
Transaction assurance in E-commerce — Principles and framework

*Assurance des transactions de commerce électronique — Principes et
cadre*

STANDARDSISO.COM : Click to view the full PDF of ISO 32111:2023



STANDARDSISO.COM : Click to view the full PDF of ISO 32111:2023



COPYRIGHT PROTECTED DOCUMENT

© ISO 2023

All rights reserved. Unless otherwise specified, or required in the context of its implementation, no part of this publication may be reproduced or utilized otherwise in any form or by any means, electronic or mechanical, including photocopying, or posting on the internet or an intranet, without prior written permission. Permission can be requested from either ISO at the address below or ISO's member body in the country of the requester.

ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

Published in Switzerland

Contents

	Page
Foreword.....	v
Introduction.....	vi
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions.....	1
4 Framework of e-commerce transaction assurance.....	1
5 Principles.....	2
5.1 General.....	2
5.2 Authenticity.....	2
5.3 Accountability.....	3
5.4 Accessibility.....	3
5.5 Security.....	3
5.6 Privacy.....	3
6 Participants in e-commerce transactions.....	3
7 Activities during the transaction process.....	4
7.1 General.....	4
7.2 Activities during pre-transaction phase.....	5
7.2.1 General.....	5
7.2.2 Account registration.....	5
7.2.3 Verification of registered information.....	6
7.2.4 Preparation of third-party service.....	6
7.2.5 Releasing transaction-related information.....	6
7.3 Activities during in-transaction phase.....	7
7.3.1 General.....	7
7.3.2 Placement of electronic order.....	7
7.3.3 Confirmation of electronic order.....	7
7.3.4 Choice of payment method.....	7
7.3.5 Payment for purchased products.....	8
7.3.6 Delivery of purchased products.....	8
7.3.7 Customs clearance.....	8
7.3.8 Receipt with confirmation.....	9
7.4 Activities during post-transaction phase.....	9
7.4.1 General.....	9
7.4.2 Performance evaluation.....	9
7.4.3 Resolving disputes.....	9
7.4.4 Return of products.....	10
7.4.5 Refund of payment.....	10
7.4.6 Compensation for transaction loss.....	10
7.4.7 Maintenance and technical support.....	10
8 Assurance elements.....	11
8.1 General.....	11
8.2 Identity information.....	12
8.3 Qualification information.....	12
8.4 Terms of use.....	12
8.5 Third-party service rule.....	12
8.6 Online reputation information.....	13
8.7 Product information.....	13
8.8 Transaction document.....	14
8.9 Multiple payment methods.....	14
8.10 Payment security rule.....	14
8.11 Delivery rule.....	14

8.12	Customs clearance rule.....	15
8.13	Performance evaluation rule.....	15
8.14	Dispute resolution rule	15
8.15	Return and refund rules	15
8.16	Compensation rules	16
8.17	Maintenance and technical support rule.....	16
Annex A	(informative) List of principles in e-commerce and equivalent activities	17
Annex B	(informative) List of principles in e-commerce and equivalent assurance elements	19
Annex C	(informative) Correlation between transaction activities and assurance elements.....	21
Bibliography		22

STANDARDSISO.COM : Click to view the full PDF of ISO 32111:2023

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

ISO draws attention to the possibility that the implementation of this document may involve the use of (a) patent(s). ISO takes no position concerning the evidence, validity or applicability of any claimed patent rights in respect thereof. As of the date of publication of this document, ISO had not received notice of (a) patent(s) which may be required to implement this document. However, implementers are cautioned that this may not represent the latest information, which may be obtained from the patent database available at www.iso.org/patents. ISO shall not be held responsible for identifying any or all such patent rights.

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 321, *Transaction assurance in E-commerce*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The rapid development and wide use of e-commerce has increased awareness of the importance of fostering a trustworthy, reliable, and secure e-commerce transaction environment to ensure e-commerce transaction activities.

The characteristics of e-commerce transactions, e.g. highly digital, non-face-to-face and cross-regional, can bring challenges. The following are some of the challenges:

- more unknowns in the process of purchasing products;
- issues such as product quality, intellectual property, personal information protection, after-sale services, and transaction security;
- risks in product delivery, e.g. damage, delay and failure.

The challenges of e-commerce transactions come from different elements in upstream/downstream processes of e-commerce transactions, and eliminating those challenges necessitates the attention and efforts of all stakeholders.

This document specifies the principles and framework of e-commerce transaction assurance to support all parties in better understanding e-commerce transaction assurance activities.

It can assist in the following:

- identifying key elements to improve the assurance of the e-commerce transaction process;
- contributing to e-commerce transaction assurance programs;
- informing government or non-governmental organizations or individuals engaged in the e-commerce industry;
- promoting sustainable development of the e-commerce industry.

