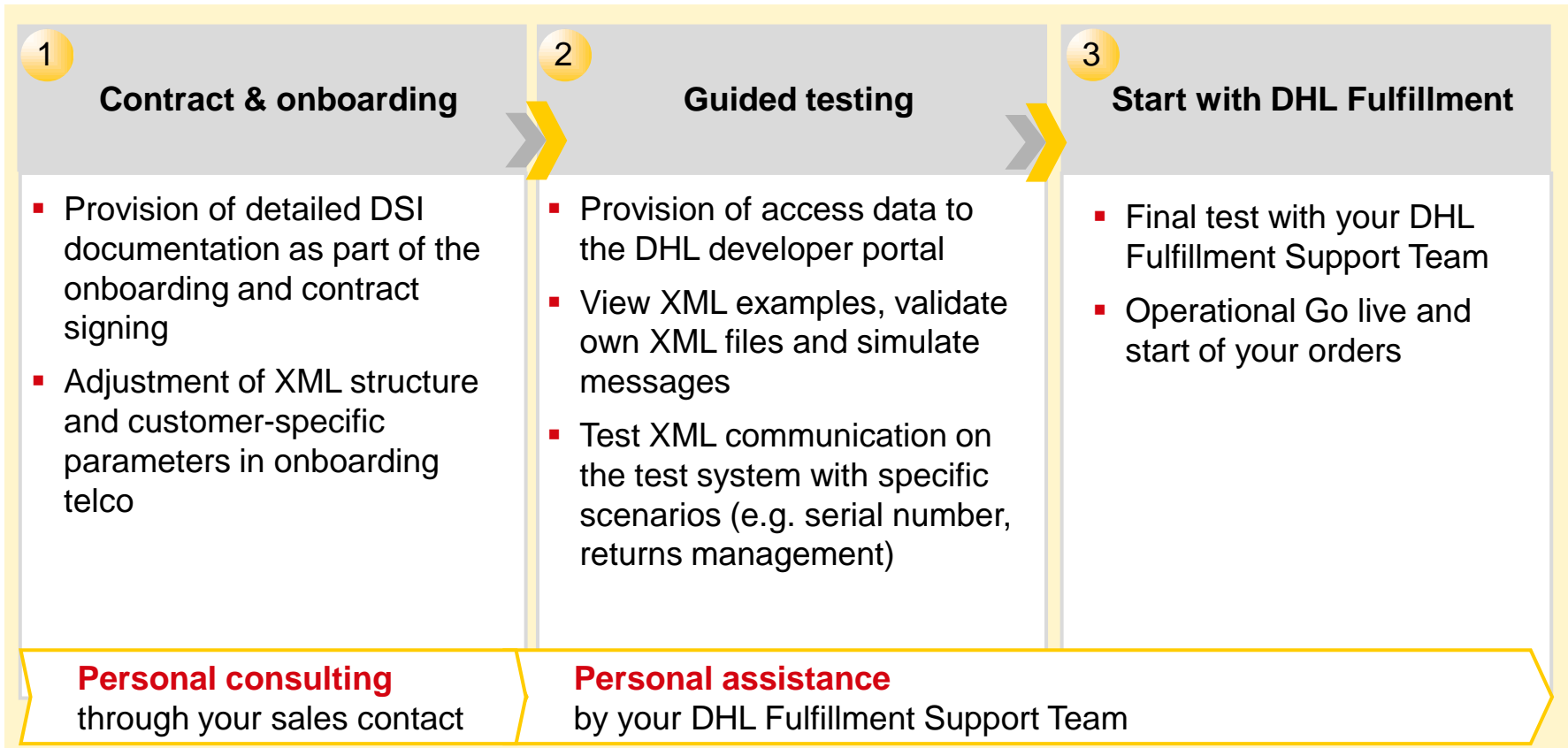
```
<TransmissionControlNumber>1234567890</TransmissionControlNumber>
<SendingPartyID>DHLHD</SendingPartyID>
<ReceivingPartyID>ABC</ReceivingPartyID>
<AcknowledgementDetails>
  <Message>
    <MessageStructureVersion>2.12</MessageStructureVersion>
    <MessageCreationDate>2019-01-24T14:37:00.749Z</MessageCreationDate>
    <MessageControlNumber>1</MessageControlNumber>
    <MessageContent>
      <ns2:Order>
        <OrderId>
          <System>ABC</System>
          <Id>100012939</Id>
        </OrderId>
        <OrderNr>2019-123456</OrderNr>
        <Sender xmlns:xsi="http://www.xxxxxxx.org/2345/xxxxx" xsi:type="ns2:Warehouse">
          <PartnerId>
            <System>ABC</System>
            <Id>2</Id>
          </PartnerId>
        </Sender>
        <Receiver xmlns:xsi="http://www.xxxxxxx.org/2345/xxxxx" xsi:type="ns2:Customer">
          <PartnerId>
            <System>ABC</System>
            <Id>492099</Id>
          </PartnerId>
          <Name>Max Mustermann</Name>
          <Address>
            <Title>Mr</Title>
            <Name1>Max Mustermann</Name1>
            <CountryCode>DE</CountryCode>
            <PostalCode>10117</PostalCode>
            <City>Berlin</City>
          </Address>
        </Receiver>
      </ns2:Order>
    </MessageContent>
  </Message>
</AcknowledgementDetails>
```

