

SupplyOn Invoicing

Integration Guide for Suppliers

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Index of Abbreviations

ABBREVIATION DESCRIPTION ASN Advance Shipping Notification AS2 **Applicability Statement 2** CSV Comma Separated Values EDI Electronic Data Interchange Electronic Data Interchange for Administration, Commerce and Transport **EDIFACT** HTTP **Hypertext Transfer Protocol** M2M Machine to Machine OCR **Optical Character Recognition** Odette Organization for data exchange by teletransmission in Europe P2P Purchase to Pay PDF Portable Document Format **Purchase Order** PO S/MIME Secure / Multipurpose Internet Mail Extensions UBL Universal Business Language. VAT Value-added Tax VDA Verband der Automobilindustrie (association of the automotive industry in Germany) XSD XML Schema Definition

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1 Introduction

This document describes the technical possibilities for the integration of suppliers' systems (for example billing or ERP systems) with SupplyOn Invoicing, as an alternative to manually entering the invoice data using the web interface. Target group are persons with a technical background, for example in the IT-department of the supplier companies, which want to implement an integration of SupplyOn Invoicing with their companies system.

This document is structured as follows:

- Chapter 2 "Process Overview" provides an overview of the overall business processes supported by SupplyOn Invoicing, which may be helpful for a better understanding of the business context.
- Chapter 3 "Message Content" describes the requirements regarding the content of the exchanged messages
 or data files, i.e. the invoice data to be provided by the supplier's system. Suppliers should first check
 whether their system can provide the required content before taking any further action.
 - It is also recommended, that suppliers first use SupplyOn Invoicing via the web interface before starting a technical implementation. In general, the same requirements regarding invoice content apply when using SupplyOn Invoicing via the web interface compared with the options for technical integration described in this document. Generally, an implementation of an integration of the supplier's system to SupplyOn Invoicing is recommended only for suppliers with a high transaction volume, e.g. with more than 500 invoices to the respective SupplyOn customer(s) per year.

As most SupplyOn customers have individual requirements regarding the invoice content, customer-specific addendums are available for some customers with additional information specific to that customer.

- Chapter 4 "Channels for SupplyOn Invoicing" explains the different technical integration options (= channels). Following channels are currently available:
 - o CSV or Excel Upload
 - o EDI (using EDIFACT or UBL XML format)

Based on the information in this chapter, suppliers should first determine which channel they want to use, if this is not decided already.

Note that not all customers support all channels. The respective customer-specific addendum explains which channels the respective customer supports.

After the supplier has selected the appropriate channel, the sub-chapter for the respective channel provides information regarding the technical implementation by the supplier, in order to use that channel. For each channel, following information are provided: o

Prerequisites:

Preconditions, which the supplier must fulfilled in order to use the channel. o Restrictions: Any restrictions the channel may have.

- o File Format: Format (structure, syntax, ...) of the message or data file to be generated by the supplier's system, as mandated by the respective channel.
- Uploading or transmitting the file: How the file is uploaded into SupplyOn Invoicing or transmitted between the supplier's system and SupplyOn Invoicing.
- Error Handling: Information on error handling for the channel.
- Chapter 5 "Error handling process" explains how to correct invoices for which an error has been detected during processing at SupplyOn or at the customer.
- Chapter 6 "Invoice Compliance, Original Invoice and Archiving" provides information regarding regulatory aspects, which should be considered as a framework.
- Chapter 7 "Training and Support" provides information, how SupplyOn can help suppliers during the implementation or the usage of a technical integration.

NOTE: In the following, the term "invoice" is also used for other types of financial documents created by the supplier, like a credit note or a price variation debit/credit, unless stated otherwise.



2 Process Overview

This chapter provides an overview of the business processes supported by SupplyOn Invoicing.

2.1 Financial Documents Created by the Supplier

The supplier creates an invoice, credit note, or other type of financial document supported by SupplyOn Invoicing for the respective customer. This is typically done in the supplier's billing or ERP system.

Provided an integration with SupplyOn Invoicing exists, the invoice is transferred from the supplier's system to SupplyOn Invoicing.

Depending on the customer and the tax-relevant country, SupplyOn Invoicing performs certain validations in order to ensure that the invoice content complies with the respective country's regulations and the customer's business requirements.

If the invoice passes the validation successfully, it is transferred from SupplyOn Invoicing to the customer's system, where it is processed. Some customers return a status message regarding the processing of the invoice on their side. This status information is currently not transferred to the supplier. This means, that suppliers need to log on to SupplyOn Invoicing to check the invoice status via the web interface. (View the **customer status** column in the **Sent** tab of the **Invoice list**. The column may need to be selected via the link **View-button**.)

2.2 Financial Documents Created by the Customer

Some customers also transfer financial documents created on their side (for example self-billing invoices, credit notes) to the supplier via SupplyOn Invoicing.

Such documents can be transferred from SupplyOn Invoicing to the supplier for processing in their internal system. The process is currently only supported via the EDI channel (see section 4.3 "EDI") in the EDIFACT format. Otherwise, the supplier needs to retrieve the documents via the SupplyOn Invoicing web interface, where a PDF file (including the original EDI file from the customer attached) and a CSV or Excel file are available for download.

3 Message Content

Some requirements exist regarding the content of the messages sent by the supplier to SupplyOn Invoicing (or data files uploaded to SupplyOn Invoicing), in order to ensure that the information can be processed by SupplyOn Invoicing and that it complies with the customer's business requirements and the respective country's legal requirements. This chapter describes these requirements.

3.1 Routing Data

The supplier needs to provide following identifiers in all financial documents in order to identify the sender and the receiver of the document:

- Customer: Identifier for the customer's organizational unit.
- Customer Site: Identifier for the customer's plant.
- Supplier Number: The customer's identifier for the supplier or supplier's plant. Leading zeros have to be taken into account.

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These identifiers relate to following fields on the Invoicing user interface and the relevant channels:

	Customer	Customer site	Supplier Number
Label in SupplyOn	(under "Customer	under "Customer	Supplier Number (under
Invoicing	addresses")	addresses")	"Supplier addresses")
CSV	BuyerOrgID	BuyerID1	SellerID1
EDIFACT	NAD+BY - C058 – 3124*1	NAD+BY - C082 – 3039	NAD+SE - C082 – 3039
UBL XML	cac:BuyerCustomerParty.	cac:BuyerCustomerParty.	cac:SellerSupplierParty.cbc:
	Party.PartyLegalEntity.	cbc:CustomerAssigned AccountID	CustomerAssigned AccountID
	CompanyID		

If the IDs to be used for the routing data are not known to the supplier, they can be identified as described in the following sections.

