Cargo 2000 is the largest improvement initiative ever in the air cargo industry. It brings together over 35 of the world’s leading airlines, forwarders and third parties involved in air-freight forwarding under the auspices of the International Air Transport Association (IATA). The objective is to create standard shipping process steps as well as interfaces for the exchange of shipment data between the parties, whereby door-to-door transport can be precisely planned and proactively monitored.

In the event of a delay occurring during the shipment cycle, an alert message is automatically issued. The forwarder and carrier are thus able to communicate with the customer and implement corrective measures in good time to ensure the cargo reaches its destination as originally planned, despite the delay.

CARGO 2000 EXPLAINED

The Cargo 2000 initiative aims to standardise and optimise the door-to-door transport process, making it more efficient, visible and reliable.

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Cargo 2000 also records performance data for every concluded shipment and operator. On the basis of standardised reporting procedures, customers can measure and directly compare the performance of individual forwarders and carriers.

Kuehne + Nagel is, at the moment, the only forwarder to be globally Cargo 2000 Phase 2 certified. Every shipment handled is planned and monitored according to these standards. We apply our Cargo 2000 philosophy and capabilities to the advantage of every customer, regardless of carrier or route. No other forwarder is currently able to offer a comparable level of service in the air cargo industry.

While common cargo services will deliver a given rigid time frame, Kuehne + Nagel’s time under Cargo 2000 Phases Exact time and date of shipment individually, by automation the time it takes for operations at handling up to the transport cycle, as well as holidays, stations opening and specific data.

The three pillars of Cargo 2000: plan, control, report
Background of Cargo 2000

When it comes to airfreight, reliability is key. Customers depend on the timely delivery of their goods, for they also have delivery promises to their customers to keep.

In addition to reliability, customers demand:
- Visibility through real-time tracking and tracing
- Precise, time-defined delivery
- Transparent and competitive rates
- Clear responsibilities
- Consistent service levels worldwide

In the early 1990s, it was obvious that the air cargo industry was falling short in meeting these requirements. Furthermore, it appeared that the industry was failing to compete against integrators’ reliable, time-definite transport services that were combined with good information integration and visibility capabilities.

To address this shortcoming, a group of leading airlines and forwarders agreed to redesign airfreight transport. This marked the foundation of the Cargo 2000 initiative.

Aim of the initiative

The overall objective of the Cargo 2000 interest group is to satisfy customer expectations. Based on detailed research, the group re-engineered the transport process from shipper to consignee and designed a master operating plan (MOP), thereby considerably reducing the number of necessary process steps in the air cargo supply chain as well as defining standards for the exchange of data. The implementation of the MOP will guarantee industry-wide process standards and enhance the visibility and control of a shipment’s movement along the transport chain.

Cargo 2000 mainstays

Cargo 2000 is about planning, controlling and reporting on air cargo shipments.

PLAN – Based on the standardisation of each process step from door to door, Cargo 2000 is able to precisely calculate the time at which certain events, known as milestones, will occur within the shipment cycle. The result of this automated procedure is a transport plan – the shipment’s route map. The route map defines where the cargo is scheduled to arrive at the consignee’s doorstep and represents a delivery promise to the customer.

CONTROL – Once a shipment is on its way, the fulfilment of each milestone is electronically monitored against the respective transit schedules in the route map. If one of these process steps is not completed as planned, the system triggers an alert, enabling the forwarder and carrier to implement corrective measures. This supervision of the shipment is ongoing until it is delivered at destination.

REPORT – It is important for customers to know how reliable their logistics partners actually are. Cargo 2000 includes standardised reports based on key performance indicators developed in cooperation with various Shippers Councils worldwide. These reports enable customers to compare the performance of forwarding providers across a standard set of parameters.
When it comes to keeping a delivery promise, planning and visibility are key. Without these, there can be no control. And what is not under control cannot be measured.

This is where Cargo 2000 comes in. Its key objectives are to plan, control and ultimately report on each individual shipment.

