

Advance Shipping Notice (ASN): digital advance notification of shipments

Advance Shipping Notice (ASN) refers to the electronic advance notification of a shipment that a supplier transmits before or with the despatch to the customer. The message generally contains line items, quantities, packaging and despatch data as well as the expected delivery date. As a key component of Electronic Data Interchange (EDI), the ASN creates transparency in the logistics chain and is a prerequisite for efficient goods acceptance and automated reconciliation between delivery note, purchase order and invoice.

Key facts

- The ASN is an electronic delivery notification typically transmitted via EDI (e.g. UN/EDIFACT DESADV or ANSI X12 856).
- It is usually generated directly after despatch or during goods receipt processing by the carrier and contains order, line-item, quantity and packaging data.
- In combination with barcodes or RFID on packages, the ASN enables automated, quantity-accurate goods acceptance.
- ASN quality is frequently measured using key figures such as data accuracy and punctuality rate.
- In supplier management, ASN capability is often part of supplier evaluations and addressing, for example with system suppliers.
- The ASN supports delivery date tracking, inventory planning and the automation of the Procure-to-Pay (P2P) process.

Definition: Advance Shipping Notice (ASN)

The Advance Shipping Notice (ASN) is a structured electronic message with which a supplier announces its delivery before it arrives at the customer. It belongs to the family of EDI messages and is usually implemented as DESADV (UN/EDIFACT) or 856 (ANSI X12).

Distinction from delivery note and consignment note

Unlike a delivery note, which accompanies the goods, the ASN reaches the recipient before or independently of the physical delivery. The consignment note documents the transport contract, while the ASN provides the logistics and order-related data in machine-readable form for goods acceptance and system posting. In practice, the ASN does not fully replace the paper-based process but considerably reduces the manual effort.

Legal and contractual classification

The ASN itself typically does not create any obligations of its own, but it is frequently enshrined contractually via supplier handbooks or general terms of purchase. There, customers specify format, timing of transmission, accuracy requirements and consequences of violations. The specific design, such as cancellation rights or questions of proof in the event of missed deadlines, should be reviewed

legally on a case-by-case basis.

Structure and data content of an ASN

An ASN is always part of an overarching data model that consistently maps order, despatch, packaging and goods receipt. Depending on the industry and depth of integration, the scope and level of detail of the message vary.

Core content

Typical fields are order and line-item numbers, quantities delivered, units, part and batch numbers, packaging structure (packages, pallets, hierarchies), despatch date, expected receipt date, carrier and consignment number. In regulated industries, customs data, REACH-relevant substance information or traceability details are added.

Packaging and labelling level

The value of the ASN arises above all from its link with machine-readable labels such as SSCC numbers (Serial Shipping Container Code). Each package unit receives a unique identifier that is referenced in the message. At goods receipt, a single scan is then sufficient to post the entire structure – from the pallet down to the individual line item.

Transmission standards

In Europe, UN/EDIFACT DESADV dominates, in North America ANSI X12 856; in the automotive sector, ODETTE formats also play a role. Alternative transmission channels include Web EDI portals for small suppliers, XML-based interfaces or supplier portals based on marketplaces. The choice typically depends on the size and IT maturity of the supplier.

Process integration: from order receipt to goods receipt

The ASN closes a process chain that begins with the purchase order and ends with invoice posting. It thereby connects procurement, logistics and finance along the entire Procure-to-Pay (P2P) chain.

Delivery date tracking and capacity planning

Incoming ASNs feed delivery date tracking and enable the goods receipt department to plan acceptance capacity, staffing and industrial trucks proactively. Deviations between the confirmed and announced dates become visible early and can be escalated before the delivery. In practice, this considerably reduces buffer times and safety stock.

Automated goods acceptance

On receipt, the warehouse management system reconciles the scanned packages with the ASN. Deviations in quantity, line item or labelling are flagged immediately before the goods enter the warehouse. Without an ASN, the same check requires manual counting and reconciliation steps, which are error-prone and slow.

Link to invoice verification and payment

The ASN provides the basis for the three-way or four-way match between order, ASN, goods receipt and invoice. With consistent data, the invoice can be posted automatically, which makes Days Payable Outstanding (DPO) predictable and reduces clarification cases. Pricing checks such as a price

discrepancy workflow act as a supplementary control where invoice and order prices do not match.

Key KPIs for assessing ASN quality

Suppliers are increasingly evaluated on how reliably and precisely they transmit ASNs. The measurement is systematic and feeds into the supplier portfolio and general supplier evaluation.

Accuracy and completeness

The central key figure is ASN data accuracy, i.e. the proportion of error-free messages relative to all messages. It covers line-item correctness, quantity conformity and correct packaging references. In practice, values below a defined threshold lead to qualification measures or sanctions within supplier evaluation.

Punctuality and interface availability

In addition, it is measured how often the ASN arrives before defined deadlines, for example at least 24 hours before arrival of the load. The technical availability of the interface and the speed of error resolution are also increasingly used as KPIs. Clear supplier PPM targets for ASN errors have established themselves as an effective steering instrument.

Impact on downstream KPIs

Good ASN quality indirectly improves process KPIs such as throughput times in goods receipt, inventory accuracy and the proportion of automatically posted invoices. Buyers should therefore evaluate ASN metrics not in isolation but in the context of the overall process.

