



Form 4: New Work Item Proposal

Circulation date: TBD Closing date for voting: TBD	Reference number: Click here to enter text. (to be given by Central Secretariat)
Proposer (e.g. ISO member body or A liaison organization) KATS, Republic of Korea	ISO/TC204 text./SC 26683-3 Click here to enter text. <input type="checkbox"/> Proposal for a new PC
Secretariat ITS America	N Click here to enter text.

A proposal for a new work item within the scope of an existing committee shall be submitted to the secretariat of that committee with a copy to the Central Secretariat and, in the case of a subcommittee, a copy to the secretariat of the parent technical committee. Proposals not within the scope of an existing committee shall be submitted to the secretariat of the ISO Technical Management Board.

The proposer of a new work item may be a member body of ISO, the secretariat itself, another technical committee or subcommittee, an organization in liaison, the Technical Management Board or one of the advisory groups, or the Secretary-General.

The proposal will be circulated to the P-members of the technical committee or subcommittee for voting, and to the O-members for information.

IMPORTANT NOTE: Proposals without adequate justification risk rejection or referral to originator.

Guidelines for proposing and justifying a new work item are contained in **Annex C of the ISO/IEC Directives, Part 1.**

The proposer has considered the guidance given in the Annex C during the preparation of the NWIP.

Proposal (to be completed by the proposer)

Title of the proposed deliverable.

English title:

Intelligent transport systems – Freight land conveyance content identification and communication : Part 3 Monitoring cargo condition information during transport

French title (if available):

[Click here to enter text.](#)

(In the case of an amendment, revision or a new part of an existing document, show the reference number and current title)

Scope of the proposed deliverable.

This international standard establishes guidelines for transport and condition monitoring of transported consignments such as agricultural goods or food products, etc., through the applications, models, processes, and information bundles established in ISO 19845. This standard enhances the requirements for the transport and condition monitoring of transported consignments such as agricultural goods or food products, etc., for reliability, safety, and freshness. This standard applies to both domestic and cross-border transport of transported consignments such as agricultural goods or food products, etc. This standard incorporates the methods described in "ISO TS 24533" and "TS 17187" which are transport domain specific. Specific extensions include additional actors in the model related to especially, the agriculture transport sub-domain, with extended specific processes, and additional information items and/or information bundles for consignment conditions.

Transport Service Provider (for example, carrier) delivers consignments from Transport Service User (for example, producer or manufacturer) to customer side Transport Service User through logistics base in global supply chain. Following figure shows cargo movement by transport service provider.