3.1.1 Routing Data from an Invoice

If an invoice already exists in SupplyOn Invoicing (for example when previously created manually), the routing data can be derived from there by opening the invoice.

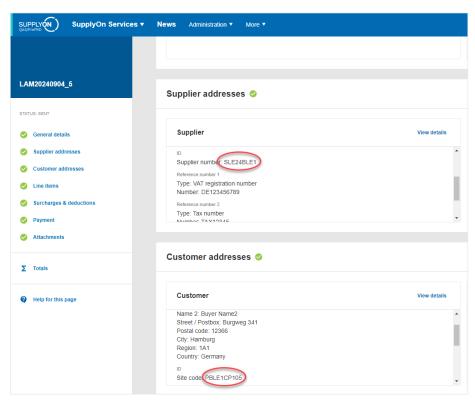


Figure: Routing data on a invoice

If no invoice exists which contains the required routing data, the supplier can create an invoice within SupplyOn Invoicing. This invoice does not need to be sent to the customer; it can be saved as draft and/or deleted.

3.1.2 Routing Data from a Demand Document

If the invoice relates to a Purchase Order in SupplyOn Logistics and Finance (WebEDI) or AirSupply, the routing data can alternatively be derived from there:

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¹ Contrary to the declaration in the VDA guideline, the segment NAD C058 / 3124 is used for the statement of Org Code. This segment is listed as "not used" in the guideline.



3.1.2.1 Logistics and Finance (WebEDI)

The figure below shows, where the routing data can be found on a Purchase Order within SupplyOn Logistics and Finance (WebEDI).

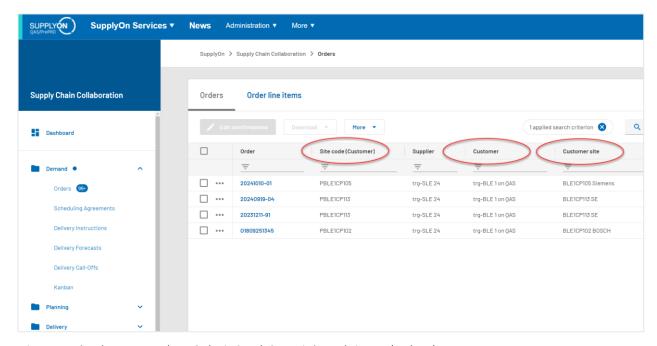


Figure: Routing data on a Purchase Order in SupplyOn Logistics and Finance (WebEDI)

In order to access Purchase Orders:

- After logging on to SupplyOn, click SupplyOn-Services and select Supply Chain Collaboration
- Click on link Demand Orders
- You may search for a specific Purchase Order
- Click on the corresponding row to open a Purchase Order
- Use the View-button to add additional columns if needed

3.1.2.2 AirSupply

In order to retrieve the routing information from a Purchase Order in AirSupply, download the Purchase Order:

- Navigate to Ordering Purchase orders
- Select the relevant Purchase Orders and click **Download**, then select **PO Schedule Lines** (full) I The routing information can be derived from the downloaded file:

Routing information	Colum in Download
Customer	Customer Group Short Name
Customer site	ERP Plant
Supplier Number	Supp. No.

3.1.3 Routing Data from the Partner File

The allowed routing data configured on the SupplyOn Platform can be downloaded in the SupplyOn Invoicing application via the Invoice list by clicking **Download**, choosing **Reports** and then selecting **Partner File**.



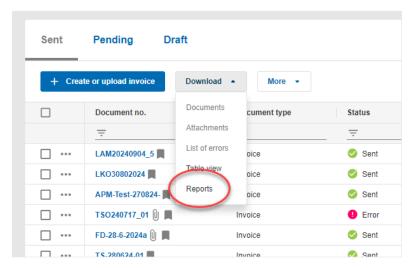


Figure: Downloading a partner file



Figure: Example of a partner file



3.1.4 Routing Data from an Inbound EDI Message

For the channel EDI (see chapter 4.3 "EDI"):

If the supplier receives EDIFACT documents from SupplyOn via EDI (for example document types "selfbilling invoice" and "remittance advice"), the routing information can be derived from there:

Sender ID (UNB.S002.0004)	The Sender ID of the customer has to be copied out of the inbound message and		
+ Recipient ID	sent back as Recipient ID in the outbound message to SupplyOn (see example).		
(UNB.S003.0010)	contraction of the contraction o		
,	From SupplyOn to supplier:		
	UNB+UNOC:3+ BUYER-XY +RecipientID+031003:1947+0471104812'		
	, and the second		
	From supplier to SupplyOn:		
	UNB+UNOC:3+SenderID+ BUYER-XY +031003:1947+0471104812'		
Buyer Ord Code	The Customer has to be copied out of the inbound message and sent back in the		
(NAD.C058.3124#1)	outbound message to SupplyOn (see example).		
	From SupplyOn to supplier:		
	NAD+BY+2222::91+ Buy01 :Buyer GmbH+Buyer GmbH &		
	Co.KG+Schlossallee 100+Neustadt++12345+DE'		
	Form condition to Condition		
	From supplier to SupplyOn: NAD+BY+2222::91+ Buy01 :Buyer GmbH+Buyer GmbH &		
Customer site (NAD.C082.3039)	Co.KG+Schlossallee 100+Neustadt++12345+DE' The Customer site has to be conied out of the inhound massage and sent back in		
customer site (NAD.CO82.3039)	The Customer site has to be copied out of the inbound message and sent back in the outbound message to SupplyOn (see example).		
	the outbound message to supplyon (see example).		
	From SupplyOn to supplier:		
	NAD+BY+ 222 ::91+Buy01:Buyer GmbH+Buyer GmbH &		
	Co.KG+Schlossallee 100+Neustadt++12345+DE'		
	From supplier to SupplyOn:		
	NAD+BY+ 2222 ::91+Buy01:Buyer GmbH+Buyer GmbH &		
	Co.KG+Schlossallee 100+Neustadt++12345+DE'		
Supplier number	The Supplier number has to be copied out of the inbound message and sent back		
(NAD.C082.3039)	in the outbound message to SupplyOn (see example).		
	From SupplyOn to supplier:		
	NAD+SU+ 009999875 ::92++Supplier GmbH & Co.KG+Kastanienweg		
	12+Bremen++45678+DE'		
	From supplier to SupplyOn:		
	NAD+SU+ 009999875 ::92++Supplier GmbH & Co. KG+Kastanienweg		
	12+Bremen++45678+DE'		
	NAD+SE+009999875 (for message type invoice)		

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3.2 Types of Financial Documents

SupplyOn Invoicing supports different types of financial documents, which are described in the following sections. As the (commercial) invoice is the most commonly used type, the term "invoice" is also used in this document as a generic term to denote all types of financial documents.

