

Supply Chain & Logistics Requirements



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1 Introduction

1.1 Purpose

The Spheros Supply Chain and Logistics Requirements are a set of standards, specifying the rules and requirements for logistics exchanges between Spheros sites and supplier sites, in the attempt to avoid misunderstandings and conflicts, and to clearly identify responsibilities, commitments and expectations

1.2 Scope

These requirements apply to all Spheros sites. They cover the whole product lifecycle, from Request For Quotation (RFQ) through to the end of product life.

1.3 Reference documents

These requirements shall be considered as an integral part of the contract between the parties, specified on Spheros document during the Request For Quotation process.

The detailed and specific conditions of the logistic relation between a Spheros site and a supplier site are described in the document named "PST-SC-TCV-0004_Supplier Logistics Protocol".

1.4 Spheros Supply Chain Strategy

Spheros goal is to ensure customer satisfaction, all Spheros employees and suppliers all over the world to deliver "zero defects" to customers and provide them with the same quality standards regardless of the production plant.

"Just-In-Time" parts supply, the basis of our Spheros Production System (SPS); this means providing exactly what is needed (**right products, right time, right quantity, right packaging with right labelling and right place**), exactly when needed, on a daily or multi-daily basis.

To optimise the flow of materials through the supply chain, Spheros uses a twin-level supply chain planning principle:

- First, Spheros provides forecasts to suppliers, which give an indication of the projected demand for future □ Used by suppliers to plan their own production schedule and size their capacities;
- Then, Spheros expresses its real demand through firm orders. Only firm orders have the status of an authorization to ship to Spheros: □ Used by suppliers to set up parts preparation and loading, according to firm orders.

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1.5 Supplier's Commitment and Contacts

The supplier has to be aware of all requirements described in the Spheros Supply Chain and Logistics Requirements and annexes. Please make sure that you always have the latest version of this standard.

The supplier has to appoint a logistics manager or a supply chain manager to comply with all Spheros Supply Chain and Logistics Requirements including the site logistics team.

2 Information flows

2.1 Electronic Data Interchange (EDI)

Electronic Data Interchange (EDI) is a system of transferring data between different company networks. It is used by suppliers to receive delivery instructions and send shipping documents.

The Web-EDI system is an alternative solution proposed by Spheros for suppliers which are not able to implement a complete EDI solution.

The use of one of these two systems is prefer to work with Spheros. The exchange of data must be guaranteed 24 hours a day, 7 days a week. Once setup is completed, the supplier will make sure the EDI or Web-EDI is properly maintained and fed with accurate information. Despite not being preferred, email / pdf communication remains a possible option for exchange of data.

2.2 Forecasts

Spheros provides suppliers on a weekly basis with rolling forecasts regarding its potential requirements for at least the following 15 weeks. This forecast is related to the weekly MPS – Master production Schedule - process within Spheros. The “PST-SC-TCV-0004_Supplier Logistics Protocol” gives the transmission day and the horizon agreed between the Spheros site and the supplier site.

In specific cases, Spheros can provide suppliers on a monthly basis with rolling forecasts regarding its potential requirements for the following 12 months. This forecast is related to the monthly SIOP – Sales Inventory and Operations Planning - process within Spheros.

If the supplier does not receive the information by a specified time, the supplier shall contact Spheros to ensure normal operations can be restored as soon as possible.

In any case, such projections shall not constitute an authorization to ship products to Spheros but shall be provided solely for guidance, so as to facilitate supplier's planning.

Supplier shall, with adequate safety margin, plan supplier manufacturing resources and capacity and safeguard supplies so that deliveries can with certainty be made promptly when the firm order asks for such.

Spheros understands and acknowledges that it is in Spheros' interest that the supplier is informed, early enough, of planned long term changes in volume of production and product assortment that may affect the volume of shipments to be made.

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Forecasts are transmitted to Supplier through EDI, Web-EDI or email/pdf communication system. The transmission mode is specified in the “PST-SC-TCV-0004_Supplier Logistics Protocol”.