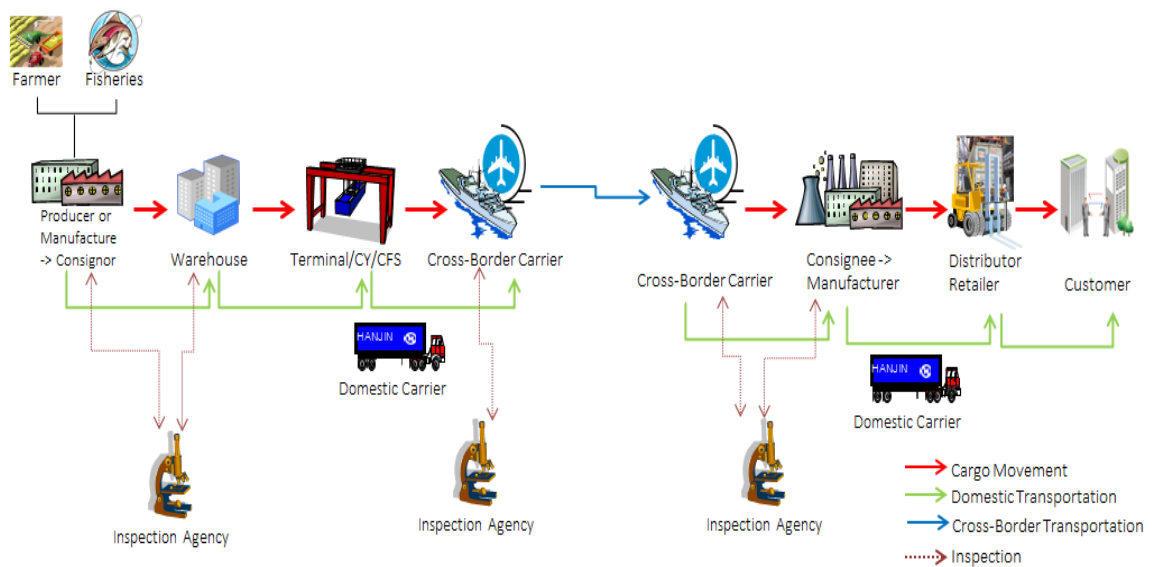


Figure 1. Flow of cargo movements in supply chain

Purpose and justification of the proposal*

In global supply chains, reliability, safety, and freshness of movement of contained or non-contained goods (for example, agricultural goods) are the most important factors in transporting these goods. In transporting between domestic transportations, cross-border transportations, or domestic and cross-border transportation including storing, it should be able to check the accurate status of consignment, or to check accurate location in real-time for reliable and safe transport, and freshness of consignment.

- Reliability
 - Check whether the movement of a consignment is suspended or not.
 - Able to forecast the estimated arrival time, and supports Just-In-Time
- Safety
 - Includes inspection information for raw materials or the completed products
 - Able to check accurate status of consignment; might contain invasive species, checked a malicious attempt to disrupt or destroy, whether may still have residual chemicals exceeding acceptable
- Freshness
 - Check the status of consignments during transport, especially cold-chain transportation
 - status : temperature, humidity, whether open or not for boxes

In agriculture and fisheries transportation, the ratio of rejection at custom inspection has been increasing every year. In the case of US imported seafood inspection, where they inspected 1% of the imported seafood, the rejection rate was up to 51%. The reasons for rejection were disease and insect pest detection, residual chemicals exceeding acceptable limits, or heavy metal content exceeding permissible levels, etc. In some countries, up to 60% of agricultural and fisheries goods in transport have to be discarded, lost or wasted. Additionally, mislabeling of raw materials is possible and can cause health problems.

For safety and freshness, end users (consumers) want to know a comprehensive record of consignment's status and its transportation history both for the origin of raw material as well as the final product is available. For example, whether or not the original produce or its final product may still have residual chemicals exceeding acceptable limits or other types of contamination or degradation. A transport information model and related business processes are needed to provide a foundation to track transport activities. They provide a foundation upon which an application specific domain can be established to extend the model, processes and information elements relevant to the domains specific needs.

Many transport information models are focused on the movement of goods within containers or pallets by transport service providers employing transport means by air, sea, road, and railway. The global supply chain is also not focused on the full meaning of the reliability, safety, and freshness of goods. Movement of contained or non-contained goods (domestic transportations, cross-border transportations, or domestic and cross-border transportation including storing) should be able to check accurate status of consignment, or to check accurate location with real-time for reliable and safe transport, and freshness of goods.

Therefore, additional features are necessary to ensure reliable food product and transparency on transport processes between transportation events (or transport nodes). Based upon the ISO/IEC 19845 library of documents (messages) and information elements, this standard establishes an enhanced model containing status information for transporting and storing agricultural goods, including historical information and transaction information.

This transport information will be shared among the relevant participating business entities (such as; inspection agency). Sharing information such as agricultural certificate of origin, agricultural goods and status, and produce integrity (regarding agricultural chemicals or radioactive material) will improve visibility and reliability of the goods transportation (regarding contained or non-contained goods). In contrast to packaged goods, agriculture and fisheries goods are transported through non-standardized package units from consignor to consignee, and freshness and safety for agriculture goods is the most important factor regarding transportation. At food manufacturing industries, a company has to produce food product using raw agriculture material for examples, corn or salmon, etc. Consumers want to know detailed information about the raw material or product; whether or not residual agriculture chemicals or radioactive matter which can remain in agriculture goods was found in agriculture products or food products, or are exceeding the acceptable limits. Once a standard is established the global trade in food products will be enhanced and high-value logistics service such as cold-chain transportation will be increased.