3.2.1 (Commercial) Invoice

A (commercial) invoice is used for the billing of goods or services created by the supplier. It may relate to a demand document (Purchase Order, ASN), or not ("Invoice from scratch").

3.2.2 Credit Note

A credit note is used for the correction of a quantity-based invoice. Therefore, the quantity to be subtracted must be entered as a positive value. SupplyOn Invoicing reduces the invoiced quantity as follows:

Current invoiced quantity = previous invoiced quantity – corrected invoiced quantity via credit note

3.2.3 Price Variation Credit

A price variation credit is used for the correction of a price-based invoice if the previous invoiced price was too high. Therefore, the price to be credited must be entered as a positive value. SupplyOn Invoicing reduces the invoiced amount as follows:

Current invoiced value = previous invoiced value - invoice value difference via price variation credit

3.2.4 Price Variation Debit

A price variation debit is used for the correction of a price-based invoice if the previous invoiced price was too low. Therefore, the price to be added must be entered as a positive value. SupplyOn Invoicing increases the invoiced amount as follows:

Current invoiced value = previous invoiced value + invoiced value difference via price variation debit

3.2.5 Prepayment

A prepayment invoice can be used to request an advance payment of an invoice amount from the customer. Prepayment invoices do not reduce the billable amount or quantity; this is only done by the commercial invoice (final invoice).



3.3 Field Description

The field description is a separate Excel file which is provided together with the customer-specifc addendum. It describes which Invoicing fields are available for the respective customer, including additional information for each field.

The file shows for different types of financial documents following information:

- Field name: Label of the field (in English language) as shown in the web interface of SupplyOn Invoicing
- Mandatory: Whether field is
 - o Mandatory in every case
 - o Mandatory if another field is used ("Conditional"), or
 - o Optional
- Max. length: Maximum allowed length, as defined by SupplyOn Invoicing. In case of EDI channel, additional restrictions regarding the field length may result from the respective XML Schema or EDI Guideline.
- Max. repetitions: Maximum number of repetitions of the respective field.
- Allowed values: If only specific values are allowed, these values are listed, together with an explanation or their meaning.
- Additional requirements: Additional requirements regarding the content of the field.
- Mapping to the different formats (EDIFACT, UBL XML, etc.).

 Note, that the fields are sorted according to the structure of Invoicing. Column "Sort Key" within the respective format can be used to sort the fields according to the structure of the respective format.



3.4 General Topics

This section describes some general requirements regarding the message content.

3.4.1 Country and Currency Codes

3.4.1.1 Countries

Countries need to be specified with a code according to ISO 3166 ALPHA-2 (see https://en.wikipedia.org/wiki/ISO_3166-1).

3.4.1.2 Currencies

For each amount, a currency has to be provided as 3-letter ISO code (ISO 4217 ALPHA-3 Code). If different currencies are being used, the currency has to be provided multiple times (currency of customer and supplier country).

3.4.2 Total Values

Unlike manually entering invoices via the web interface, SupplyOn Invoicing does not perform any calculation of totals (for example tax total, invoice total) when uploading or transferring invoices via data files. Therefore, the supplier needs to provide all totals be provided in the invoice message or data file.

Rounding differences in VAT calculations on the totals level is only allowed within certain limits:

- On totals level: Allowed rounding differences in VAT calculations is 0,01 EUR maximum.
- On items level: No rounding differences are allowed.

3.4.3 Taxes

- Surcharges on a header level are only permitted if the tax rate at the items level is the same for all items.
- A tax category (e. g. "Reverse Charge") is required if the tax rate is zero.

3.4.4 Invoice from Demand

Unlike the manual entry of invoices "from demand" via the SupplyOn Invoicing web interface, no "switching" of demand data is performed when uploading or transferring invoices via data files, which refer to a demand document from SupplyOn Logistics and Finance or AirSupply, like a Purchase Order or ASN (Advance Shipping Notification). The invoice message must contain all relevant invoice data. The invoice data must match the corresponding data on the demand document with respect to the following information, depending on the customer's requirements:

- Price Unit
- Price per Unit
- · Unit of Measure
- Currency
- ..

The line item quantity (in case of a quantity based order) or amount (for example, in the case of valuelimit orders) - including other invoices already created - must not exceed the quantity or amount on the referenced demand document's line item, considering a tolerance range, if applicable.

The spelling of the number of the referenced demand document and the line item has to be identical to the one provided by the customer.

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3.4.5 Invoice Correction

In case of the correction of invoices (Credit Note, Price Variation Debit/Credit; see chapter 3.2 "Types of Financial Documents"), the following requirements apply:

- Document number and item number of the referenced invoice document are mandatory.
- Customer and supplier data, including reference numbers (for example VAT number) have to be the same as in the invoice being corrected.
- In general, item data have to be the same as in the invoice being corrected. Exceptions are:
 - Quantity and amounts in case of credit note o
 Amounts in case of price variation debit/credit

3.4.6 Attachments

Type, size and number of the attachments must comply with following general restrictions, which may deviate for individual customers; see chapter 3.6 "Customer-specific Requirements".

- Attachment Types:
 - bmp,csv,doc,docx,gif,jpg,jpeg,pdf,png,ppt,pptx,rtf,tif,tiff,txt,xls,xlsx,xml,zip,BMP,CSV,DOC,DOCX,GIF,JPG,JPEG,PDF,PNG,PPT,PPTX,RTF,TIF,TIFF,TXT,XLSX,XML,ZIP
- Maximum number of attachments per invoice: 5
- Maximum size of one attachment: 5 MB
- · Maximum size of all attachments for one invoice: 10 MB

3.5 Country-specific Requirements

Different countries have different legal requirements regarding the content of the invoice. These requirements are reflected in country-specific rulesets configured by SupplyOn. These rulesets control, which of the invoice fields are available (on a mandatory or optional basis). In some cases, the field content is also checked for allowed values. The relevant country is determined based on:

- the VAT number of the supplier (first two characters) or
- the country of the supplier or
- the VAT number of the tax representative (first two characters)

Country-specific requirements (in addition to customer-specific requirements – see chapter 3.6 "Customer-specific Requirements") are documented in the field description; see chapter 3.3 "Field Description".