This document can also facilitate future e-commerce assurance standards development by putting forward key e-commerce assurance principles, identifying key stakeholders and elements and demonstrating the e-commerce transaction process.

Transaction assurance in E-commerce — Principles and framework

1 Scope

This document specifies the principles and framework for e-commerce transaction assurance, including participants, activities and assurance elements. It does not describe specific e-commerce transaction assurance requirements or methodologies in detail. It is intended to be used by organizations and individuals engaged in e-commerce transactions.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 32110¹⁾, *Transaction assurance in E-commerce — Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 32110 apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Framework of e-commerce transaction assurance

The framework of e-commerce transaction assurance (see [Figure 1](#)) includes principles (see [Clause 5](#)), participants in e-commerce transactions (see [Clause 6](#)), activities during the transaction process (see [Clause 7](#)) and assurance elements (see [Clause 8](#)), as well as their inter-relationships.

Principles provide guidance for participants on how to participate in activities during the transaction process and protect their interests. They also provide guidance for the smooth operation of activities in e-commerce transactions.

Assurance elements associated with activities during the transaction process are the main content of e-commerce transaction assurance. Assurance elements can support the accomplishment and realization of the principles.

Participants engage in activities during the transaction process according to their responsibilities and demands. No matter what role participants play in e-commerce transactions, they should identify and consider the assurance elements associated with their role as much as possible and take effective assurance measures.

1) Under preparation. Stage at the time of publication: ISO/FDIS 32110:2023.

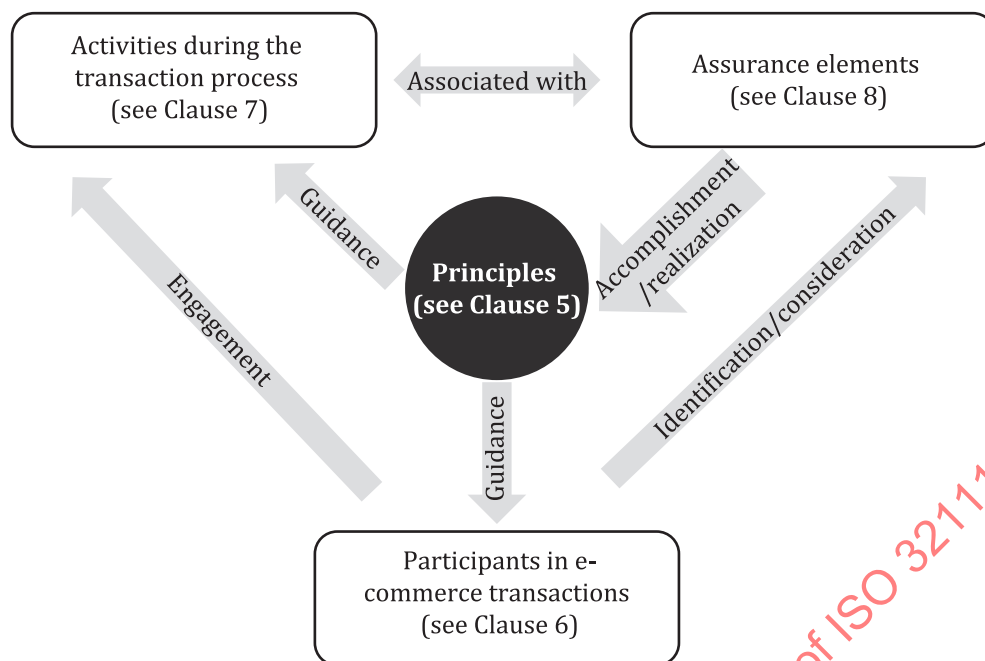


Figure 1 — E-commerce transaction assurance framework

5 Principles

5.1 General

The principles listed here are undertaken in accordance with all applicable requirements consistent with the protections for participants in the activities and the requirements on the assurance elements for e-commerce transactions. The principles are as follows:

- authenticity;
- accountability;
- accessibility;
- security;
- privacy.

The principles can generally support all activities during the transaction process, however, the degree of guidance of each principle towards different activities can differ. [Annex A](#) illustrates the list of e-commerce principles and the equivalent activities.

All assurance elements can support the realization or accomplishment of the principles, however, some assurance elements play a primary role in supporting the accomplishment of certain principles (see [Annex B](#)).

5.2 Authenticity

Participants, products and information generated in e-commerce transactions, should be consistent with what they claim to be.

5.3 Accountability

Participants in e-commerce transactions should be aware of the applicable requirements. Information generated in e-commerce transactions, such as resolving disputes or tracing obligations, should be recorded and stored properly to support e-commerce assurance.