* A cold chain is a temperature-controlled supply chain. An unbroken cold chain is an uninterrupted series of storage and distribution activities which maintain a given temperature range. It is used to help extend and ensure the shelf life of products such as fresh agricultural produce, seafood, frozen food, photographic film, chemicals, and pharmaceutical drugs.

In order to use information across internal systems, and to integrate with systems deployed by trading partners, that information needs to be semantically coherent and in a format that is recognizable and usable by all parties. The policy for operating under these rules is that all business entities wishing to engage with other business partners to facilitate electronic trade using the tools described herein shall follow certain standards of practice for information interchange. This international standard is envisioned to be the core standard for interoperability for all enterprises wishing to benefit from the resulting efficiencies as a member user.

The basis for this standard has its foundation in ISO TS/24533, titled, Intelligent transport systems — Electronic information exchange to facilitate the movement of freight and its intermodal transfer — Road transport information exchange methodology; and ISO TS/17187 titled, Intelligent transport systems — Electronic information exchange to facilitate the movement of freight and its intermodal transfer —Governance rules to sustain electronic information exchange methods; and ISO intelligent transport systems -- Framework for cooperative telematics applications for regulated vehicles (TARV) -- Part 17: Consignment and location monitoring;

Consider the following: Is there a verified market need for the proposal? What problem does this standard solve? What value will the document bring to end-users? See Annex C of the ISO/IEC Directives part 1 for more information.

See the following guidance on justification statements on ISO Connect:

<https://connect.iso.org/pages/viewpage.action?pageId=27590861>

Preparatory work (at a minimum an outline should be included with the proposal)

A draft is attached An outline is attached An existing document to serve as initial basis

The proposer or the proposer's organization is prepared to undertake the preparatory work required:

Yes No

<p>If a draft is attached to this proposal,:</p> <p>Please select from one of the following options (note that if no option is selected, the default will be the first option):</p> <p><input type="checkbox"/> Draft document will be registered as new project in the committee's work programme (stage 20.00)</p> <p><input type="checkbox"/> Draft document can be registered as a Working Draft (WD – stage 20.20)</p> <p><input type="checkbox"/> Draft document can be registered as a Committee Draft (CD – stage 30.00)</p> <p><input type="checkbox"/> Draft document can be registered as a Draft International Standard (DIS – stage 40.00)</p>
<p>Is this a Management Systems Standard (MSS)?</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>NOTE: if Yes, the NWIP along with the <u>Justification study</u> (see <u>Annex SL</u> of the Consolidated ISO Supplement) must be sent to the MSS Task Force secretariat (tmb@iso.org) for approval before the NWIP ballot can be launched.</p>
<p>Indication(s) of the preferred type or types of deliverable(s) to be produced under the proposal.</p> <p><input checked="" type="checkbox"/> International Standard <input type="checkbox"/> Technical Specification</p> <p><input type="checkbox"/> Publicly Available Specification <input type="checkbox"/> Technical Report</p>
<p>Proposed development track</p> <p><input checked="" type="checkbox"/> 1 (24 months) <input type="checkbox"/> 2 (36 months - default) <input type="checkbox"/> 3 (48 months)</p> <p>Note: Good project management is essential to meeting deadlines. A committee may be granted only one extension of up to 9 months for the total project duration (to be approved by the ISO/TMB).</p>
<p>Known patented items (see ISO/IEC Directives, Part 1 for important guidance)</p> <p><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p> <p>If "Yes", provide full information as annex</p>
<p>Co-ordination of work: To the best of your knowledge, has this or a similar proposal been submitted to another standards development organization?</p> <p><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If "Yes", please specify which one(s):</p> <p>There is a similar but not the same work program in UN/CEFACT under Sector PDA, Agriculture Domain.</p>
<p>A statement from the proposer as to how the proposed work may relate to or impact on existing work, especially existing ISO and IEC deliverables. The proposer should explain how the work differs from apparently similar work, or explain how duplication and conflict will be minimized.</p> <p>There is no similar work in ISO and IEC to the proposer's knowledge. The proposer contends this work activity is fully ITS related, especially to the IT linkage between the various parts of the supply chain. All of the activity proposed here is primarily connected to transporting agricultural goods.</p>
<p>A listing of relevant existing documents at the international, regional and national levels.</p> <p>ISO/IEC 19845, ISO TS/24533, ISO TS/17187, and ISO 15638-17.</p> <p>Agriculture goods data exchange standards such as UN/EDIFACT, ANSI X12, GS1 EPCIS, etc.</p>