Planning – the basis of every delivery promise

In order to control a shipment’s movement from door to door, detailed planning is required. Cargo 2000’s members have developed the process framework necessary for the calculation of each shipment cycle. Based on this framework, a route map is automatically issued for every shipment. The route map defines the “latest by” times for the fulfillment of the key process steps (milestones) along the transport chain. It is a time-defined delivery promise to the customer.

All parties that are involved in the transport of a shipment are equally involved in planning its route map. Cargo 2000 has established standard data interfaces so that the route maps of the carrier and the forwarder seamlessly combine.

Customers expect reliability. They expect their cargo to be delivered to the doorstep on time, precisely as promised by the forwarder. To this end, planning and control are essential.

**HOW DOES CARGO 2000 WORK?**

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Control – proactive shipment monitoring ensures timely delivery

After the transport and delivery requirements have been agreed with the customer, and the route map calculated and issued accordingly, the actual shipment is then automatically monitored against this route map from origin to destination. With the completion of every milestone, both the carrier’s as well as the forwarder’s IT systems are updated. Any deviation from the route map triggers an alarm. This facilitates proactive communication between the forwarder/carrier and shipper/consignee, allowing for corrective measures to be taken in order to bring the shipment back on schedule.

Should the extent of the delay mean a shipment cycle cannot be concluded as planned, a new delivery schedule is calculated and the route map adjusted accordingly for the remaining transport steps. At the same time, exception codes are entered into the system to record the causes and responsibilities for the delay.

Commonly used tracking and tracing solutions only list a shipment’s past movements. The Cargo 2000 route map concept provides not only visibility of historic shipment data, but also illustrates this against the route map schedule and provides anticipated shipment information to destination.

Reporting – was that delivery promise kept?

At the end of the shipment process, it is important to establish whether or not the delivery promise was kept as well as the reasons behind a possible delay.

All Cargo 2000 members are accountable for monitoring their performance on the basis of standardised reporting procedures and agreed exception codes. This enables the production of month-end reports that list the most frequent causes and responsibilities for delays. For the first time in the airfreight industry, it is possible for customers to directly compare the performance of their Cargo 2000 enabled forwarders, carriers or logistics providers.
CARGO 2000 DEMONSTRATED

In order to illustrate how Cargo 2000 translates from theory into practice, we captured the door-to-door shipment of a Computed Tomography (CT) scanner from the Siemens Medical Solutions plant in Forchheim, Germany to the Renaissance Hospital in Groves, Texas, USA.

Working closely with the Cargo 2000 certified carrier KLM, Kuehne + Nagel planned the transport according to Siemens’ requirements. The CT scanner had to arrive in Groves at the latest by midday on Monday, March 7th 2005, when Siemens technicians would be standing by for installation.

Based on this time frame, and applying Cargo 2000 process standards, Kuehne + Nagel issued the shipment’s route map. This automatically calculated transport schedule included the latest pickup time from the Siemens plant and specified all planned milestone transit times. These are listed on the following pages.

Along the transport chain – via Nuremberg-Frankfurt-Amsterdam-Houston – Kuehne + Nagel had full visibility of the shipment’s progress at all times. With every milestone completion, the shipment’s status was automatically checked against its route map and Kuehne + Nagel’s systems were updated accordingly.

Initially, everything went according to the route map and all milestones were fulfilled ahead of plan. However, when a snowstorm hit Amsterdam, and KLM had to off-load all freight from the scheduled flight to Houston, Cargo 2000 had the opportunity to really prove itself.

With Cargo 2000, Kuehne + Nagel is not only capable of planning and monitoring a shipment from door to door, but can also fully report on every single milestone and ensure proactive exception handling.

Please open the page and have a look
Kuehne + Nagel receives a transport order from Siemens Medical Solutions. A Computed Tomography (CT) scanner needs to be shipped from Forchheim, Germany, to Groves, Texas, on March 7th, 2005, at noon. A Kuehne + Nagel operator books the shipment with KLM. Based on this booking, KLM and Kuehne + Nagel create the route map. The operator is now able to tell Siemens the latest time that Kuehne + Nagel needs to pick up the CT scanner.