2.3 Firm Orders

2.3.1 Direct flows:

Firm orders will be communicated to suppliers on a regular basis (for instance: daily, multi-daily or weekly basis). Firm orders communicate to the supplier the material quantity to be collected / delivered to Spheros and with the agreed lead time and Incoterms rules.

Firm orders are mainly expressed by a message or a document called “Pick-Up Order”.

Scheduled Orders (MRP mode) are only used for specific cases. The supply mode is specified in the “PST-SC-TCV-0004_Supplier Logistics Protocol”.

As mentioned before, only a firm order has the status of being a formal authorization to ship products to Spheros. Spheros will take into account the mutually agreed packaging and order quantities between Spheros and suppliers. The transmission mode is specified in the “PST-SC-TCV-0004_Supplier Logistics Protocol”.

2.3.2 Indirect Flows:

In case of delivery through a SAW - Supplier Advanced Warehouse, firm orders will be communicated to the logistics service provider managing the stock on a daily / multi-daily basis. This information includes communicates the quantity to be delivered to Spheros from the advanced warehouse provider and with the agreed upon lead time.

2.4 Capacity management

In order to deliver parts to Spheros without stock out, suppliers must have implemented and demonstrated the production capacity agreed in the RFQ.

If the forecasts exceed the supplier's production capacity (capacity agreed in the Specific Spheros Requirement File - RFQ) and the supplier cannot provide the additional requirements, then the supplier must immediately warn the Spheros buyer and the Spheros supply chain scheduler.

2.4.1 Flexibility and Liability

Forecasts may vary from time to time. Spheros measures forecast variations per weekly between two consecutive forecast releases. A forecast increase is managed by the Flexibility Rule. A forecast decrease is managed by the Liability Rule. (In the “PST-SC-TCV-0004_Supplier Logistics Protocol”)

2.4.1.1 Flexibility

Flexibility can be defined for:

- A part number
- A family of product
- All products of a supplier

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Flexibility allows Spheros to decrease or increase its forecast to protect itself against a customer demand increase.

The supplier has to be able to accept forecast fluctuation, especially increases. The minimum increase from week to week that the supplier has to accept depends upon:

- The time between the current date and the week of the forecast. Further in the future the week is, higher the increase can be;
- The cumulated flexibility of the previous week;
- The maximum quantity to order per week for the part, family of product or supplier.

2.4.1.2 Liability

For each product provided by the supplier, a liability horizon is defined for:

- The full value of the product;
- A partial value of its raw material.

These horizons are defined by the “PST-SC-TCV-0004_Supplier Logistics Protocol”, in order to protect the supplier against obsolescence and slow moving inventory when Spheros decreases its demand within this horizon.

2.5 Supplier Closure

If the supplier site is closed during a Spheros working period, the supplier has the responsibility to have material available to be picked-up in another site/location open during this period. This site has to be known and validated by Spheros at least one month before the first pick-up to allow Spheros to organise transportation. The location of this site cannot generate for Spheros an extra transportation cost. The use of this site is at supplier expense.

The products delivered during the closure must be labelled as defined with Spheros. The EDI links have to be maintained during this closure period. Any gap in labelling and EDI must be covered by a written deviation request sent in advance by the supplier.

The quantity to be stored in this site has to cover the quantity required during the supplier closure period by the last forecast communicated by Spheros and the potential flexibility during the closing period.

At the beginning of each calendar year, the supplier must communicate to Spheros its closure calendar, so Spheros can be aware when transportation will have to be reviewed. Any modification must be communicated immediately in a formal way (letter or email) to Spheros. The supplier has to make sure to receive an acknowledgement of receipt from his Spheros counterpart.

2.6 Safety and Strategic Stock

2.6.1 Safety Stock

Supplier will analyse its capabilities in meeting the demand from Spheros. In cases where the supplier perceives operational risks and that could endanger the delivery to Spheros (such as machine or mold breakdowns, high level of rejects, etc.), the supplier will put in place an appropriate safety stock under its ownership.

This safety stock is in operational use, meaning that it shall be used for normal deliveries to Spheros and not only for deliveries in emergency cases. Safety stock only buffers for lack of flexibility and upstream capability. The storage management and deliveries must respect FIFO rules.