Please fill out the relevant parts of the table below to identify relevant affected stakeholder categories and how they will each benefit from or be impacted by the proposed deliverable(s).

	Benefits/impacts	Examples of organizations/companies to be contacted
Industry and commerce – large industry	<ul style="list-style-type: none"> · Reliable transport · Sustainability · Visibility · Work efficiency 	Cross-Border Transport service provider Domestic Transport Service Provider, forwarder
Industry and commerce – SMEs	<ul style="list-style-type: none"> · Same as above 	Same as above
Government	<ul style="list-style-type: none"> · Sustainability · Visibility · Statistics 	The Ministry of Transport Inspection Agency
Consumers	<ul style="list-style-type: none"> · Sustainability · Safety · Freshness · Accuracy · Comprehensive record of consignment's status and its transportation history 	Retailer, End user(consignor, consignee)
Labour	Not applicable	Not applicable
Academic and research bodies	Not applicable	Not applicable
Standards application businesses	<ul style="list-style-type: none"> · Interoperability 	UN/CEFACT, OASIS
Non-governmental organizations	Not applicable	Not applicable
Other (please specify)	Not applicable	Not applicable

Liaisons:

A listing of relevant external international organizations or internal parties (other ISO and/or IEC committees) to be engaged as liaisons in the development of the deliverable(s).
UN/CEFACT [Click here to enter text.](#)

Joint/parallel work:

Possible joint/parallel work with:

- IEC (please specify committee ID)
[Click here to enter text.](#)
- CEN (please specify committee ID)
[Click here to enter text.](#)
- Other (please specify)
[Click here to enter text.](#)

A listing of relevant countries which are not already P-members of the committee.

[Click here to enter text.](#)

Note: The committee secretary shall distribute this NWIP to the countries listed above to see if they wish to participate in this work

<p>Proposed Project Leader (name and e-mail address) Kerri Ahn, ahn.kyeongrim@gmail.com</p>	<p>Name of the Proposer (include contact information) Kerri Ahn, ahn.kyeongrim@gmail.com, phone +82-10-6266-6424</p>
<p>This proposal will be developed by:</p> <p><input checked="" type="checkbox"/> An existing Working Group (please specify which one: Working Group 7)</p> <p><input type="checkbox"/> A new Working Group (title: Click here to enter text.) (Note: establishment of a new WG must be approved by committee resolution)</p> <p><input type="checkbox"/> The TC/SC directly</p> <p><input type="checkbox"/> To be determined</p>	
<p>Supplementary information relating to the proposal</p> <p><input checked="" type="checkbox"/> This proposal relates to a new ISO document;</p> <p><input type="checkbox"/> This proposal relates to the adoption as an active project of an item currently registered as a Preliminary Work Item;</p> <p><input type="checkbox"/> This proposal relates to the re-establishment of a cancelled project as an active project.</p> <p>Other:</p>	
<p><input checked="" type="checkbox"/> Annex(es) are included with this proposal (give details) UML Diagrams</p>	

Additional information/questions

A.1 Brief Description

In global supply chains, reliability, safety, and freshness of movement of contained or non-contained goods (for example, agricultural goods) are the most important factors in transporting these goods. In transporting between domestic transportations, cross-border transportations, or domestic and cross-border transportation including storing, it should be able to check the accurate status of consignment, or to check accurate location in real-time for reliable and safe transport, and freshness of consignment.

To provide the above factors, it needs to collect data, analyze its information, and provide the results of the analysis to transport service provider and user. Therefore, when the transport service provider transports cargo between logistics bases (for example, transport service requestor, transport service user, such as consignor, inspection centre, warehouse, port, terminal, station, consignee, etc.), the e-document regarding the cargo's movement, status, and inspect information is generated.