3.6 Customer-specific Requirements

In addition to country-specific requirements, each customer has specific requirements regarding the content of an invoice, which are reflected in customer-specific rulesets configured by SupplyOn. Customer-specific requirements (in addition to country-specific requirements – see chapter 3.5 "Country-specific Requirements") are documented in the field description; see chapter 3.3 "Field Description".

Important customer-specific requirements are also explained in the addendum for the respective customer. (See respective document "SupplyOn Invoicing Integration Guide_Addendum ...")

4 Channels for SupplyOn Invoicing

SupplyOn offers different technical approaches for the integration of the suppliers' systems with SupplyOn Invoicing ("channels"), in order to allow as many suppliers as possible to integrate their systems with SupplyOn Invoicing.

The following sections describe the available channels. For suppliers who have already decided which channel they want to implement, only the corresponding sub-section is relevant.

Note that not all channels are supported by all customers; see respective customer-specific addendum for information on the channels supported by that customer.

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4.1 CSV or Excel upload

CSV² files are text files, in which a delimiter separates the different fields, for example "," or ";". Many systems support the generation of CSV files. However, note that the format of the CSV file must correspond to the SupplyOn standard as described below in chapter 4.1.3 "CSV File Format". SupplyOn Invoicing users can create invoices by uploading such a CSV file within the application.

Invoicing is compatible with Excel XLSX file extension uploads as well. Besides the technical file extension, such files have to match the same SupplyOn standard as mentioned above for CSV files.

4.1.1 Prerequisites

In order to use the CSV or Excel upload, following prerequisites need to be fulfilled:

- The upload can be used by all suppliers using SupplyOn Invoicing.
- A SupplyOn user with access to SupplyOn Invoicing and authorization to create invoices is required in order to perform the upload.
- The business relationship to the respective customer's plant must be set up for SupplyOn Invoicing by the customer
- During the upload or when sending the uploaded invoice in a second step, the user must confirm the "Invoicing Terms and Conditions", which you also can find here: https://supplyon.com/img/help/download/eInvoicing/EN eInvoicing Terms Conditions.pdf

4.1.2 Restrictions

File attachments are currently not supported during CSV or Excel upload. However, when choosing the "Save as draft" option (versus "Send"), file attachments can be added to the invoice manually.

4.1.3 CSV and Excel file format

The structure of the file needs to conform to the SupplyOn format as described in this section. Requirements regarding the content of the CSV file are described in chapter 3 "Message Content".

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² CSV = comma separated values



4.1.3.1 General format requirements

- The first row of the CSV file needs to contain the field names, separated by a delimiter (";" or "," see chapter 4.1.3.2 "Format of Dates, Numbers and Delimiters"). The field names must exactly match the names used by SupplyOn Invoicing. They can be derived from the format description (see section 3.3 "Field Description"); or by using a downloaded CV file (see 4.1.3.3 "Downloading a file") as an example file. The sequence of the fields is not relevant; but it must be consistent for all rows of the file; i.e. the subsequent rows must contain the fields in the same sequence as the first row.
- All fields need to be separated by a delimiter (see chapter 4.1.3.2 "Format of Dates, Numbers and Delimiters"). If the field value contains a delimiter, it needs to be encapsulated by quotation marks (for example "A,B,C").
- Fields ending with a "1" in the name can occur multiple times in columns within the file. (Exceptions: "...Name1","...ID1") In such cases, the number needs to be increased for subsequent occurrences, e.g.: "BuyerRefNumberType1, BuyerRefNumberType2, BuyerRefNumber1, BuyerRefNumber2, ..." (Numbers must be consecutive. E.g. "BuyerRefNumberType1, BuyerRefNumberType3, BuyerRefNumber1, BuyerRefNumber3, ..." would lead to an error.
 - Column "max. repetitions" in the field description (see chapter 3.3 "Field Description") contains the maximum number of allowed repetitions.
- The upload file can contain data of one or multiple invoices or invoice line items. In case of multiple invoice line items, the fields on the header level must be repeated in each row.
- The file must be UTF-8 encoded.

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4.1.3.2 Format of dates, numbers and delimiters

The date and decimal format as well as the delimiter (";" or ",") to be used in the CSV or Excel file are dependent on the country of the SupplyOn user performing the upload (as set in the user profile under **Administration** -> **My User Account**).

Following table shows the formats to be used for some countries:

Country	Date Format	Decimal Separator	Delimiter
Australia	d/MM/yyyy		,
Austria	dd.MM.yyyy	,	;
Belgium	d/MM/yyyy	,	;
Brazil	dd/MM/yyyy	,	;
Canada	dd/MM/yyyy		,
China	yyyy/M/d		,
Czech Rep.	d.M.yyyy	,	;
Denmark	dd-MM-yyyy		;
Finnland	d.M.yyyy	,	;
France	dd/MM/yyyy	,	;
Germany	dd.MM.yyyy	,	;
Hong Kong	d/M/yyyy		,
Hungary	yyyy.MM.dd	,	;
Ireland	dd/MM/yyyy		,
Italy	dd/MM/yyyy	,	;
Japan	yyyy/MM/dd		,
Netherlands	d-M-yyyy		;
Poland	yyyy-MM-dd	,	;
Portugal	dd-MM-yyyy	,	;
Romania	dd.MM.yyyy	,	;
Singapore	d/MM/yyyy		,
South Africa	yyyy/MM/dd		,
Spain	dd/MM/yyyy	,	;
Sweden	yyyy-MM-dd	,	;
Switzerland	dd.MM.yyyy		;
U.S.A.	M/d/yyyy		,
United Kingdom	dd/MM/yyyy		,



4.1.3.3 Downloading a CSV or Excel file

It is recommended to download an existing invoice in SupplyOn Invoicing as a CSV or Excel file in order to obtain an example, based on which you can generate a CSV or Excel file. If no invoices exist yet, you can create an invoice using the invoice web form. The invoice can be saved as draft and deleted later, and does not need to be sent to the customer.

Validate the invoice before you download it without errors, in order to ensure that all required data are available and entered correctly. (Click **Check** in the invoice web form to validate the invoice.) Steps to perform a download in SupplyOn Invoicing:

- Select the documents to be downloaded in the corresponding tab of the invoice list.
- Click Download and then click Documents.
- Select the file format CSV or Excel.
- Click Download.