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The safety stock as well as any changes to this stock proposed by the supplier needs to be authorised by Spheros.

2.6.2 Strategic stock

In specific cases, Spheros may require the supplier to put in place a strategic stock under its ownership, at a location specified by Spheros, in order to safeguard from any major external risk identified by Spheros.

The strategic stock as well as any changes to this stock proposed by the supplier needs to be authorised by Spheros.

The sizing of safety and strategic stock should be calculated based on current production and according to the latest forecast for three months ahead sent by Spheros.

These safety or strategic stocks should be stored in standard packaging. If not possible, alternative packaging must be used as defined in the "PST-SC-TCV-0004_Supplier Logistics Protocol". The storage management must respect FIFO rules.

2.7 Contingency Plan

To anticipate potential important incidents due to social perturbations, critical process breakdown..., the supplier must set up a contingency plan.

A contingency plan includes all preventive and curative actions that the supplier starts to ensure his deliveries to Spheros in the event of risks. It also favors a quick response to incidents (clear timetable, anticipated production, stocks, necessary working days...).

This contingency plan is confidential and shared between Spheros and supplier only.

2.8 Communication

To guarantee an optimal collaboration, the supplier has to comply with the following requirements:

- Respond to specific requests made by the Spheros supply chain teams within 24 hours;
- Report and update the supplier contacts in the Logistics Protocol;
- Communicate periods of supplier plant shutdown (date and time) to the respective Spheros plants (at least before the total time required to order, manufacture and transport the materials);
- Notify any changes impacting the supply chain in terms of information flows (including EDI systems) and physical flows (packaging, transport ...) to the respective logistics contact person at Spheros.

If any manufacturing difficulty arises, the supplier must inform the Supply Chain and Purchasing departments at once.

In case of changes in the supplier's company structure that are pertinent for the Supply Chain department of Spheros, the Supply Chain manager has to be informed immediately.

Each change of production location has to be communicated to the Purchasing, Quality and Supply Chain departments.

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3 Physical flows

3.1 General rules

3.1.1 Transport

The Spheros Production System is based on a “Just In Time” mindset. To support this policy, Spheros controls its incoming flows, through globalised volumes using standard sea, road, or rail shipping lines, which ensures regular transit times and delivery frequency. Spheros organises and is fully responsible for the transportation activities.

For incoming flows, the standard INCOTERMS applied by Spheros is:

FCA (Supplier Place) ICC Incoterms® 2020.

The use of any other Incoterm must be validated by the site supply chain manager/Site logistic manager and Site purchasing manager and define the condition in the “PST-SC-TCV-0004_Supplier Logistics Protocol”.

The FCA ICC Incoterms® 2020 may be used for all modes of transport, including multimodal.

Under the “Free Carrier” Incoterms, the supplier delivers the goods to the carrier or another person nominated by Spheros at the supplier’s premises or another named place.

If the parties intend to deliver the goods at the supplier’s premises, they should identify the address of those premises as the named place of delivery. If, on the other hand, the parties intend the goods to be delivered at another place, they must identify a different specific place of delivery.

Unlike the Ex-Works Incoterms, FCA requires the supplier to clear the goods for export, which allows him to prove during a tax audit actual exportation of the goods and justify the invoice without indirect taxes (eg: VAT).

(ref: Incoterms ® 2020 ICC Rules for the Use of Domestic and International Trade Terms - ICC Publication N° 723E).

Depending on the specific key transportation parameters (volume, frequency, distance), Spheros will implement the following principles:

- Direct delivery with a dedicated truck;
- Pick-up rounds from several suppliers (milk-run loop);
- Indirect delivery with consolidation through cross-docking or through a dedicated warehouse.

The supplier is responsible for shipment preparation (packaging, labelling, pallet preparation, truck loading, transport, commercial and customs documentation as required, and export customs clearance) and full compliance between documentation including labelling and shipment content.

Suppliers must load only the quantity requested in the Pick-Up/firm order.

