

ASN Processing (Advanced Shipping Notice): Efficient Notification of Deliveries in Goods Receiving

ASN processing (Advanced Shipping Notice) covers the receipt, checking and further processing of shipping notices with which suppliers announce incoming consignments electronically in advance. It is the link between dispatch at the supplier and goods receipt at the recipient, ensuring that materials are captured, checked and made available in good time. Sound ASN processing reduces manual effort, improves inventory data quality and prevents bottlenecks in production.

Key facts

- An ASN (Advanced Shipping Notice) electronically announces delivery content, quantity, packaging and expected arrival date before the physical goods receipt.
- Typical formats are EDI messages such as DESADV (EDIFACT) or API-based transmissions from supplier portals.
- Complete matching between purchase order, shipping notice and goods receipt is the basis for electronic invoice processing without manual checking.
- In practice, unprocessed or incomplete shipping notices are frequently the main cause of delays in goods receiving.
- ASN quality is typically measured using KPIs such as ASN coverage rate, accuracy and schedule deviation.
- ASN data also serves logistics management, for example for slot terminals, delivery windows and the planning of changeover times.

Definition: ASN processing (Advanced Shipping Notice)

ASN processing refers to the entire process from receipt of an Advanced Shipping Notice to the allocation of the incoming delivery to purchase order, quality inspection and inventory management. Before dispatch, the supplier reports which items in which quantities and packaging units are being shipped and when arrival is expected. The recipient uses this data to prepare goods receiving, the warehouse and production.

Contents of a shipping notice

An ASN typically contains the purchase order reference, line item details (article number, quantity, unit of measure), packaging information (SSCC, packing instruction), delivery date, transport data and, where applicable, batch or serial numbers. For complex industrial products, customs and Incoterms information may also be included, for example with Incoterms CIP and freight cost allocation. The more complete the data, the more automatable the processing.

- Purchase order and line item reference

- Packaging and tracking data
- Expected arrival date and time

Distinction from other notification processes

The shipping notice should not be confused with a scheduling agreement or forecast management: while call-off and forecast processes govern future demand, the ASN relates to a consignment that has actually been dispatched. It is therefore an operational notification document at the interface between procurement, logistics and goods receiving.

Systems involved

Typically involved are an ERP or inventory management system, an EDI converter or supplier portal, the warehouse management system and, where applicable, a transport management system. The reference data from master data and purchase orders form the basis against which the ASN contents are validated. Faulty master data frequently leads to faulty shipping notices, which is why master data governance plays a key role.

Methods and procedure in ASN processing

Processing follows a multi-stage workflow: receipt and technical mapping, substantive validation against purchase order and master data, approval and preparation of goods receipt, and subsequent allocation to the physical delivery. Depending on the supplier's maturity, transmission takes place via EDI, portal upload or – in emerging supplier relationships – by email with manual follow-up.

Receipt and validation

Upon receipt, the ASN is technically validated (format, mandatory fields) and substantively matched against open purchase order items. Typical checks concern quantity deviations, unknown article numbers, deviating units of measure and implausible dates. Irregularities are routed to exception handling, often with clearly defined SLAs for clarification. Effective data control at this point prevents follow-up costs in goods receiving.

Allocation to delivery time windows

Based on the notified arrival date, the consignment is scheduled in a time window (slot) at the gate or plant entrance. This smooths utilisation peaks, reduces waiting times and enables the planning of staffing and forklift capacity. For just-in-time processes, reliable ASN allocation is a prerequisite for minimising line stoppage risks in assembly.

Linking with goods receipt and invoicing

After receipt of the goods, the goods receipt is matched against the ASN and the purchase order. In a three-way match (purchase order, shipping notice/goods receipt, invoice), the invoice can be released automatically, provided price deviations from the purchase order and quantity deviations fall within defined tolerances. This reduces processing times and increases the meaningfulness of the supplier status in supplier evaluation.

Key KPIs of ASN processing

The quality of ASN processing is measurable. Commonly used KPIs relate to ASN coverage, data accuracy and schedule adherence, and these also feed into supplier evaluation. They also provide a

basis for parts shortage management and inventory analysis.

ASN coverage rate and data quality

The ASN coverage rate indicates what percentage of deliveries are notified with an ASN; in practice, more mature supplier relationships typically target values above 95 per cent. Data accuracy measures how many notices could be processed without correction. Both values should be discussed regularly as part of supplier development, for example in the annual review with strategic suppliers.

Schedule adherence and deviation analysis

The deviation between the notified and the actual delivery shows how reliable the notification is. Large deviations complicate slot scheduling and material availability and are often factored into the supplier status. A systematic deviation analysis helps identify structural causes such as a lack of process integration at the supplier.

Throughput and exception rates

The straight-through processing rate shows the proportion of notices processed without manual intervention; in well-established environments, 80 to 95 per cent is typically achievable. The exception rate and processing time per exception reveal hidden process costs, which are also reflected in procurement's process cost accounting.

Risks and controls in ASN processing

The main risks are missing or incorrect shipping notices, data breaks between systems and insufficient contractual commitment in the supplier contract. Without clear agreements, data quality declines, and the benefit for goods receiving, production and invoice processing diminishes considerably.

Missing or faulty shipping notices

When suppliers send shipping notices that are incomplete, late or not sent at all, rework effort arises and production risks parts shortages. Countermeasures include contractual obligations, clear communication of requirements in the sourcing process and escalation levels in the event of repeated violations. For critical materials, a 100 per cent ASN obligation should apply.