EXAMPLE 2: Error message

```
<ns2:TransmissionAcknowledgement xmlns:ns2="http://www.it4logistics.de/i4ldata/ext">
  <TransmissionControlNumber>sf-1484234220088</TransmissionControlNumber>
  <SendingPartyID>DELIVERIT</SendingPartyID>
  <ReceivingPartyID>AAA</ReceivingPartyID>
  <AcknowledgementDetails>
    <ErrorResponse>Ein übermittelter Artikel ist unbekannt.</ErrorResponse>
    <ErrorCode>UNKNOWN_ITEM</ErrorCode>
  </AcknowledgementDetails>
  <Message>
    <MessageStructureVersion>2.12</MessageStructureVersion>
    <MessageCreationDate>2017-01-12T15:17:00.102Z</MessageCreationDate>
    <MessageControlNumber>1</MessageControlNumber>
    <MessageContent>
      <ns2:Order>
```

- For each XML-message sent from the retailer the system generates acknowledgements
- Acknowledgements can contain **positive information** or **error messages**
- When sending the **item master**, wait for the corresponding **positive acknowledgement** before sending an order containing a new item. This way, error messages can be avoided.

Getting connected to DHL Fulfillment | Next Steps



BACK UP

DSI | EXAMPLE Order-XML

(sent from retailer to DHL Fulfillment)

```
<Name>Max Mustermann</Name>
<Address>
<Title>Herr</Title>
<Name1>Max Mustermann</Name1>
<Name2>optional</Name2>
<Name3>optional</Name3>
<CountryCode>DE</CountryCode>
<PostalCode>53113</PostalCode>
<City>Bonn</City>
<Street>Sträßchensweg 10</Street>
<PhoneNumber1>+49 123456789</PhoneNumber1>
<Email>Kundenadresse@provider.com</Email>
</Address>
```

```
<InvoiceAddress>
<Title>Herr</Title>
<Name1>Max Mustermann</Name1>
<Name2>optional</Name2>
<Name3>optional</Name3>
<CountryCode>DE</CountryCode>
<PostalCode>53113</PostalCode>
<City>Bonn</City>
<Street>Sträßchensweg 10</Street>
<PhoneNumber1>+49 123456789</PhoneNumber1>
<Email>Kundenadresse@provider.com</Email>
</InvoiceAddress>
</Receiver>
```

```
<OrderType>POST</OrderType>
<ProductType>EH</ProductType>
<FreightTerms>FV</FreightTerms>
<OrderDate>2018-10-05</OrderDate>
<Information>Zusatztext</Information>
<InvoiceNr>Test-Order_123</InvoiceNr>
<InvoiceDate>2018-12-18</InvoiceDate>
<ShippingCost>
  <Amount>5.00</Amount>
  <Currency>EUR</Currency>
</ShippingCost>
<Price>
  <Amount>50.00</Amount>
  <Currency>EUR</Currency>
</Price>
<Items>
  <CatalogNr>711A</CatalogNr>
  <Quantity>1</Quantity>
  <Packages>1</Packages>
  <Volume>
    <Amount>0.00132</Amount>
    <Unit>CBM</Unit>
  </Volume>
  <Weight>
    <Amount>1.800</Amount>
    <Unit>KG</Unit>
  </Weight>
  <TaxRate>19</TaxRate>
</Items>
</ns5:Order>
```



DSI | EXAMPLE Transport-XML Order processed

(Message sent to the retailer when order is ready for collection by the shipping provider)

- Extract Transport-XML

```
<TransportType>OUTGOING</TransportType>
<TransportDirection>STANDARD</TransportDirection>
<Items>
  <ItemId>
    <System>TEST</System>
    <Id>123</Id>
  </ItemId>
  <PositionNr>1</PositionNr>
  <ProductNr>123</ProductNr>
  <Quantity>2</Quantity>
  <TargetQuantity>2</TargetQuantity>
  <StockType>PRIME_SELECTION</StockType>
  <TransportItemDetails>
    <Barcode>00312345670000000111</Barcode>
    <Quantity>2</Quantity>
  </TransportItemDetails>
</Items>
<Packages>
  <Barcode>00312345670000000111</Barcode>
  <Size>S</Size>
</Packages>
</ns2:Status>
</MessageContent>
</Messages>
```