A.2 UML Diagrams

a. Use Case Diagram of Cargoes transportation

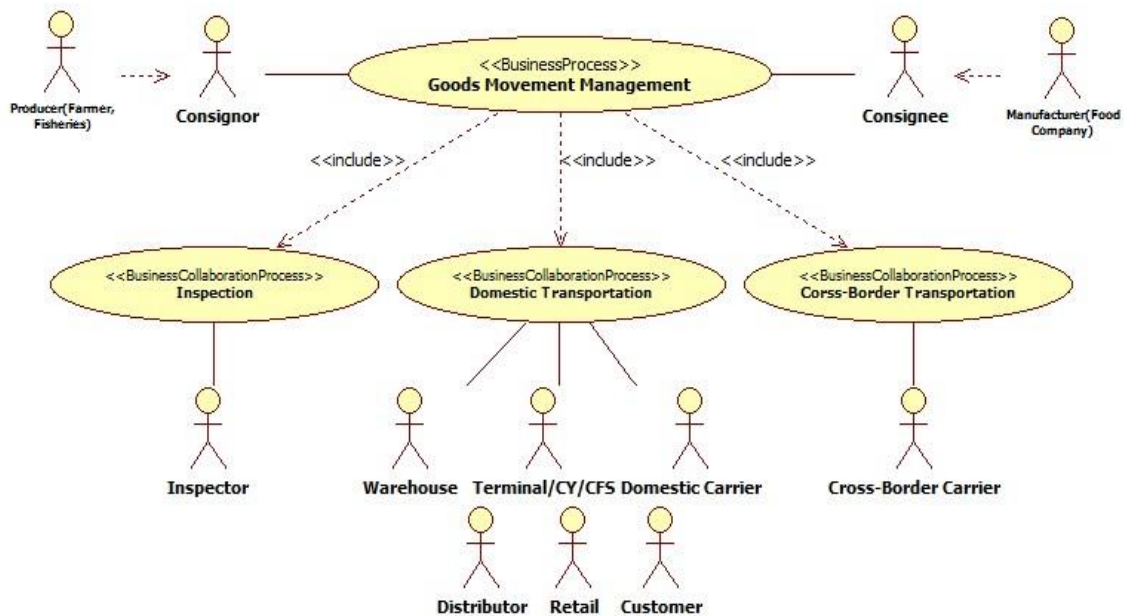


Figure 2. Use Case Diagram of Cargo transportation

Business process “Cargo Transport Management” of Figure 1 has the participating entities such as consignor, consignee, carrier, inspector, etc. and includes business collaboration processes such as cargo condition in transport, domestic and cross-border transport. Cargo condition in transport process is occurring to transportation between transport service user and transport service provider; hereby, transport service provider is carrier, and transport service user may be consignor, consignee, producer, warehouse, terminal, etc. Generally, transport service provider provides cargo condition information in transport to transport service user. Transport service user wants to inspect goods for ensuring freshness or safety before or after transportation. In this case, transport service user is to inspection service user (or requestor). And, transport service user requests goods delivery to transport service provider. Transport service provider picks up goods from transport service user, and delivers it to inspection service provider.

Preconditions	Producer (farmers or fisheries) should harvest or fish agriculture goods, and trade business is starting between consignor and consignee.
Begins When	After trade business, "Cargo Transportation" business process starts when Transport Service Requestor may request a cargo inspection to Inspection Service Provider before/after/during domestic or cross-border transportation.
Definitions	<p>Transport Service User requests "Cargo Transportation" to Transport Service Provider from one place to the other place.</p> <p>Hereby, transportation in this business process includes domestic and cross-border transport.</p> <ul style="list-style-type: none"> • <i>Transport Service User: Producer, Consignor, Consignee, Warehouse, Terminal, CFS/CY, Inspection Agency, Manufacturers, etc.</i> • <i>Transport Service Provider : Carrier (Domestic, Cross-Border)</i>
Ends When	Transport Service Provider deliver a cargo to the designated Transport Service User.
Exceptions	Transport Service Provider rejects a request from Transport Service User.
Postconditions	