Shipping preparation must comply with FIFO rules. These rules will apply safety stocks, if any (see Chapter 2.6, herein).

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In case of any difficulty to meet Spheros requirements, the supplier must:

- Inform and alert immediately the Spheros site contact;
- Determine and communicate causes and correctives actions to be implemented;
- Propose short term actions to ensure deliveries.

If no communication is received from the supplier, a logistics incident will be opened by Spheros.

It is the responsibility of the supplier to ensure that all material that is requested in the Pick-Up/firm order is available at the time of pick-up. It is strictly forbidden for a supplier to ship more than the quantity ordered in any Pick-Up/firm order.

At the time of receipt of the goods or materials, Spheros will compare the Pick-Up/firm order to the goods/materials actually received. In the event that the quantity received exceeds the quantity ordered, Spheros reserves the right to refuse the excess quantity.

Suppliers must load according to the time window agreed in the "PST-SC-TCV-0004_Supplier Logistics Protocol". The supplier's shipping location must be in line with the Spheros requirement dates and times, and must respond to planned collection times or planned delivery times in order to take into account shipments from external premises, e.g National Holidays.

The control of incoming road, rail or ferry boat transportation flows also means that premium freight organisation is Spheros supply chain responsibility. If the premium freight is the supplier's responsibility, the costs therefore will be re-invoiced as per agreement between Spheros and supplier.

For Spheros sites using a Transport Management System, suppliers are required to book the transport quantity, provide all necessary transport documents and report any loading incident through the dedicated web interface, within the agreed time frame. In case of delivered a place (DAP), the supplier will be required to book the dock time slot within the agreed time frame.

3.1.2 Warehousing

Implementing a warehousing solution for material procurement flow is intended to:

1. absorb the variability of transportation frequencies;
2. compensate the impact on inventory between Spheros and supplier seasonal closures;
3. respond to customer demand variability versus a long-distance supplier lead times;
4. store material with MSQ not in line with client demand.

Depending on which of the above cases occurs, a Supplier Advanced Warehouse (SAW), an External Spheros Warehouse Consignment Stock or in-house Spheros Consignment Stock may be appropriate.

A Supplier Advanced Warehouse must be close to a Spheros site (transit time less than 1 day during all seasons), owned by the supplier and in his full responsibility (management, surface, stock ownership, contract between supplier and warehouse provider...).

The logistics warehousing provider represents the supplier. Spheros has no contract with the warehousing provider.

The supplier must respect Spheros logistics rules regarding stock level formalised in

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“PST-SC-TCV-0004_Supplier Logistics Protocol” and RFQ. In order to detect any shortage, the supplier has to alert Spheros to any deviation from the contractual minimum stock thresholds.

3.1.3 Transfer of Title to the Goods/Materials Delivered to Spheros

The transfer of title to the goods is not connected to the transportation responsibility. It shall occur in accordance with the RFQ.

This will require to implement with the suppliers a Consignment Stock Agreement covering the transit from pickup location up to the Spheros in house storage of the goods.

As goods in transit and consigned inventory continue to be owned by the supplier, Spheros will at the request of the supplier provide a report of materials pending to arrive, or in consignment to ensure full accounting compliance on the supplier side.

In order to insure the on time payment to the supplier, a self billing procedure is implemented, including INVOICE-EDI Messages.

3.1.4 Customs

3.1.4.1 Introduction

In each country, Customs is a governmental tax agency with three main missions:

1. Collecting duties and taxes, Customs also plays an economic role based on international set of rules which improve fluidity, safety and quality in the flow of goods;
2. Fighting against fraud and major international trafficking (counterfeit products, drugs, arms, fraud to agricultural policy, etc.), protecting security and public health;
3. Protecting the environment (various forms of pollution...) or national heritage (control of exchange of works of art, collectibles and antiques...).

Customs must be cleared for every international flow of goods:

- at the point of exit of the goods of the country: Export Customs
- at the point of entry of the goods into the destination country: Import Customs

In his own country:

- exporter will always be legally accountable to his national fiscal administration
- importer will always be legally accountable to his national fiscal administration

That is why exportation customs must be under supplier control, and importation customs must be under customer control. Applying this rule eliminates “de facto” EXW & DDP Incoterms.