Please be aware that the downloaded CSV file might contain some fields, which are not required for the upload, as they will be ignored by the system. These fields include:

- GUID (Header)
- countrySource (Header)
- Status (Header)
- CustomerStatus (Header)
- · Channel (Header)

Only relevant for invoices to customer Airbus:

- CFTPLevel1 (Header)
- CompanyCode (Header)
- FactsCode (Header)
- InvoiceImageFilename (Header)
- NumberOfAttachments (Header)
- SAPClientNumber (Header)
- SAPSystemName (Header)
- UniqueInvoiceIdentificationNumber (Header)
- archivingProviderBuyside (Header)
- archivingProviderSellside (Header)
- archivingSectionBuyside (Header)
- archivingSectionSellside (Header)
- signatureProvider (Header)
- Basis1NetPrice (Item)



4.1.3.4 Using Excel to edit CSV Files

Note the following when using Microsoft Excel to edit CSV files:

- Excel deletes zeros at the beginning of entries by default and sets the data format according to the
 language settings of the user's computer. To avoid errors when uploading CSV files, entries starting with
 zero must be entered with an apostrophe (for example '0110) or the cells formatted as "text".
 Furthermore, the regional data format standards have to be considered (for example English:
 dd/mm/yyyy). The language setting of the user's computer may need to be adapted to the language
 settings of the corresponding user.
- CSV files generated by SupplyOn Invoicing use UTF-8 encoding; and Invoicing expects UTF-8 encoding for CSV files to be uploaded. In order to ensure that special characters (for example äöü) are processed correctly with Excel:
 - Before opening a CSV file generated by Invoicing with Excel, you need to convert it to ANSI encoding. This can, for example, be done with a text editor like the Windows Editor (File -> Save as, and set Encoding to ANSI).
 - Before uploading a CSV file edited with Excel, convert it to UTF-8 encoding correspondingly.
- To avoid such issues, we recommend to use Excel download and upload directly.

4.1.4 Uploading a CSV or Excel file

In order to upload a CSV or Excel file (containing one or multiple invoices) within SupplyOn Invoicing in the invoice list:

- Click Create or upload and then click Upload CSV file or Upload Excel files.
- In the upcoming dialogue window, you can either select one or multiple files via the file selection dialog window ("Browse"); or you can drag and drop files into the grey box.
- Following options are available for uploading files:
- **Send**: The invoice is immediately sent to the customer, if it does not contain any errors. It can be found in the **Sent** tab of the **Invoice list**.
- Save as draft: The user can edit the data via the web interface or add attachments before the invoice is sent to the customer. After successful uploading, the invoice is available in the **Ready to send** tab of the **Invoice** list. The final sending to the customer has to be initiated manually by the user in one of the following ways:
 - Select the relevant row in the Ready to send tab of the Invoice list and click Send.
 - Open the invoice by clicking on the document number and then click **Send**. You may edit the data or upload attachments before sending the invoice.

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4.1.5 Error Handling

If the format of the uploaded file does not conform to the SupplyOn standard as described above, or its content does not comply with the requirements described in chapter 3 "Message Content" an error message is displayed:

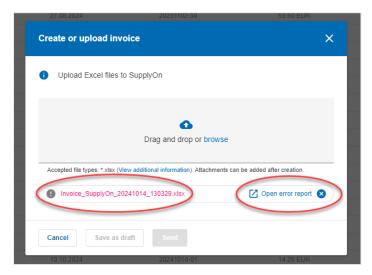


Figure: Error message for CSV upload.

If multiple error messages occur, they are listed in a separate file that you can download. You can use this file to communication the problem with the file upload to the SupplyOn customer support (see chapter 7 "Training and Support".

See chapter 5 "Error handling process" for general information on how to correct invoices for which an error has been raised by SupplyOn or the customer.

4.2 EDI

EDI (Electronic Data Interchange) refers to the electronic exchange of business information in a standardized way. SupplyOn currently supports following EDI message formats:

- EDIFACT Global Invoice standard based on the VDA guideline 4938 part 2 version 2.2 from July 2016.
- UBL XML V2.1 Invoice from November 2013

Following communication protocols are supported for both message formats:

- OFTP2 via TCP/IP
- AS2 via HTTPS

4.2.1 Prerequisites

In order to use the EDI channel, following prerequisites need to be fulfilled:

- The supplier needs a Connect contract for the corresponding customer and P2P (Purchase-toPay), or a Professional contract with SupplyOn.
- A contract for the joint integration project with SupplyOn is required; see chapter 4.3.6 "Integration Project". Fees will incur for the project.
- The business relationship to the respective customer's plant must be set up for SupplyOn Invoicing by the customer.
- The respective customer needs to allow the usage of the EDI channel.
 (See respective customer-specific addendum.)
- A SupplyOn user with access to Invoicing is not a mandatory requirement, but may be helpful for trouble shooting, verification or viewing of invoices, checking customer status of invoices, etc.

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4.2.2 Restrictions

For UBL XML, only the document types (see section 3.2 "Types of Financial Documents") Invoice and Credit Note are supported.

4.2.3 EDI Message Format

SupplyOn currently offers the following EDI formats for SupplyOn Invoicing, which are described in more detail in the following sections:

- EDIFACT
- UBL XML

Requirements regarding the content of the EDI messages are described in chapter 3 "Message Content".

4.2.3.1 EDIFACT

EDIFACT Global Invoice standard based on the VDA guideline 4938 part 2 version 2.2 from July 2016 is supported. (See https://www.vda.de/en/services/Publications/global-invoic-implementation-guideline.html) The EDIFACT message needs conform to this standard. This implies, that in addition to fields which are mandatory due to customer's or legal requirements (chapter 3 "Message Content"), all fields need to be provided which are mandatory due to the UBL standard.

Suppliers need to send invoices via message type GlobalINVOIC D07.A . If attachments are transmitted, the VDA Container needs to be used. In addition, following rules apply:

- Multiple messages within one transmission file are NOT allowed, i.e. each transmission file may only contain one UNH segment.
- Line breaks (CRLF = Carriage Return Line Feed) at the end of segments.
 You can send EDIFACT messages with or without CRLF to SupplyOn. In case CRLF is used, it has to be used at the end of every segment.
- Requirements regarding the content of the EDIFACT message are described in chapter 3 "Message Content".
- Not all fields of the EDIFACT standard are supported by Invoicing. The fields supported by the respective customer and the requirements of the customer regarding the content of the invoice can be derived from the field description; see chapter 3.3 "Field Description".
- Note, that the field description is sorted based on the structure of the Invoicing application. Please refer to the EDIFACT guideline for the correct structure of the EDIFACT file.