Data breaks and master data errors

Different article numbers, packaging logic or units of measure between supplier and recipient lead to reconciliation problems. Reference data matching and a well-maintained article master mapping are key control instruments. Data control before releasing an ASN in one's own system also acts as a filter here.

Binding nature and incentives

ASN rules should be anchored in the supply contract and in supplier agreements, including tolerance rules and consequences for violations. Some companies link payment terms or the supplier financial risk to compliance with electronic notification processes. Legal questions, for example regarding the binding nature of ASN obligations, should be clarified contractually on a case-by-case basis.

Current developments and digitalisation

ASN processing is increasingly becoming part of seamless digital supply chains. Standardised EDI formats remain the backbone, supplemented by portal and API solutions that also integrate smaller

suppliers. At the same time, requirements are growing due to sustainability reporting and more complex supply structures.

Integration into e-procurement

As part of e-procurement in procurement, ASN processes are frequently integrated into supplier portals and procurement platforms. This also facilitates the onboarding procedure for new suppliers and supports increasing the catalogue coverage rate for C parts, while A and B parts continue to run via call-offs and shipping notices. The goal is a seamless digital document flow from purchase order to invoice.

Use of data beyond goods receiving

ASN data gains value as a basis for decision-making: it feeds transport cost control and freight audit, supports Supply Chain Carbon Footprint (SCF) calculations through transport and packaging data, and improves inventory analysis. For direct delivery or supplier relocation, the ASN can also serve as the primary notification instrument to track goods flows without direct warehouse contact.

Resilience and critical materials

For critical materials and vulnerable supply routes, shipping notices provide early indicators: if notified consignments fail to arrive or dates are repeatedly postponed, the system issues an early warning. Combined with forecast management and scheduling agreement data, an early warning system can be built that manages parts shortage management proactively rather than reactively.

Typical metrics

ASN coverage rate: > 95%

Proportion of deliveries with a valid ASN; maturity indicator for the supplier relationship

ASN data accuracy: > 98%

Proportion of notices processed error-free without manual correction

Straight-through processing: 80–95%

Proportion of notices processed automatically; typical benchmark depending on industry

Schedule adherence, notified vs. actual: ± 1 day

Usual target for the deviation between the shipping notice and the actual delivery

Practical example

A mid-sized mechanical engineering company with around 350 active suppliers previously processed shipping notices predominantly manually via PDF email. After introducing a supplier portal with a mandatory ASN requirement for A and B parts, slot scheduling at goods receiving and automated three-way matching, rework time fell noticeably and schedule adherence in goods receiving became measurably more stable. Particularly for just-in-time components for final assembly, the risk of short-term parts shortages was reduced.

- Introduction of a 100 per cent ASN obligation for all A and B parts with defined mandatory fields
- Automated matching of ASN, purchase order and goods receipt with defined tolerance rules
- Slot terminal scheduling based on notified arrival times to smooth gate utilisation
- Regular reporting of ASN coverage rate and data accuracy in supplier evaluations

Conclusion

ASN processing is a seemingly unremarkable yet economically significant element of the industrial supply chain. It connects purchase order, transport, goods receipt and invoice processing, and provides data that is valuable beyond the mere receipt process. Prerequisites are a binding agreement with suppliers and sound matching against well-maintained master data. Those who make ASN quality measurable and systematically follow up reduce process costs and lower the risk of parts shortages in production. Combined with digital procurement and logistics processes, the ASN thus becomes a genuine efficiency and early warning instrument.

Frequently asked questions

What does ASN mean in procurement?

ASN stands for Advanced Shipping Notice (in German, Lieferavis). It is an electronic advance notification from the supplier about a dispatched or soon-to-be-dispatched delivery, including contents, quantities, packaging units and expected arrival date. The buyer or goods receiving department uses this data for preparation and automated matching.

What is the difference between a shipping notice (ASN) and a goods receipt note?

The shipping notice (ASN) comes from the supplier and announces the consignment before it arrives. The goods receipt note is created by the recipient when the goods physically arrive and are checked. Ideally, both documents are automatically matched with each other and with the purchase order.

What data does a shipping notice contain?

Typically included are the purchase order number and line item, article number, quantity and unit of measure, packaging data such as SSCC, dispatch and arrival dates, transport and packaging details, and optionally batch or serial numbers. For international deliveries, Incoterms and customs information may also be included. The more complete the data, the higher the degree of automation.

In what format are shipping notices transmitted?

The most common formats are EDI messages such as DESADV under the EDIFACT standard or the corresponding ANSI X12 variants. Alternatively, supplier portals offer web forms or upload options, and increasingly API interfaces as well. In practice, portal access is the most pragmatic entry point for smaller suppliers.

What happens if a supplier does not send a shipping notice?

Without a shipping notice, goods receiving must manually assign the delivery to a purchase order, which is time-consuming and error-prone. Scheduling at the gate and material availability for production become less reliable. In practice, a contractual ASN obligation, clearly defined escalation levels and the inclusion of relevant KPIs in supplier evaluation help.

How do you measure the quality of ASN processing?

Common KPIs are the ASN coverage rate (proportion of deliveries with a shipping notice), data accuracy (proportion of notices processed without correction) and the deviation between the notified and actual delivery. Exception rate and processing time are also reported as supplementary metrics. These values lend themselves well to regular discussions with strategic suppliers.