b. Sequence Diagram of Cargo transportation

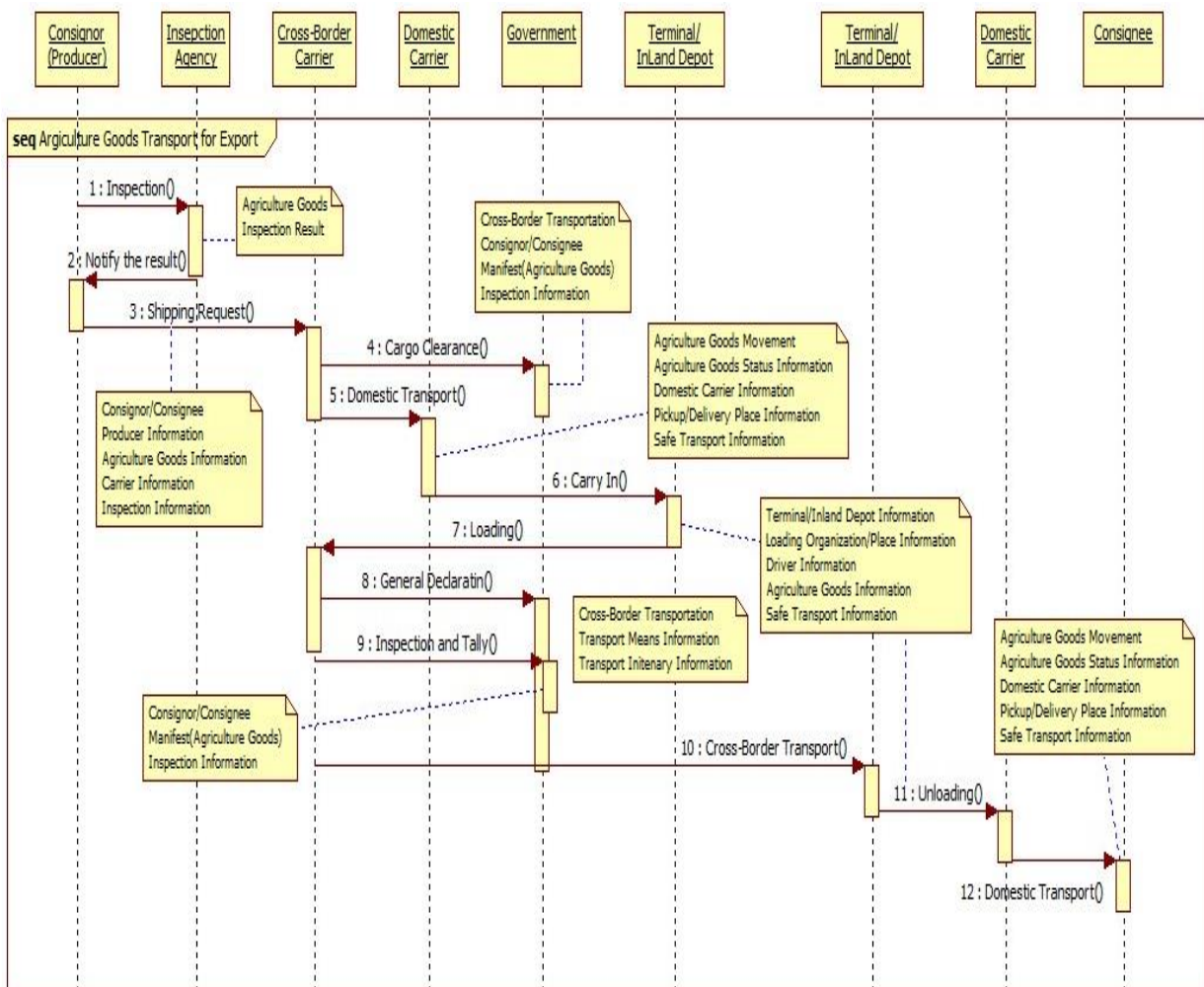


Figure 3. Sequence Diagram of Cargo transportation