Siemens employees prepare the CT scanner for transport. Kuehne + Nagel delivers two empty KLM racks to the Siemens warehouse. Siemens warehouse employees load the shipment onto the racks.

A Kuehne + Nagel truck picks up the loaded rack and transports it to the Kuehne + Nagel warehouse in Nuremberg. The Kuehne + Nagel operator updates the system with the pickup information.

When the shipment arrives at Kuehne + Nagel’s warehouse, the racks are unloaded from the truck.

The shipment is weighed, measured, and prepared for onward transport. The operator receives the original documents, confirms the receipt, and updates the Kuehne + Nagel system accordingly.
The operator issues the AWB. Printing the AWB automatically triggers the FWB message to be sent to KLM.

The Kuehne + Nagel operator takes care of export customs clearance, and the shipment is transported to the KLM facility in Frankfurt. KLM updates its system upon receipt of the shipment at its warehouse, and Kuehne + Nagel is automatically informed.

KLM moves the shipment from Frankfurt to its hub in Amsterdam via the scheduled road feeder service.

The shipment arrives at the KLM warehouse at Schiphol Airport in Amsterdam, where it waits for the flight to Houston.

Due to severe weather conditions in Amsterdam the shipment does not depart as planned. Accordingly, the route map does not receive a DEP status update automatically and Kuehne + Nagel re-books the shipment on the next day’s flight and both maps are updated. Except codes are entered into the original documents, confirms receipt and updates the Kuehne + Nagel system accordingly.
Kuehne + Nagel picks up the original shipment documentation from KLM. The Kuehne + Nagel operator checks all documents and finalises customs clearance. The shipment is on time.

**AWD/ATB**

**ADJUSTED KUEHNE + NAGEL ROUTE MAP**

**THE SHIPMENT IS NOW UNDER THE PHYSICAL RESPONSIBILITY OF KLM**

**ARR (AMS)**

**DEP (AMS)**

**ARR (IAH)**

**RCF**

**NFD**

**AWD/ATB**

The shipment arrives at the KLM house at Schiphol Airport in Amsterdam, where it waits for the flight to Houston.

Kuehne + Nagel can start pre-customs clearing as soon as KLM advises that the shipment is on board and the plane has taken off from Amsterdam.

This is the last status update that KLM provides the route map with. From now on status updates are once again made by Kuehne + Nagel operators.

Both KLM and Kuehne + Nagel make all necessary preparations to secure the on-time delivery of the shipment. Upon arrival of the shipment at the KLM import warehouse, KLM informs Kuehne + Nagel that it has received the cargo.

After KLM has completed the documentation and prenotification of customs clearance, it informs Kuehne + Nagel that the shipment is available for Kuehne + Nagel’s disposal.

Kuehne + Nagel picks up the original shipment documentation from KLM. The Kuehne + Nagel operator checks all documents and finalises customs clearance to confirm to Siemen’s the delivery of the ship.

Due to severe weather conditions in Amsterdam the shipment does not depart as planned. Accordingly, the route map does not receive a DEP status update and automatically sends out an alert. Kuehne + Nagel reacts immediately and contacts the shipper. KLM re-books the shipment onto the next day’s flight and both route maps are updated. Exception codes are entered into the system. The shipment leaves Amsterdam on March 4th.

**ARR (IAH)**

**DEP (AMS)**

**RCF**

**AWD/ATB**

The shipment is unloaded from the plane and transported to the KLM warehouse at Houston International Airport.

Kuehne + Nagel operators.
Kuehne + Nagel picks up the original shipment documents from KLM. The Kuehne + Nagel operator checks all documentation, finalises customs clearance and is able to confirm to Siemens that the delivery of the shipment will be on time.

AWD / ATB

Kuehne + Nagel picks up the original shipment documents from KLM. The Kuehne + Nagel operator checks all documentation, finalises customs clearance and is able to confirm to Siemens that the delivery of the shipment will be on time.

DLV / OFD

The scheduled truck picks up the shipment at the Kuehne + Nagel warehouse, confirms the receipt and dispatches the CT scanner to Groves, Texas.

