



Standard

Key takeaways

- 01** The 1Lieferschein initiative provides a standard for digital despatch advices.
- 02** 1Lieferschein uses established international standards for mapping documents and data to business transactions.
- 03** The data sovereignty for each individual data record lies exclusively with the business partners involved in this logistics process.
- 04** Transmission is possible online and offline.
- 05** No registration is required.

Introduction

Up to now, the exchange of despatch advices has been a paper-based process in German-speaking countries. Creating, forwarding, handing over at reception, confirming to the supplier, transporting to the office and careful storage with checking and archiving of the despatch advices in accordance with the rules can only be managed with a great deal of time. The initiative 1Lieferschein offers a remedy as it provides a **standard** for digital despatch advices.

It uses well-established international standards for mapping documents to business transactions and develops innovative standards for communicating and transporting data from existing components. As a result, a large implementation effort for the creation, receipt and processing of despatch advices is eliminated. Moreover, since the standards used are exploitable by many applications, each user is free to choose the application used for the creation, reception and processing of 1Lieferschein, even if some are recommended by 1Lieferschein. The unrestricted free availability of the standards and components is a criterion for their selection. All additions and changes are made according to this specification.

The transfer of an 1Lieferschein is possible both offline and online and a QR+Wifi-Direct/Bluetooth smartphone solution is offered.

It should be stressed that the data sovereignty for each individual data record lies exclusively with the business partners involved in this logistics process.

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How to use 1Lieferschein?

As a standard that requires only freely available resources, 1Lieferschein specifies in particular the structure of the digital document. Hence, 1Lieferschein are simple XML documents in UBL (latest version 2.3) format which is already well-established.

In most cases, the companies face complex delivery and transport chains with dr, logistics subcontractors and changing modes of transport. Therefore, 5 or more parties are regularly involved in the delivery process: Commercial seller and buyer, logistically sender and receiver, plus at least one, but potentially more, transport companies. Within the 1Lieferschein standard, these parties can be referenced in the delivery documents. Consequently, all changes are mapped and all parties involved are automatically informed. Thus, each party can enrich the 1Lieferschein with further information and after shipment to the recipient, a confirmed 1Lieferschein "ReceiptAdvice" follows in UBL format.

To monitor the supply chain in which a party is involved, no special application is therefore required.

For the automatic and configuration free reception of the 1Lieferschein at the receiving party it is recommended to use the transmission standard [DTRANS](#), since then, besides software support only the corresponding DNS entries have to be set once per company - and not per business relationship. Yet, sending and receiving can also be done as an email attachment or any other electronic way. In addition, the use of [DTRANS](#) will generate a receiving advice for the despatch advice.

The handover on the construction site between two smartphones takes place via "QR-Shake", a combination of QR Codes and Wifi Direct for Android and the iOS alternatives. Email attachments, WhatsApp etc can also be used here.

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The 1Lieferschein standard

Within 1Lieferschein a certain structure based on the UBL-syntax is used. The UBL-syntax is already spread by its use in the invoice standard XRechnung.

This structure allows the user to fill the despatch advice with a variety of data. A brief overview of this structure is provided below.

Although most elements are optional, there are some elements that are mandatory to use in in 1Lieferschein (also required by XML-format and UBL-syntax, respectively), i.e., the XML-declaration and the used UBL-scheme. Beyond these, the use of the elements listed in the following table is mandatory.

UBL-Version	Specifies the earliest version of the UBL schema for this document type, which defines all elements that can occur in the current instance.
CustomizationID	An identification of the specification that contains the entire set of rules regarding semantic content, cardinalities, and business rules to which the data contained in the instance document corresponds. For 1Lieferschein, it is "1Lieferschein" during test phase
ProfileID	Identifies a user-defined profile of the UBL fitting used. In case of 1Lieferschein it is ubl-xml-only if the document is to be send as XML (in UBL format), without surrounding PDF, and ubl-hybrid if the document is to be send as XML (in UBL format), encapsulated in a PDF, ZUGFeRD Style
ID	An identifier for this document assigned by the sender. In case of 1Lieferschein it is: 1LS-<someID>@<domainOfDespatchSupplierParty> if the Document is created by Despatch Supplier, or 1LS-<someID>@<domainOfSellerSupplierParty> if the Document is createy by the seller.
IssueDate	The date, assigned by the sender, on which this document was issued.
DespatchAdviceTypeCode	A code signifying the type of the Despatch Advice.
OrderReference	A reference to the order containing the referenced order line.

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CustomerReference	Text used for tagging purchasing card transactions.
DespatchSupplierParty	Information on the despatch party, e.g., the address
DeliveryCustomerParty	Information on the delivery recipient, e.g., the address
Delivery	A class to describe a delivery, e.g., the delivered item, delivery specifications

Please note that information on multiple parties that are involved in the delivery process, can be added, e.g., the buyer, the seller and a customer party as the originator.

For other elements that are optional to be included in the 1Lieferschein, please see:

<http://docs.oasis-open.org/ubl/os-UBL-2.2/mod/summary/reports/UBL-DespatchAdvice-2.2.html>

Furthermore, please find examples on an 1Lieferschein, represented as an XML file as well as a PDF file at <https://github.com/1Lieferschein/samples>.

To self-generate a sample XML file, we recommend you to use the following link: <https://cranesoftwrights.github.io/resources/Crane-UBL-2.1-Skeleton/Crane-UBL-DespatchAdvice-2.1.html>.

How to convert and create 1Lieferschein?

For creating an XML-based UBL despatch advice (latest version 2.3) an editor application is not necessarily required but highly recommended. There is a large variety of free software for the creation and display of XML documents. Special editors for XML documents can already be found on the Internet, e.g., XMetal or Microsoft XML Notepad.

These can be used in order to create an 1Lieferschein.

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How to transfer an 1Lieferschein?

The despatch advice can be exchanged between the existing background systems of the respective companies (ERP, merchandise management, store) via an automatic and configuration-free process as well as via mobile devices (please note that this requires mobile devices that support the corresponding transmission standard) . For 1Lieferschein there is no mandatory transmission standard. Different options are possible, though, e.g. blockchain, Peppol or [DTRANS](#). However, the initiative 1Lieferschein prefers the decentral and open-source transmission standard [DTRANS](#), since the advantage of this standard is the use of the well-known transmission protocol HTTPS und its backwards compatibility to other transmission standards, e.g., PEPPOL, AS/2 and email. For more information on these opportunities, see:

- [DTRANS](#)
- Peppol
- Blockchain
- QR-Shake for smartphone (offline) transmission
- [Multipeer Connectivity for Offline transmission IOS](#)

What's next?

In the future, the initiative will extend the standard for other document types, i.e., purchase order, receipt advice, inquiry, delivery call-off. To increase the level of service, support for companies and their service providers in setting up 1Lieferschein and DTRANS will be established. In addition, a community will be established for software developers and system operators to develop software components for the use of 1Lieferschein and DTRANS in existing systems.

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