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4.2.3.2 UBL XML

SupplyOn currently supports UBL XML V2.1 (November 2013) for document types Invoice and Credit Note:

- http://docs.oasis-open.org/ubl/os-UBL-2.1/UBL-2.1.html#T-INVOICE
- http://docs.oasis-open.org/ubl/os-UBL-2.1/UBL-2.1.html#T-CREDIT-NOTE

Following needs to be considered for the UBL XML files sent to Supplyon Invoicing:

- The UBL XML file needs conform to the respective UBL schema (XSD), which describes the structure and syntax of the UBL XML file. This implies, that in addition to fields which are mandatory due to customer's or legal requirements (chapter 3 "Message Content"), all fields need to be provided which are mandatory due to the UBL standard. It is necessary to respect also fields which become mandatory if the higher-level element is provided. (E. g. for UBL, the segment cac:TaxScheme within cac:PartyTaxScheme.) It is recommended, that the supplier validates the XML file generated on his side against the schema. The schemas can be found under following links:
 - o Invoice: http://docs.oasis-open.org/ubl/os-UBL-2.1/xsd/maindoc/UBL-Invoice-2.1.xsd o Credit Note: http://docs.oasis-open.org/ubl/os-UBL-2.1/xsd/maindoc/UBL-CreditNote-2.1.xsd

In addition to the schemas for the respective document types above, the schemas of the common UBL library needs to be downloaded, as they are referenced in the document type-specific schema.

Also see:

- http://docs.oasis-open.org/ubl/os-UBL-2.1/UBL-2.1.html#S-SCHEMA-DEPENDENCIES
 http://docs.oasis-open.org/ubl/os-UBL-2.1/UBL-2.1.html#S-UBL-2.1-COMMON-SCHEMAS
- Requirements regarding the content of the UBL XML message are described in chapter 3 "Message Content".
- Not all fields of the UBL standard are supported by Invoicing. The fields supported by the respective
 customer and the requirements of the customer regarding the content of the invoice can be derived from
 the field description; see chapter 3.3 "Field Description".
- Note, that the field description is sorted based on the structure of the Invoicing application. Please refer to the UBL schema for the correct structure of the UBL XML file.

4.2.4 Transferring EDI Messages

For both formats - EDIFACT and UBL XML - he technical connection to SupplyOn EDI can be alternatively set up via two communication protocols:

- OFTP2 via TCP/IP
- AS2 via HTTPS

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4.2.4.1 OFTP2 via TCP/IP

OFTP2 (Odette File Transfer Protocol version 2) is an enhancement of the Odette File Transfer Protocol. OFTP2 can be set up on different transport layers: ISDN, X.25, TCP/IP. SupplyOn only supports OFTP2 via TCP/IP (Internet).

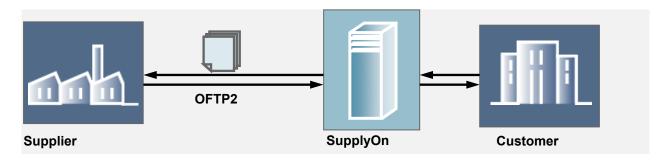


Figure: Overview of OFTP2

4.2.4.1.1 Communication Process

One of the partners initiates the communication. After the exchange of Odette IDs and passwords, files can be exchanged in both directions. The files receive a pre-configured virtual file name for the transmission. Files can be transmitted via OFTP2 either encrypted or unencrypted. SupplyOn allows only an encrypted transmission. After the transmission, a confirmation in form of an *End to End Response* (EERP = positive acknowledgment of receipt, EERN = negative acknowledgment) takes place. This *Endto-End Response* can take place either immediately after the transmission within the same connection, or the receiver can independently dial the original sender for transmission.

Strengths of OFTP2:

- OFTP2 allows a restart to the connection after an abort. It is not necessary to send the entire file again.
- The implicit *End-to-End Response* guarantees a correct transmission and a processing of the file through the receiver.
- Secure data and connection due to encryption.

4.2.4.1.2 OFTP2 Encryption

SupplyOn uses the maximal security settings with OFTP2, including the latest cryptographic algorithms:

- symmetrical encryption using the AES/256 algorithm,
- · SHA1 digital signature algorithm,
- data compression and only a signed and encrypted receipt.

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4.2.4.1.3 OFTP2 Parameters

OFTP2		SupplyOn	Explanation
Parameter		Communication	
Security	Communication Certificate	Trusted	One certificate for communication and signature Trusted: Certificate Authority assigns, administrates and controls certificates. There are Class 2 and Class 3 certificates. Certificates have to be updated at least after 5 years.
	Digital signature	SHA1	Before the data is dispatched, a signature is generated and attached to the transmission. With the receipt of the message, the receiver verifies the signature. This guarantees that the message really comes from the sender. SHA1 is an option of the signature algorithm and is recommended.
	Encryption	AES/256	Advanced Encryption Standard is a symmetrical encryption method that is considered to be the new encryption standard. It is used to encrypt data and the transmission connection.
Transport Layer	Internet connection	permanent internetconnectionfixed and public URL orIP address mandatory	A permanent internet connection has to be granted.
	Transport Protocol	OFTP2 via HTTPS	HTTPS is a special form of the HTTP Protocol offering increased security via SSL (128-Bit encryption). HTTPS is used to prevent "monitoring" during the transmission of sensitive data.
Client Authentification	Authentication	HTTPS Basic authentication with username and password	Authentication of the sending interface system during the receipt.

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4.2.4.2 AS2 via Internet (HTTPS)

AS2 (Applicability Statement 2) is a communication protocol for secure data transfer via the Internet. Electronic business documents in any format, which are sent to the business partners, are compressed and, if necessary, provided with an electronic signature.

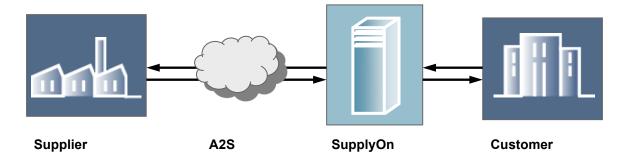


Figure: Overview of AS2

4.2.4.2.1 Communication Process

AS2 works with an "envelope" in which the EDI data is embedded. The data is transmitted with the Hypertext Transfer Protocol (HTTP), the core technology of the World Wide Web.