c. Activity Diagram of Cargoes transportation

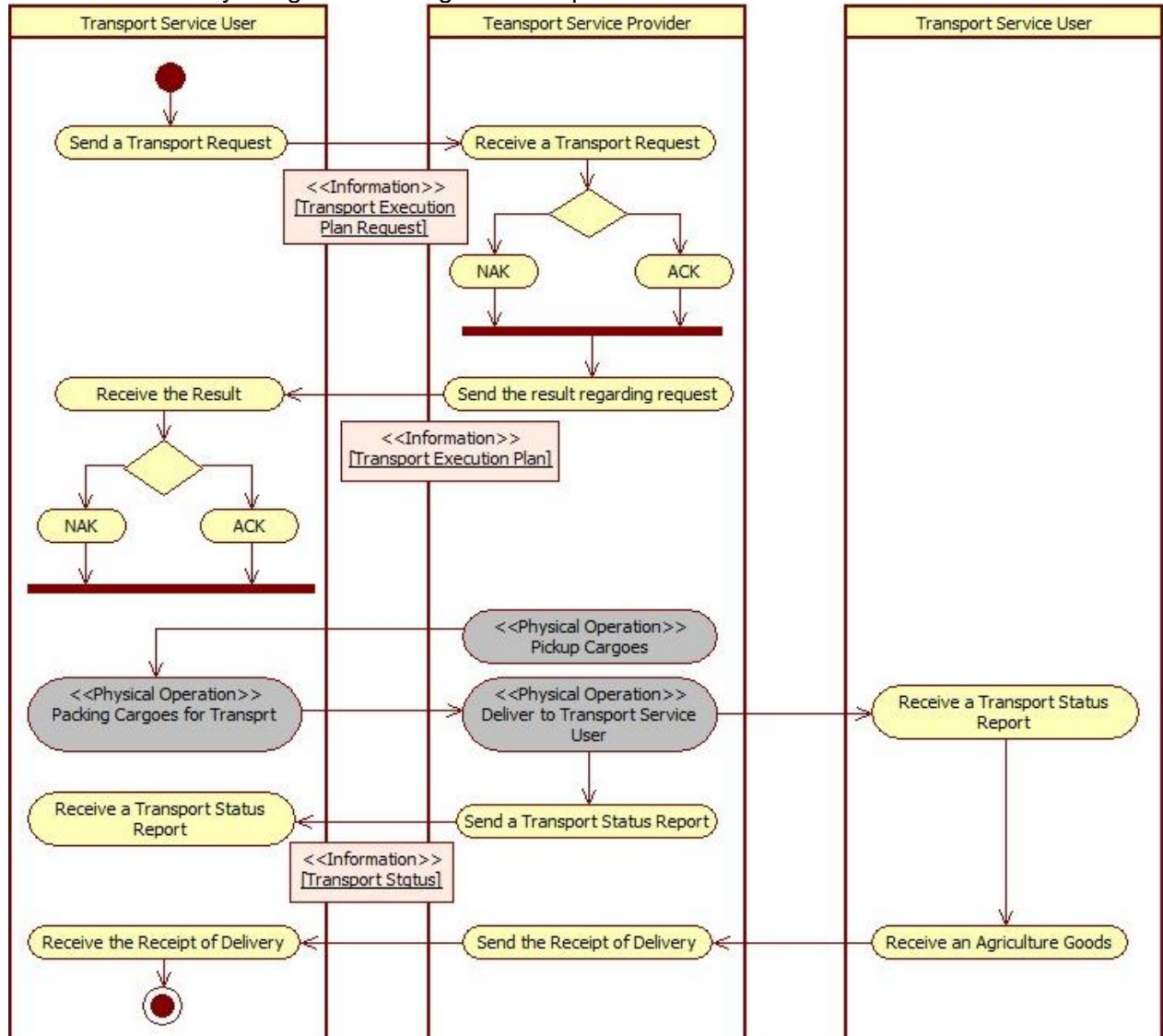


Figure 4. Activity diagram of cargo transportation