

Electronic B2B invoices

Importance of data exchange formats for the European automotive industry

EDIFACT for electronic B2B invoices

Relevance for the automotive industry

Global Invoice (Status Quo)

- EDIFACT format
- In use worldwide since 2008.
- The most widely used invoice format in the German automotive industry.
- Developed jointly with Odette (Europe) AIAG (USA), JAMA/JAPIA (Japan).
- Complies with legal requirements in Germany, the EU and many other countries around the world.
- Fulfills all requirements of the automotive industry (including JIS and JIT).

Consequences of switching to EN16931

- All existing connections would have to be reorganised, tested and approved.
- Invoices for serial material can only be single-item, as the order number in EN16931 is referenced at document level and not at item level.
- This means that one invoice can easily become 1,000 invoices.
- Processing and validating them would be very time-consuming.
- Information from JIS and JIT deliveries, for example, can only be entered unstructured in text fields and therefore cannot be processed automatically.

Acceptance of structured electronic invoice formats (in particular EDIFACT Global Invoice), which are established and have proven themselves in practice. The tightening of the requirements for an e-invoice in German law compared to the European directive proposal (COM (2022) 701 final (VAT Directive) of 8 December 2022) is not reasonable from the point of view of companies.

In addition to an e-invoicing platform, companies must continue to be able to transmit an e-invoice from the service provider (or the alternative invoice issuer) directly to the service recipient (or the alternative invoice recipient). Here too, existing and proven communication channels should continue to be usable.

Exemplary scenario for a conversion of the invoice format at "Gute Autos AG" from the Global Invoice (EDIFACT) to the EN16931

Key figures

5.000	Number of suppliers
1.000	Number of connected suppliers with Global Invoice (EDIFACT) incoming invoices.
1.000.000	Number of incoming invoices Global Invoice (EDIFACT) within 12 months.
2.000	Number of connected suppliers with Global Invoice (EDIFACT) Self Billing Invoice.
400.000	Number of invoices sent using the Global Invoice (EDIFACT) Self Billing Invoice within 12 months.
24	Time required to change a format (EDIFACT to EN 16931) per connection/supplier in hours (technical changeover incl. test).
160	Time required for the internal creation of the format and customisation of internal processes in hours.
8	Time required to change the transmission path (e.g. OFTP2 to Peppol) per connection/supplier in hours incl. test.
100.000 €	Annual salary per e-invoicing expert
1.000 €	Daily rate for external e-invoicing expert

Exemplary scenario for a conversion of the invoice format at "Gute Autos AG" from the Global Invoice (EDIFACT) to the EN16931

Based on the key figures, the expenses for "Gute Autos AG" are as follows

96.160 Hours of work for the migration of all suppliers previously connected with Global Invoice (EDIFACT, Invoices & Self Billing Invoices).

12.020 Working days 8 hours each

52 Person-years assuming 230 working days per year

13 Persons per calendar year 2024, 2025, 2026 and 2027

5.226.087 € Costs for the conversion of all suppliers previously connected with Global Invoice (EDIFACT) when processing with own staff.

12.020.000 € Costs for the migration of all suppliers previously connected with Global Invoice (EDIFACT) - processing with external staff.

Exemplary scenario for a conversion of the invoice format at "Gute Autos AG" from the Global Invoice to the EN16931

Scenario - Costs for the automotive industry in Germany

assumed

25 Car manufacturer

1.000 Automotive supplier

5.356.739.130 € **Costs for the entire industry for the migration of all suppliers previously connected with Global Invoice (EDIFACT) for processing with internal staff.**

12.320.500.000 € **Costs for the entire industry Costs for the migration of all suppliers previously connected with Global Invoice (EDIFACT) for processing with external staff.**

53.567 **Person-years assuming 230 working days per year**

Example of the impact of the format migration for invoicing JIS deliveries

Explanations for example


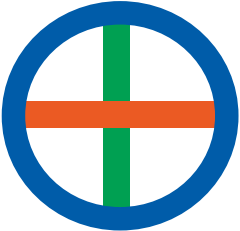

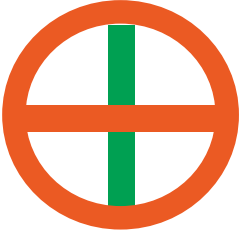








The following slides illustrate the delivery and invoicing of vehicle-specific steering wheels in a highly simplified manner in order to illustrate the main problems when migrating the invoice format from Global Invoice (EDIFACT) to EN16931 (Directive 2014/55/EU of 16 April 2014, OJ L 133 of 6 May 2014, p. 1).

Just-in-sequence (JIS) is a typical method in the automotive industry in which the parts must be delivered in the exact order (sequence) in which they are to be installed.