3.1.4.2 Obligations of the parties in relation to Customs under the FCA ICC

Incoterms

In compliance with the FCA (named place of delivery) ICC Incoterms® 2020:

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- The supplier must provide a commercial invoice in conformity with the contract of sales and any other evidence of conformity that may be required by the contract.
- Where applicable, the supplier must obtain, at its own risk and expense, any export licence or other official authorization and carry out all customs formalities necessary for the export of the good.
- The supplier must pay, where applicable, the costs of customs formalities necessary for export, as well as all duties, taxes, and other charges payable upon export.
- The supplier must pay the costs of those checking operations (such as checking quality, measuring, weighing, and counting) that are necessary for the purpose of delivering the goods in accordance with the “named place of delivery”, as well as the costs of any pre-shipment inspection mandated by the authority of the country of export.
- The supplier must, where applicable, in a timely manner, provide to or render assistance in obtaining for Spheros, at Spheros’ request, risk and expense, any documents and information, including security-related information, that Spheros needs for the import of goods and/or for their transport to the final destination.

(source: Incoterms ® 2020 ICC Rules for the Use of Domestic and International Trade Terms - ICC Publication N° 723E)

- Declaration of Temporary Importation for Packaging and Export Balance: Suppliers importing Spheros packaging in temporary admission mode and exporting parts in Spheros packaging must act in compliance with applicable local customs legislation in particular in relation to the export of such temporarily admitted packaging.

3.1.4.3 Import document communication

The supplier will mail in a PDF format to the Spheros Supply Chain procurement contact and to the nominated Spheros import customs broker the necessary documents to fill import customs declaration, at the same time Advanced Shipping Notice (rich ASN) is transmitted to Spheros through its EDI, Web-EDI or email/pdf communication system. The document package must include:

- 1 Invoice for customs clearance with at least:
 - Ship from / Ship to
 - Bill from / Bill to
 - Full Incoterms ICC 2020® aligned with commercial contract
 - P/N, description, quantities, prices
 - Origin of the goods
 - Any other legal mentions that should be noted on the invoice, in particular ECCN (Export Control Classification Number) notification in case of dual use or listed goods or preferential origin mention when applicable.

The prices mentioned in the customs invoice must be the exact price to be paid to the supplier, negotiated with Spheros.

In case of a shipment with no payment, it should be clearly stated in the invoice : “Invoice for customs only - no transactional value” and the price must be the price for an identical or equivalent good : never set a price at no value or any other lump sum.

- Packing list with P/N, description, quantities per PN, weights (gross/net),...

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- Preferential Origin documents for Free Trade Agreement between the country of Origin and importing country. Please note that:
 - Spheros nominated brokers must receive the original document before the arrival of the goods otherwise Spheros cannot apply for the preference.
 - When issuing a preferential origin document, suppliers must take necessary due diligence to guarantee that products sold to Spheros qualify with the free trade agreement terms and keep at least 10 years of evidence of the preferential origin, in case of a customs audit and administrative cooperation .
- Any technical certificate in accordance with importing country regulations (for example CE certificate for EU regulation on machinery, or origin certification for some destination or product, ...)

3.2 Delivery Documents

A complete set of documents must be included in each shipment, with at least:

- The Pick-Up Order if applicable
- The Delivery Note
- The Transport Documents (Bill of lading, CMR) correctly filled in (shipping date, quantity, weight and volume of goods, possible irregularities, signature of the dispatching site...);
- The Customs Documents (COO: Certificate of Origin, etc...) if requested.

The set of required documents will depend on the applicable country rules and the detailed list of documents required will be contained in the "PST-SC-TCV-0004_Supplier Logistics Protocol".

In case of EDI or Web-EDI is used, when shipments are completed, Advanced Shipping Notices (rich ASN) are transmitted to Spheros through its EDI or Web-EDI system, applying the EDIFACT standards. The mode of transmission for these communications is specified in the "PST-SC-TCV-0004_Supplier Logistics Protocol".