The server of the receiver waits for messages that are addressed to it. As soon as the server recognizes that a message addressed to it arrives, the server checks the certificates/Authorization of the message.

After the check, it lets the message enter.

Similar to a telephone without a mailbox, the server acquires the message only if the server is available. Therefore, the server has to keep a permanent connection to the internet.

4.2.4.2.2 Strengths of AS2

AS2 enables the user to send and receive data securely and reliably with the Internet protocol HTTPS. The cost advantage, which results from the use of the Internet, is passed on directly to the AS2 user. If you have decided to use an AS2 software solution, no additional costs will arise, even when sending a larger data volume. Due to the rising number of EDI messages this is, apart from the security aspect, the decisive factor to implement AS2 for many companies.

Digital certificates ensure for example, that messages only reach the desired receiver and that the sender can be verified. AS2 works with encryption and signature algorithms, so that the security of the documents is ensured.

4.2.4.2.3 Prerequisites for the AS2 Communication

A prerequisite for the data exchange with other AS2 compatible companies is an Internet access and AS2 compliant software. Ensure that your AS2 software supports HTTP Basic Authentication for data transmission to SupplyOn.

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4.2.4.2.4 AS2 Parameters

AS2 Parameter		SupplyOn Communication	Explanation
Security	Communication Certificate	trusted or self-signedmaximum validity 5 years	One certificate for communication and signature Trusted: Certificate Authority assigns, administrates and controls certificates. There are Class 2 and Class 3 certificates. Self-Signed: Self-Signed certificates reduce the administration effort. Certificates have to be updated at least after 5 years.
	Digital signature	SHA1	Before the data is dispatched, a signature is generated and attached to the transmission. With the receipt of the message, the receiver verifies the signature. This guarantees that the message really comes from the sender. SHA1 is an option of the signature algorithm and is recommended.
	Encryption	-	No additional encryption of the data is necessary, since the communication is already SSL encrypted (HTTPS)!
Transport layer	Internet connection	permanent internet connection fixed and public URL or IP address mandatory	A permanent internet connection has to be granted.
	Transport Protocol	AS2 via secure HTTP (HTTPS)	HTTPS is a special form of the HTTP Protocol offering increased security via SSL (128-Bit encryption). HTTPS is used to prevent "monitoring" during the transmission of sensitive data.
Client Authentification	Authentication	HTTP Basic authentication with username and password	Authentication of the sending interface system during the receipt.
Message Disposition Notification = MDN	MDN	Mandatory	The MDN is an instrument for transaction security. The MDN is sent back by the recipient. It confirms the message receipt and provides proof that the correct recipient was reached, since he was in the possession of the private key.
	MDN signed	Synchronously signed if necessary	Signing of the message receipt
	MDN encryption	_	No additional encryption of the data is necessary, since the communication is already SSL encrypted (HTTPS)!

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4.2.5 Error Handling

If at least one error occurred during processing of the invoice, SupplyOn sends an e-mail with the error description to the supplier.

The original message that caused the error is attached to this e-mail.

Sender address of the e-mail is WebEDIAdmin@SupplyOn.com.

Recipient address of the e-mail is the e-mail address as stated along with the UNB sender ID in the parameter sheet, as defined during the Integration Project.

It is recommended to configure the SupplyOn e-mail domain (supplyon.com) on the supplier's e-mail whitelist in order to avoid that the mails from SupplyOn are rejected as spam mails.

See chapter 5 "Error handling process" for general information on how to correct invoices for which an error has been raised by SupplyOn or the customer.

4.2.5.1 Error Message for EDIFACT

For suppliers using EDI format EDIFACT, SupplyOn Invoicing can return the error status via an EDIFACT message for easier processing in the supplier's system. The message is of type APERAK based on UN/EDIFACT APERAK message release 15A. (See https://www.unece.org/trade/untdid/d15a/trmd/aperak_c.htm) Details of the message format are provided in a separate EDIFACT guideline.

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4.2.5.2 Error Message for UBL XML

For suppliers using EDI format UBL XML, SupplyOn Invoicing can return the error status alternatively via an UBL message of type Application Response (see http://docs.oasis-open.org/ubl/os-UBL-2.1/UBL-

<u>2.1.html#T-APPLICATION-RESPONSE</u>), in order to allow easier processing in the supplier's system. This message is based on UBL schema http://docs.oasis-open.org/ubl/os-UBL-2.1/xsd/maindoc/UBLApplicationResponse-2.1.xsd.

Description of important elements of Application Response message:

UBL XML element	Description
cbc:ID	SupplyOn message ID of the Application Response
	message
cbc:lssueDate	Date of the Application Response message
cbc:VersionID	Version ID
cac:SenderParty/cbc:EndpointID	Org Code of the Buyer (Routing Triple)
cac:SenderParty/cac:PartyIdentification/cbc:ID	Plant Code of the Buyer (Routing Triple)
cac:ReceiverParty/cac:PartyIdentification/cbc:ID	Supplier Number (Routing Triple)
cac:DocumentResponse/cac:Response/cbc:Descriptio n	ERROR in case of overall error status, or OK
	otherwise.
cac:DocumentResponse/cac:Response/cac:Status/cbc	Error code
:StatusReasonCode	
cac:DocumentResponse/cac:Response/cac:Status/cbc	Error description
:StatusReason	
cac:DocumentResponse/cac:DocumentReference/cbc: ID	Unique identifier for the invoice, as provided by
	the supplier in inbound message in element
	/cbc:ID
cac:DocumentResponse/cac:DocumentReference/cbc: UUID	Unique identifier for the message, as provided by
	the supplier in inbound message in element
	/cbc:UUID
cac:DocumentResponse/cac:DocumentReference/cbc:	Date of the invoice, as provided by the supplier in
IssueDate	inbound message in element /cbc:IssueDate
cac:DocumentResponse/cac:DocumentReference/cbc:	Receiving time stamp of the inbound message
IssueTime	
cac:DocumentResponse/cac:DocumentReference/	SupplyOn Message type of the inbound message
cac:Attachment/cac:ExternalReference/cbc:FileName	
cac:DocumentResponse/cac:DocumentReference/	SupplyOn Creation time stamp of inbound
cac:Attachment/cac:ExternalReference/cbc:Description	message
cac:DocumentResponse/cac:DocumentReference/cac:	Supplier number of inbound message (Routing
IssuerParty/cac:PartyIdentification/cbc:ID	Triple)
cac:DocumentResponse/cac:DocumentReference/cac:	Sender Info
IssuerParty/cac:PartyName/cbc:Name	
cac:DocumentResponse/cac:DocumentReference/cac:	Customer of inbound message (Routing Triple)
RecipientParty/cbc:EndpointID	
cac:DocumentResponse/cac:DocumentReference/cac:	Customer site of inbound message (Routing Triple)
RecipientParty/cac:PartyIdentification/cbc:ID	

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4.2.6 Integration Project

The following diagram shows the process for an EDI integration project with SupplyOn. For additional information, please contact EDI-Connect@SupplyOn.com.