Risks, controls and implementation

In practice, the introduction of ASN processes rarely fails because of the technology, but rather because of data quality, exceptions and supplier diversity. A structured approach with clear controls is decisive.

Typical sources of error

Common problems are late or missing messages, missing package references, quantity discrepancies and reused labels. For ASNs maintained manually by smaller suppliers, the error rate rises significantly. Without an exception procedure, such cases would otherwise block the entire goods receipt process.

Controls and escalation paths

Effective controls include automatic validation on receipt, warning levels for recurring errors and defined escalation paths up to 8D containment for systematic errors. Supplier blocking and sanction models, such as refusal of acceptance where an ASN is missing, must be secured contractually and applied consistently.

Staged introduction

A roll-out by supplier class is recommended: first system suppliers and volume suppliers with a high consignment frequency, then gradually smaller partners via Web EDI. A thorough needs analysis in advance clarifies which suppliers and material classes promise the greatest benefit. Changes to the data model should be versioned and agreed with suppliers.

Current developments and outlook

The ASN is evolving from a purely logistics message to a strategic data component in interconnected supply chains. The drivers are digitalisation, traceability and resilience.

Transparency and sustainability

Despatch data from ASNs is increasingly flowing into emissions balances and reports on decarbonising the supply chain, for example on transport choice and load utilisation. Traceability requirements, such as for REACH-regulated substances, can also be better mapped using structured despatch data. The ASN thereby becomes part of corporate supply risk management.

Analytics and AI

Central processing of ASNs in a data lake enables pattern recognition: routes prone to delays, recurring labelling errors or predictable fluctuations of individual suppliers. Artificial intelligence can use these signals for agile procurement and dynamic scheduling. A clean and consistent master data basis remains a prerequisite.

Standardisation and small suppliers

Reshoring and diversified sourcing lead to more small, regional suppliers without EDI capability. Web-based ASN entry via portals and simplified standards help to integrate these partners. The challenge lies in ensuring convenience and data quality alike.

Typical metrics

ASN data accuracy: > 98%

Proportion of error-free ASN messages; a typical target for key suppliers in practice

ASN lead time: >= 24 h before receipt

Minimum lead time before arrival of the load, frequently agreed contractually

ASN coverage: > 90% of consignments

Proportion of consignments with a valid advance notification, typical benchmark for mature processes

Automated goods receipt posting: > 95%

Proportion of scan-based postings without manual rework for ASN-supported consignments

Practical example

A medium-sized mechanical engineering company with around 400 active suppliers suffered from long waiting times at goods receipt and frequent quantity discrepancies. The procurement department introduced ASN obligations in stages: first for 30 core suppliers with a high consignment frequency, and via a portal offering also for smaller partners. ASN data accuracy was established as a KPI in supplier evaluation, with defined escalation stages in the event of repeated errors.

- Mandatory ASN transmission no later than 24 hours before arrival of the load, enshrined in the supplier handbook
- SSCC labelling on pallets and automatic reconciliation at goods receipt via scanning
- Weekly error reporting per supplier with a target for ASN accuracy
- Exception workflow for messages without an ASN, including retrospective notification and allocation of responsibility

Conclusion

The Advance Shipping Notice is far more than a technical message: it is the backbone of transparent and automated delivery processes between supplier and customer. Those who introduce ASN obligations on a binding basis and measure their quality benefit from faster goods acceptance, cleaner postings and more stable supply relationships. The metrics feed meaningfully into the supplier portfolio and supply risk management. What matters are clear contractual arrangements, a pragmatic exception process and a staged roll-out across the supplier base. This turns the ASN from a compliance topic into a genuine lever for efficiency and on-time delivery.

Frequently asked questions

What is an Advance Shipping Notice (ASN)?

An ASN is an electronic advance notification of a shipment that the supplier sends to the customer before the goods are received. It contains order, line-item, quantity and packaging data in machine-readable form. The ASN thereby enables automated goods receipt and reconciliation with the purchase order and invoice.

What data does an ASN contain?

Typically, order and line-item numbers, quantities delivered, batch information, packaging structure with package identifiers (e.g. SSCC), despatch date and expected receipt date, as well as the carrier and consignment number. In regulated industries, customs and substance data are also included. The scope varies depending on the industry standard and customer requirements.

What is the difference between an ASN and a delivery note?

The delivery note accompanies the goods physically, whereas the ASN is available to the recipient electronically in advance. The ASN is machine-readable and serves to pre-control goods receipt and system postings. In practice, the two documents complement each other, with the ASN greatly reducing manual checking.

How is an ASN transmitted technically?

The standard is transmission via EDI, in Europe frequently as UN/EDIFACT DESADV and in North America as ANSI X12 856. Smaller suppliers often use Web EDI portals or supplier portals with online entry. What matters is the consistent linking with the labels on the packages.

Is the ASN mandatory?

The ASN is not prescribed by law, but it is frequently made contractually mandatory via supplier handbooks or terms of purchase. Violations can be relevant to supplier ratings or may result in sanctions. The specific obligations and consequences should be reviewed contractually and legally on a case-by-case basis.

What benefits does an ASN offer in procurement?

The ASN improves delivery date tracking, enables forward planning of goods receipt and reduces safety stock. It accelerates invoice verification through automated reconciliation within the Procure-to-Pay (P2P) process. It also provides reliable data for supplier evaluation and logistics analytics.