5.4 Accessibility

Relevant services and information about e-commerce transactions should be easily obtained and understood to allow participants to make informed decisions or perform certain actions or to reduce any potential misunderstanding with due consideration to rules including privacy protection.

NOTE 1 Relevant services can include, e.g. logistics services, payment services.

NOTE 2 Relevant information can include, e.g. participant identity information, terms of use, product information, ordering information, logistics information, payment information, reputation information.

NOTE 3 Regional or local rules on accessibility can apply.

5.5 Security

Information generated in e-commerce transactions should be from an authentic data source and protected, for example, against leakage and unauthorized data disclosure. E-commerce activity operations or relevant integrated software should be secured from current or potential danger.

NOTE Keeping software up to date and taking into account security advisories can support the security of e-commerce assurance.

5.6 Privacy

Personal information, including information about an identifiable individual, such as personally identifiable information (PII), should be collected, used, stored or disclosed properly, and protected, for example, against leakage and unauthorized data disclosure.

6 Participants in e-commerce transactions

An organization or individual that engages in e-commerce transaction activities is a participant. This document identifies major e-commerce transaction participants as the following:

- seller;
- e-commerce platform operator;
- buyer;
- logistics service provider;
- third-party payment service provider;
- software service provider (individual or organization offering software service, refer to ISO 32110:20—, 3.2.11);
- collection agent for goods;
- manufacturer;
- rights holder;
- neutral party (individual or organization taking a neutral position between participants with different interests, most of them being external and therefore neutral, impartial, and fair. Within

this document, they are collectively referred to as "neutral party," e.g. auditors who review the operations of the e-commerce platform operators and certify them where applicable).

NOTE The roles of neutral parties can be important in e-commerce transaction assurance, yet this document does not provide a detailed description on their role due to the differences in different contexts.

An individual or organization can play multiple roles from the above list of participants. For example, an individual or organization can operate an e-commerce platform to sell products manufactured by themselves or others. Meanwhile, an individual or organization can also operate an e-commerce platform to provide one or more services for other parties to facilitate e-commerce transactions.

An individual or organization can be a seller, manufacturer, or rights holder at the same time. The individual or organization can use this document according to the role they play.

For further description on the above participants, see ISO 32110.

7 Activities during the transaction process

7.1 General

There are three phases in the e-commerce transaction process:

- Pre-transaction phase

The process of preparation for the initiation of the e-commerce transaction before the order is placed.

- In-transaction phase

The process that starts once the order is placed to the receipt of products.

- Post-transaction phase

The process that occurs after the receipt of products with confirmation from the buyer.

The main activities in the three phases of e-commerce transactions are listed in [Figure 2](#). While they pertain to different e-commerce transaction scenarios, some of the activities are optional. In each of these activities, there are corresponding participants. [Figure 2](#) divides the participants into "initiator" and "engaged" from the perspective of who triggers the activities and who supports the initiator to complete the activities.

Activities during the transaction process	Seller	E-commerce platform operator	Buyer	Third-party payment service provider	Logistics service provider	Software service provider	Collection agent for goods	Manufacturer	Rights holder
Pre-transaction phase (7.2)									
Account registration (7.2.2)	●	○	●			○		○	○
Verification of registered Information (7.2.3)	●	●	●					○	○
Preparation of third-party service (7.2.4)		●		○	○	○			
Releasing transaction-related information (7.2.5)	●	●	●	○	○	○	○	○	○
In-transaction phase (7.3)									
Placement of electronic order (7.3.2)	○	○	●						
Confirmation of electronic order (7.3.3)	●	○	●						
Choice of payment method(7.3.4)	○	○	●	○					
Payment for purchased products(7.3.5)	○	○	●	○					
Delivery of purchased products(7.3.6)	●	○	○		○		○	○	
Customs clearance(7.3.7)	●	○	○		○				
Receipt with confirmation (7.3.8)	○	○	●	○	○		○	○	
Post-transaction phase (7.4)									
Performance evaluation (7.4.2)	●	○	●	●	●				
Resolving disputes (7.4.3)	●	○	●	●	●			●	●
Return of products (7.4.4)	○	○	●		○		○	○	
Refund of payment (7.4.5)	●	○	●	○					
Compensation for transaction loss (7.4.6)	●	●	●	●	●			●	●
Maintenance and technical support (7.4.7)	●	○	○					●	

Key

- initiator
- engaged

Figure 2 — Activities and relevant participants during the e-commerce transaction process

7.2 Activities during pre-transaction phase

7.2.1 General

The following four activities can take place during the pre-transaction phase:

- account registration;
- verification of registered information;
- preparation of third-party service;
- releasing transaction-related information.