Both the JIS deliveries and the supporting electronic messages (preview, detailed call-off, despatch advice, invoice) require a great deal of detailed information and exact timing. As a result, this complexity of the process can also be recognised in the messages. This example focusses only on the information that would lead to fundamental problems in invoicing with EN16931. Translated with www.DeepL.com/Translator (free version)

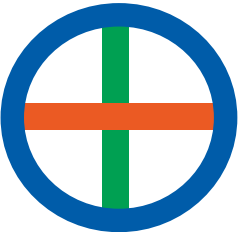
Example of the impact of the format migration for invoicing JIS deliveries

Master data - general conditions

	Material / parts / article number	Frame contract number / order reference	Steering wheels do not have their own part number, identification is done via the individual list of part numbers		
	BR013	RV002			
	BD472	RV004	BR013 RB002 GB123	RR987 BK815	RR987 RB002 GB123
	BK815	RV008			
	RB002	RV016			
	GB123	RV032			
	RR987	RV064			
			BR013 BK815	RR987 BD472	BR013 BD472

Example of the impact of the format migration for invoicing JIS deliveries

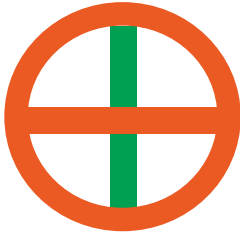
First delivery on 3 July 2023 10:00 a.m. - shipment/delivery note LF4711



BR013
RB002
GB123



RR987
BK815



RR987
RB002
GB123



BR013
BK815



RR987
BD472



BR013
BD472

Shipment/delivery note LF4711

Quantity	Part number	Frame contract
3	BR013	RV002
2	RB002	RV016
2	GB123	RV032
3	RR987	RV064
2	BK815	RV008
2	BD472	RV004

Example of the impact of the format migration for invoicing JIS deliveries

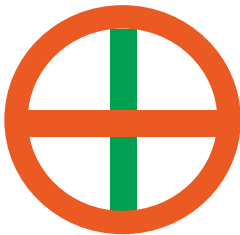
Second delivery on 3 July 2023 4:00 p.m. - shipment/delivery note LF4712



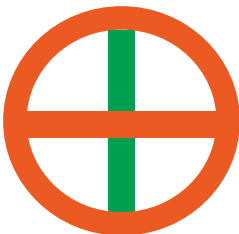
BR013
RB002
GB123



RR987
BK815



RR987
RB002
GB123



RR987
RB002
GB123



RR987
BD472



BR013
BD472

Shipment/delivery note LF4711

Quantity	Part number	Frame contract
2	BR013	RV002
3	RB002	RV016
3	GB123	RV032
4	RR987	RV064
1	BK815	RV008
2	BD472	RV004

Example of the impact of the format migration for invoicing JIS deliveries

Invoice 0800 for deliveries on 3 July 2023 with Global Invoice (EDIFACT)

Line	Qty.	Part number	Frame contract	Delivery note
1	3	BR013	RV002	LF4711
2	2	RB002	RV016	LF4711
3	2	GB123	RV032	LF4711
4	3	RR987	RV064	LF4711
5	2	BK815	RV008	LF4711
6	2	BD472	RV004	LF4711
7	2	BR013	RV002	LF4712
8	3	RB002	RV016	LF4712
9	3	GB123	RV032	LF4712
10	4	RR987	RV064	LF4712
11	1	BK815	RV008	LF4712
12	2	BD472	RV004	LF4712

As the order and delivery reference are specified at item level, **one** invoice can be created with **several** items (one per part number and delivery note).

Example of the impact of the format migration for invoicing JIS deliveries

Invoices for deliveries on 3 July 2023 with EN16931

Invoice 0801	Frame contract RV002 Item 1 3 x BR013	Delivery note LF4711	Invoice 0807	Frame contract RV002 Item 1 2 x BR013	Delivery note LF4712
Invoice 0802	Frame contract RV016 Item 1 2 x RB002	Delivery note LF4711	Invoice 0808	Frame contract RV016 Item 1 3 x RB002	Delivery note LF4712
Invoice 0803	Frame contract RV032 Item 1 2 x GB123	Delivery note LF4711	Invoice 0809	Frame contract RV032 Item 1 3 x GB123	Delivery note LF4712
Invoice 0804	Frame contract RV064 Item 1 3 x RR987	Delivery note LF4711	Invoice 0810	Frame contract RV064 Item 1 4 x RR987	Delivery note LF4712
Invoice 0805	Frame contract RV008 Item 1 2 x BK815	Delivery note LF4711	Invoice 0811	Frame contract RV008 Item 1 1 x BK815	Delivery note LF4712
Invoice 0806	Frame contract RV004 Item 1 2 x BD472	Delivery note LF4711	Invoice 0812	Frame contract RV004 Item 1 2 x BD472	Delivery note LF4712

As EN16931 expects the order reference at document level, a **separate single-item invoice** would have to be created for each part number. In addition to the increase in the number of invoice documents during delivery, invoice processing and validation is likely to be a particular challenge here, as several documents reference the same delivery.