POD

The shipment reaches the Renaissance Hospital. The Siemens technicians check all parts of the CT scanner. The responsible Siemens person signs the papers and confirms the receipt of the scanner.

POD
Due to the bad weather, the "Departure Amsterdam" milestone elapsed without the shipment completing the checkpoint as planned. This automatically triggered an alert informing Kuehne + Nagel that the CT scanner was not on the flight to Houston. The company immediately contacted the shipper to jointly evaluate possible alternatives. Siemens requested that Kuehne + Nagel keep its delivery promise as the technicians standing by in Groves on Monday would not be available the following day. KLM, who had also been alerted by the system, secured cargo space on the next day’s flight.

When re-booking the shipment, KLM updated the airport-to-airport route map, and Kuehne + Nagel updated the door-to-door route map accordingly. Both parties posted their exception codes to the system, reporting the responsibilities and reasons for the delay in Amsterdam.

With the update of the route map, an alert was automatically sent to the respective KLM and Kuehne + Nagel import departments in Houston, who arranged for special customs clearance procedures. Given that the original route map had taken the weekend between arrival in Houston and final delivery to the consignee into account, this proactive exception handling successfully brought the shipment back on schedule. As a result, Kuehne + Nagel delivered the CT scanner to the hospital on Monday morning as promised.

"Consistent and reliable transportation service is paramount to the Siemens group of companies. Disasters such as plant shutdowns and disappointed customers can be avoided by knowing that a critical part will not make the needed delivery time. Therefore, it is important to have an automated system to proactively manage exceptions, when they occur. Kuehne + Nagel’s leadership within the Cargo 2000 framework provides an advantage to Siemens. This is one reason Kuehne + Nagel is a preferred import broker and freight forwarder for Siemens in the U.S."

Mike Brewer – Director Corporate Transportation
Siemens North America

Cargo 2000 enables us to act immediately on changes that occur during the shipping process and to guarantee significantly increased service levels.

"Freight forwards consolidate consignments from the same destination and ship them together using an air waybill (MAW) issued by the carrier. The master air waybill (MAWB) is in turn issued to a house air waybill (HAWB)."

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Please open the page and have a look
THE THREE PHASES OF IMPLEMENTATION

Due to the complexity of the Cargo 2000 programme, its implementation is divided into three stages.

**Phase 1:**
Phase 1 focuses on the carrier planning and monitoring a shipment’s airport-to-airport cycle at a master air waybill (MAWB) level, and automatically updates the forwarder.

**Phase 2:**
Phase 2 enables the forwarder to play a proactive role, planning and interactively monitoring a shipment’s door-to-door movement at a house air waybill (HAWB) level.

**Phase 3:**
Phase 3 involves the real-time management of the door-to-door transport process at piece level including document tracking.

While Phase 1 enhanced visibility purely on the airport-to-airport segment, with Phase 2 the customer really begins to experience the immense benefits Cargo 2000 has to offer. The ultimate aim of the initiative is to provide full planning and monitoring of shipments at piece level plus document tracking.

As a globally Cargo 2000 Phase 2 certified airfreight forwarder, Kuehne + Nagel is able to ensure the highest possible levels of transport reliability currently available.
Customers, whose shipments are planned and monitored from origin to destination under Cargo 2000 Phase 2, are able to enjoy numerous advantages:

- Better supply chain planning thanks to a reliable, time-defined route map based on facts (station opening hours, local public holidays, etc)
- Accurate transport monitoring through standardised milestone checks - from door to door, airport to airport, door to airport, or airport to door
- Total shipment control by means of round-the-clock shipment/route map matching and automated exception alerting
- Enhanced visibility and security facilitated by standardised data exchange interfaces between Kuehne + Nagel and the carrier, ensuring shipment status updates at every milestone
- Customer-orientated exception handling through proactive communication and early planning of corrective measures based on real-time exception alerting
- Clear responsibilities and accountabilities throughout the shipment cycle
- Improved service levels for the customer thanks to reliable delivery schedules and transparent, accurate shipment information

These benefits are unique in the industry. By opting for the Cargo 2000 Phase 2 certified logistics provider Kuehne + Nagel, customers can rest assured that their cargo is looked after in the best possible way.