These documents reflect the actual physical receipts, including the associated advance shipment notice message.

3.3 Packaging Definition

Packaging strategy has to enforce Spheros Just In Time strategy and optimise logistic costs.

The choice of packaging must respect the consumption rate at the point of use, the size of the flow rack at the assembly line and the frequency of internal line feeding operations. The packing unit weight (box handled by Spheros operators) must not exceed 12 kg.

The function of packaging is to preserve parts quality (protect the components) and comply with Spheros safety rules, with the highest fill rate for transport. This includes the number of parts per unit of packaging and the standard sizes in order to optimise the filling rate loading by vehicle or by container. In that context, the supplier must take all necessary measures to guarantee a delivery without damage, in clean packaging.

In all cases, the supplier will respect the packaging requisites defined by Spheros, as well as the number of parts per packaging. Incomplete containers are forbidden. Parts must not be mixed in a box, unless they are a set and Agreed with Spheros..

The packaging optimization contributes not only to logistic cost savings, but also to CO₂ emissions

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reduction, part of Spheros' values.

Both for quality and environmental reasons, the orientation is to receive components in returnable packaging approved by Spheros Group. The packaging selected may be a property of Spheros or a box belonging to the supplier and approved by Spheros.

In some cases, for economical reasons, for backup or generally sea freight, cardboard packaging is used. The alternative packaging has to be defined in RFQ or "PST-SC-TCV-0004_Supplier Logistics Protocol" and approved at the Initial Samples submission step.

If a wooden pallet is used, the specifications must respect the International Standards for Phytosanitary Measures (ISPM 15) and be stamped with a mark of compliance (IPPC logo). This mark of compliance includes DB (debarked), HT (heat treated) and KD (kiln-dried) to reduce the moisture content (18% or less).

The cardboard sizes must then meet the Galia/Odette/AIAG standards or overseas standards, to fit the vehicle or sea container sizes.

Cardboard design shall comply with Spheros safety rules. Cardboard boxes with flaps are forbidden to avoid usage of cutting devices at the point of use. Cardboard boxes with removable covers or easy opening features are mandatory to preserve parts quality. Spheros and the supplier will aim to comply with this requirement in future.

Component's packaging is palletized for optimal picking, by default on its smaller side, allowing the operator to work with both hands at the same time.

All packaging specifications, linked with a material part number, and agreed between supplier and Spheros, will be indicated in the "Packaging Instructions" and in the RFQ. Any change compared to the agreed packaging will have to be submitted and formalised to the Site Supply Chain Department for validation. In case of deliveries to several Spheros sites, this validation has to be done by each Site Supply Chain Manager before application.

3.4 Packaging Loop

For any new projects, if applicable, Spheros will provide the returnable packaging (Spheros Small Boxes or specific stillages for big size parts).

Spheros and suppliers will jointly define the number of returnable containers required for the loop based upon lead times, delivery frequency, inventories and consumption rate. Spheros will in no case fund returnable containers beyond the agreed loop size.

Spheros and supplier will set up strict inventory management for incoming and outgoing containers

Containers are under the responsibility of both Spheros and suppliers depending upon where they are in the loop. The supplier cannot use these returnable containers for any other flow than for deliveries to the Spheros site.

They should not be used for:

- The inner production circulation
- The intermediate storage of half-finished parts
- Stockpiling
- Providing of sub-suppliers

except with a different agreement with Spheros in "PST-SC-TCV-0004_Supplier Logistics Protocol".

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3.5 Labelling

Labelling must follow the ODETTE/GALIA standards or AIAG for NAFTA, or any other format agreed with Spheros in written form (in RFQ or PST-SC-TCV-0004_Supplier Logistics Protocol).

Every Handling Unit (pallet or container) and its content will be clearly identified with a HU label. Spheros requires the use of ODETTE OTL1/ETI-1 specification or AIAG B-3 for NAFTA, or any other format agreed with Spheros in written form (in RFQ or PST-SC-TCV-0004_Supplier Logistics Protocol).