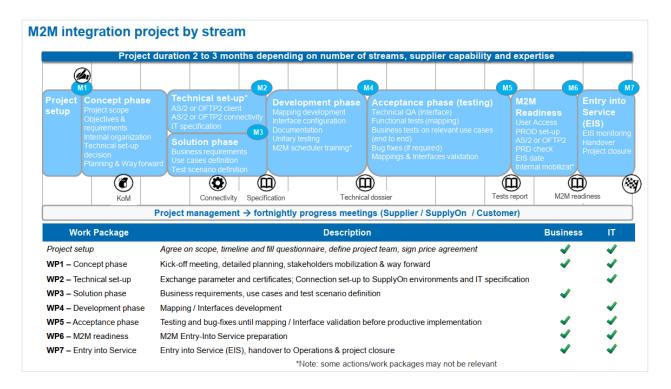


Figure: Process of an EDI integration project

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5 Error handling process

This chapter describes what type of errors can occur during the processing of an invoice within SupplyOn Invoicing. In addition, it describes how errors can be handled which are reported by the customer.

5.1 Errors raised by SupplyOn

Before an invoice created by the supplier is sent to the customer, SupplyOn Invoicing performs several checks of the invoice data.

There are three types of errors:

Syntax Errors:

The content or structure of the message does not comply with the rules defined for the respective channel. In case of a syntax error, the invoice is <u>not</u> saved in SupplyOn Invoicing.

Routing Errors:

The routing contained in the message (see chapter 3.1 "Routing Data") is not correct. In case of a routing error, the invoice is <u>not</u> saved in SupplyOn Invoicing.

Validation errors:

The message does not comply with the content requirements, as configured for the respective customer and/or country (see chapter 3 "Message Content").

In case of a validation error, the invoice can be found in the **Sent** tab of the **Invoice list** in SupplyOn Invoicing with the status "error". (Column **Status** may need to be selected using the view button) If the invoice references a Purchase Order or another demand document (for example an ASN – Advance Shipping Notification), the invoice does <u>not</u> reduce the respective billable quantity of the demand document. The supplier has the following options:

- Correct the initial invoice in the supplier's internal system and re-send it to SupplyOn Invoicing with the same invoice number.
- Cancel the initial invoice in the supplier's internal system, and create a new, corrected invoice and send it to SupplyOn Invoicing with a different invoice number. The initial (erroneous) invoice will remain in the **Sent** tab of the **Invoice List** with the status "error".
- Create a credit note in the supplier's internal system referencing the initial invoice and send it to SupplyOn Invoicing. However, this credit note will be set with the status "error" to SupplyOn, as it refers to an invoice, which is also in the status "error".

Then create a new, corrected invoice and send it to SupplyOn Invoicing.

It is also possible to correct the document in "error" status directly in the user interface. To do this, the document must be opened in "error" status from the invoice list. On the detail page that opens, there is a "correct document" button at the bottom. With this function, the document is transferred to "draft" status and can then be corrected and resent in the "draft" tab. Aspects of error handling specific to the different channels are described in section "Error Handling" in chapter 4 "Channels for SupplyOn Invoicing".

If the supplier cannot solve the error on his own, he needs to contact SupplyOn (see section 7 "Training and Support").

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5.2 Errors raised by the Customer

If no error was raised during the validation of the invoice by SupplyOn, it will be transferred to the customer's system. If the customer subsequently identifies an error within the invoice during the processing on his side, he will:

- notify the supplier outside of SupplyOn Invoicing (for example via e-mail) and/or
- set the customer status to "document rejected" for the invoice in SupplyOn Invoicing. The status is
 visible in the tab Sent of the Invoice List of SupplyOn Invoicing.

(Column **Customer** processing status may need to be selected using the view button)

Corrections are not possible for an invoice, which has already been sent successfully by SupplyOn Invoicing to the customer. Therefore, the supplier needs to create a credit note with reference to the invoice and send it to SupplyOn, so that the billable quantity of the referenced demand document (for example a Purchase Order or an ASN) within SupplyOn Logistics and Finance or AirSupply is reduced. If applicable, the supplier then needs to create a second, corrected invoice and send it to SupplyOn Invoicing.

In case of questions regarding the rejection of the invoice by the customer, the supplier needs to contact the corresponding department at the customer.

6 Invoice Compliance, Original Invoice and Archiving

The supplier, as the creator of the original document, has the responsibility to provide content consistent to tax-relevant information and which complies with all legal requirements. SupplyOn only assists the invoice creation. For further information, please refer to the SupplyOn Invoicing Terms & Conditions.

Based on legal requirements of the supplier's home country, the supplier is responsible for the archiving of the original invoice.

Regardless of the used channel, when sending an invoice to the customer via SupplyOn Invoicing, an "original document" is generated by SupplyOn Invoicing. The original document is a PDF file, which includes:

- the invoice printout
- attachments (if available)
- message provided by the supplier, if applicable EDI: EDIFACT/UBL XML message
- electronic signature, if applicable (based on the customer-specific configuration)

Specifically for channels in which the original invoice document is stored by SupplyOn, it is recommended that the supplier downloads the original invoice document from SupplyOn for archiving.

The original document is available for downloading in the Invoicing application a few minutes after the invoice has been sent to the customer. Select a submitted invoice in the **Sent** tab on the **Invoice List** page and click **Download**, then click **Original invoice document**.

Please note that this document is only available for a limited period – at least three months - on the SupplyOn platform and may be deleted at a later point in time.

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7 Training and Support

You can use the following contact information in case of operational problems:

- Regarding SupplyOn:
 - for users of Invoicing: https://www.supplyon.com/en/contact/support-contact/ o
 - for users of AirSupply: https://www.supplyon.com/en/contact/support-contact-airsupply/

SupplyOn offers advanced training support (online or as enhanced package). Please get in contact via https://www.supplyon.com/en/contact/support-contact/.

In case of an integration project for the channels EDI, see chapter 4.3.6 "Integration Project" (EDI) regarding contact information.