CUSTOMER BENEFITS OF CARGO 2000
Standardised processes, increased visibility and proactive monitoring combine to deliver significant benefits.

KUEHNE + NAGEL – A LEADING MEMBER OF CARGO 2000
Dedicated to driving improvement within the air cargo industry, Kuehne + Nagel is committed to Cargo 2000.

More than 35 companies are partners in the Cargo 2000 programme. Kuehne + Nagel is a founding member of the initiative, and in September 2002 was the first logistics company whose systems were certified to Phase 2 of the initiative. A year later, following the global roll-out, the company became the first logistics provider awarded worldwide Cargo 2000 Phase 2 certification.

Leveraging its global network of offices and standardised IT systems, Kuehne + Nagel is the only logistics provider today capable of actively planning and monitoring every airfreight shipment. Regardless of whether the carrier or trade lane used is Cargo 2000 certified or not.

This is an ability that significantly enhances the value of Kuehne + Nagel’s airfreight operations for customers worldwide.
Kuehne + Nagel’s globally standardised IT platform played a key role in achieving Cargo 2000 Phase 2 certification. Whilst other companies have to rely on the shared technology of external providers, Kuehne + Nagel is able to leverage the substantial investments it has made in its own technology.

When implementing Cargo 2000, individual profiles were set up for every Kuehne + Nagel station, describing the duration of on-site handling operations, such as customs clearance processes or loading procedures. In addition, these station profiles include local public holidays, opening hours, etc. Kuehne + Nagel manages and continually updates over 300 of these profiles, thereby providing the foundation for the calculation of every route map.

By combining this information with the departure and arrival schedules of selected carriers, all process steps, from shipper to handling stations to the consignee’s doorstep, can be aggregated and the route map automatically calculated.

The route map is then transferred to Kuehne + Nagel’s monitoring and alerting system. If in the course of transport a shipment fails to fulfil one of its milestones as scheduled, the parties and stations handling the cargo are automatically alerted. This enables Kuehne + Nagel to immediately react to delays, proactively inform the customer and take agreed corrective action to bring the shipment back on schedule.

If necessary, the route map is recalculated and exception codes, reporting on the causes and responsibilities for the delay, are entered into the system. Based on this information, month-end reports are created that help Cargo 2000 members pinpoint and eliminate possible recurring sources of error.

In the near future, Kuehne + Nagel is going to post its performance reports on KN Login, the company’s internet-based tracking and alerting system, thereby allowing customers to monitor Kuehne + Nagel’s performance for every shipment it handles.

Kuehne + Nagel’s Cargo 2000 Solution

Kuehne + Nagel is able to plan and monitor more than 90,000 different door-to-door and over 1.8 million possible door-to-airport routes.

Station profiles contain information on the duration it takes to complete certain process steps, such as pickup operations or import customs clearance. They also list local public holidays, operating hours and carrier-specific data. In combination with the respective carrier schedules, these station profiles provide the basis for the calculation of every Kuehne + Nagel route map.

KN Login is an internet-based application that allows customers to view and monitor transit status and other details regarding the transport of their shipments. Different user levels ensure that customers may even link KN Login to their own IT systems.
Kuehne + Nagel is committed to driving innovation in the air cargo industry.

Ever-increasing customer requirements regarding reliable transport solutions and high levels of visibility are being met by the introduction of Cargo 2000 standards and processes.

Following its successful implementation of Cargo 2000 Phase 2, Kuehne + Nagel is able to offer customers remarkable benefits. The company plans and monitors each airfreight shipment moved anywhere across its global network from door to door. It consistently applies the same standards and service levels worldwide. These capabilities, together with proactive information flows and automated alerting in the event of en-route delays, mark a new era in air cargo forwarding.

For more information on Kuehne + Nagel’s airfreight services please contact one of our local customer service or sales representatives, or visit our website at www.kuehne-nagel.com