Every Packaging Unit (Small Boxes or cardboard) will also be identified by a PU label. Spheros requires the use of ODETTE OTL3/ETI-9 specification or AIAG for NAFTA, or any other format agreed with Spheros in written form (in RFQ or Logistics Protocol). These boxes must be oriented on the pallet such that the labels face outward.

Pallet and Packaging Unit labels must be consistent with the advance shipment notice message.

Mandatory information mentioned on identification label are:

- Part reference number and part description,
- Revision level,
- Quantity,
- Production date,
- Supplier number,
- Label number,
- Lot number or production batch number,
- Warehouse location and Shelves life (if requested and sent in the EDI message by the Spheros entity).

Detailed requests are described in the “PST-SC-TCV-0004_Supplier Logistics Protocol”.

3.6 Traceability

Where batch traceability applies, the supplier must be able to provide Spheros with information for the following purposes:

- Trace back manufacture details from batch identification (backward traceability) for tracing any incident back to its manufacture origins for tracing the quality of products;
- Find population from batch manufacture log (forward traceability).

Where unit traceability applies, the same principle holds, with part-by-part identification following Spheros specifications.

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4 Supplier Performance

4.1 Supplier Service Rate

The Supplier Service Rate (SSR) indicator measures the level of delivery performance of a supplier to Spheros sites.

It measures the ratio of the Number of “pick-up order” Lines On Time In Full, against the Number of “Pick Up Order” Lines Requested.

This indicator is measured in % at each delivery, so against each pick-up order, and calculated as following:

$$SSR = \frac{NLOTIF}{NLR} \text{ in \%}$$

- **NLOTIF:** Number of “pick-up order” Lines On Time In Full:
 - Right quantity □ quantity delivered/picked-up = quantity ordered
 - Right time □ at the time slot defined in the pick-up order
 - Right place □ at the place defined in the pick-up order
- **NLR:** Number of pick-up order Lines Requested by Spheros
 - A pick-up order line is: 1 supplier, 1 pick-up order, 1 part number, 1 quantity ordered, 1 time slot (date/hour).

The service rate indicator for a supplier over a period (for example a month) is the rating of cumulative NLOTIF divided by the cumulative NLR

SSR consolidated = (Σ of all NLOTIF) / (Σ of all NLR) in %

Every month, the Supplier Delivery Performance is published as part of the supplier QCD performance. A continuous improvement plan is requested, and its progress followed up.

4.2 Supplier Logistics Incidents

Spheros expects from the supplier to deliver the right products, with the right quality, in the right numbers, at the right time, at the right place. Any deviation will give rise to a Logistics Incident Notification through the Spheros Supplier Portal or Mail/PDF.

In the case of defective products, Suppliers will need to replace those products within recover lead-time and at the cost to the supplier (lead-time is defined in the “PST-SC-TCV-0004_Supplier Logistics Protocol”).

The supplier will organise and pay for the possible extra logistics cost to correct his own failures or failures from its haulers and to prevent stock-outs at the Spheros site.

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All line stops due to non-conform deliveries by supplier, as well as any line stops of or special shipments to the customer of Spheros that have arisen from these non-conform deliveries by supplier will be invoiced to supplier.

List of Logistics Incidents:

Generic causes	Description
No respect of delivery period	No respect of Delivery or Pick-Up time slots ; Parts did not reach Spheros at the specified time or parts not ready at the time specified in the Pick Up Order, generating abnormalities and extra costs at receiving or transport loop.
Delivery document	ASN errors or missing: Errors on delivery document / Pick Up Order or missing: written or electronic information does not match the content of the delivery, or missing information. Pick-Up promises not received on time following the Logistics Protocol.
Quantity	Wrong quantity was delivered, in regard to the Spheros Pick-Up Order/Firm Order: <ul style="list-style-type: none"> • Products have been ordered by Spheros, but were not delivered; • Products had not been ordered by Spheros, but were delivered. This incident type includes all disturbances perceived by the final customer, as incomplete bus, bus reorienting, bus park recovery and assembly line stoppage. According to supplier short shipment impact, it is classified as L1 (customer shortage), L2 (manufacturing line shortage), or L3 (receiving/logistic disturbance).
Labelling	Label error or not conform: Label (barcode or description) does not correspond to parts inside package; Label damaged / not readable: Label not usable by Spheros: illegible, damaged; Label position not conform: Label not at right place on the Packing / Handling Unit; Missing label: Label not on all Packing / Handling Units.
Packaging	Package arrived damaged at delivery; responsibility is defined following the Incoterms; Handling or Packing Unit not conform: Handling Unit or Packing Unit used for delivery does not conform to Spheros requirements. Non-conformity can be on the type/size of the HU/PU; Incomplete Handling / Packing Unit: One or more parts missing in the PU/HU <div> <div></div> difference between expected quantity and real quantity; Mixed in Packing or Handling Unit: Different references put in single PU/HU. Dirty or broken packaging </div>

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Definition of Logistic incidents levels:

Category	Signification	Examples
L1	The logistic incident affects Spheros external customers or end users	Customer Service Rate impacted due to shortage of part deliveries leading to have a risk of line customer shutdown
L2	The logistic incident affects the Spheros manufacturing or assembly lines	Production line shutdown at Spheros due to shortage of part deliveries
L3	The logistic incident affects the Incoming Logistics organisation (Receiving/Warehouse)	Perturbation detected at Spheros receiving: <ul style="list-style-type: none"> • Parts received at Spheros plant are not compliant with supplier's promise, according to the Spheros Pick-Up Order • No respect of delivery window • Errors on delivery documents or missing (written or electronic information (ASN), handling unit identification • Damaged delivery

All Logistics Incidents are managed through the Spheros Supplier Portal or mail/PDF

Supplier Incidents are managed by using the Incident Management System (IMS), or by email communication.

The goal of IMS is to provide a rapid, definitive solution to a quality problem. IMS comprises three main steps based on the QRQC approach:

1. **Within 24 hours:** Implementation of an immediate contingency plan, to secure Spheros customers and Spheros plants.
2. **Within five days:** Analysis of the root cause of the incident and the reason why this cause was not detected. Definition of an appropriate corrective action plan.
3. **Within ten days:** Implementation of the corrective actions and verification of their effectiveness, and systematic adoption of these actions in order to avoid any recurrence.

In case of recurrent incidents without any visible improvement, the escalation of this issue will be made to the **Spheros Purchasing Department** for support.

4.3 Continuous Improvement

Spheros and suppliers will agree to a periodic meeting schedule, at least one meeting will be held each year and will deal with logistics matters.

Spheros will require supplier to provide Spheros with at least an annual continuous improvement plan that will at least focus on the following objectives:

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- Improving the Delivery Performance
- Eliminating logistics non-conformities
- Extending the pull flow principle throughout the supply chain
- Increasing delivery and internal production frequency
- Reducing delivery and internal production lot sizes
- Reducing delivery and internal lead times
- Increasing flexibility

4.4 Supplier Logistics Evaluation

Spheros demands for shorter lead times and reliable delivery has created a need for faster, more flexible and more efficient flow of information and products throughout all tiers of the supply chain. Logistics plays an increasingly significant role in the competitive environment and only through continuous improvement we can ensure lower costs and increased customer satisfaction.

To ensure Spheros' expectations are met and to drive continuous improvement through the supply chain, it is essential that Supplier Materials Planning and Logistics processes are controlled and monitored. Spheros requests that the supplier will perform yearly base self-assessment of

- Supply Chain Development
- Operating Procedures and Work Instructions
- Resource Planning
- Capacity Planning
- Production Planning
- Material Planning
- Packaging and Labelling
- Shipping
- Transportation
- Inventory
- Traceability
- Local regulation

5 Appendices

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Appendix 1 / PST-SC-TCV-0004_Supplier Logistics Protocol - [Link](#)

Appendix 2 / RFQ

Appendix 3 / Flexibility and Liability Rules (Site level, if needed)

Appendix 4 / Packaging Instructions (Site level, if needed)

Appendix 5 / Labelling Instructions (Site level, if needed)

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