7.2.2 Account registration

Account registration is the act of making an organization or individual known within a particular domain, such as an e-commerce platform, and it can be a premise for them to conduct e-commerce transactions.

The seller or buyer initiates the activity. The other participants engaged can include the e-commerce platform operator, software service provider, manufacturer and rights holder.

The seller can be requested to provide identity information, qualification information, or other necessary information to complete the account registration process. The buyer can be requested to provide

identity information. A secure registration according to the current status should be guaranteed, and it is always recommended to also provide an option for non-registered account checkout.

The main assurance elements associated with this activity include identity information (see [8.2](#)), qualification information (see [8.3](#)) and product information (see [8.7](#)).

NOTE 1 The e-commerce platform operator can sell the product, acting as the seller.

NOTE 2 Manufacturers can sell the product directly on the platform, acting as the seller.

NOTE 3 In the account registration of the seller, other participants such as the manufacturer and the rights holder can be potentially involved, which is indicated in [Figure 2](#) as "engaged". For example, the manufacturer sometimes can be requested to provide qualification information of the product to facilitate the account registration.

7.2.3 Verification of registered information

Verification of registered information is the act of checking the identity of the sellers or buyers, or confirming the consistency of the product with specific requirements.

The e-commerce platform operator, seller, or buyer can initiate this activity. The other participants engaged are the manufacturer and rights holder.

The e-commerce platform operator, seller, or buyer can take different measures to verify the other participant information, including identity information, qualification information and product information.

The main assurance elements associated with this activity include identity information (see [8.2](#)), qualification information (see [8.3](#)) and product information (see [8.7](#)).

NOTE 1 For a product required license, the e-commerce platform operator sometimes verifies the product license properly. For example, in the circumstance of electronic products, a CE certificate can be requested.

NOTE 2 For certain products, the buyer's qualification can also be verified before enabling the buyer to place an electronic order. Examples of certain products include alcohol, tobacco, firearms, R-rated comic books and videos.

7.2.4 Preparation of third-party service

Preparation of third-party service is the act of integrating services such as logistics, payment and software.

The e-commerce platform operator initiates this activity. The other participants engaged are the third-party payment service provider, logistics service provider and software service provider.

The e-commerce platform operator can use technical measures and management measures to establish internet and information services with related participants.

The main assurance element associated with this activity is the third-party service rule (see [8.5](#)).

NOTE Some e-commerce platform operators can provide delivery services themselves.

7.2.5 Releasing transaction-related information

Releasing transaction-related information is the act of making information known to others through an open network.

The seller, e-commerce platform operator and buyer can initiate this activity, and other participants can be engaged. Released information can include terms of use, transaction documents, business activities, payment, or logistics service information.

The e-commerce platform operator can use technical and management measures to facilitate release of information. For example, the e-commerce platform operator can provide a template for the sellers to upload product information.

The main assurance elements associated with this activity include identity information (see [8.2](#)), qualification information (see [8.3](#)), terms of use (see [8.4](#)), online reputation information (see [8.6](#)) and product information (see [8.7](#)).

NOTE The initiation of releasing transaction-related information first occurs in the pre-transaction phase, while in all e-commerce transaction processes, information can be updated and released.

7.3 Activities during in-transaction phase

7.3.1 General

The following seven activities can take place during the in-transaction phase:

- placement of electronic order;
- confirmation of electronic order;
- choice of payment method;
- payment for purchased products;
- delivery of purchased products;
- customs clearance;
- receipt with confirmation.

7.3.2 Placement of electronic order

The buyer initiates this activity. The other participants are the seller and e-commerce platform operator.

The buyer selects the desired products and places electronic orders to the seller.

The main assurance element associated with this activity is the transaction document (see [8.8](#)).

NOTE Ordering information can include product type and specification, quantity, amount, delivery address, consignee information such as contact person, contact information, delivery time, and selected logistics service provider.

7.3.3 Confirmation of electronic order

Confirmation of electronic order is the act of confirming an already existing electronic order, usually made by the buyer and seller over open networks.

The seller and buyer initiate this activity. The other participant is the e-commerce platform operator.

After the buyer places the electronic order, the seller confirms with the buyer through the e-commerce platform regarding the ordering information.

The main assurance element associated with this activity is the transaction document (see [8.8](#)).

7.3.4 Choice of payment method

The buyer initiates this activity. The other participants are the seller, e-commerce platform operator and third-party payment service provider.

The buyer chooses the payment options offered by the e-commerce platform operator or seller, e.g. cash on delivery, instalment payments, or online payments. The e-commerce platform operator can facilitate providing the payment option, and the third-party payment service provider can ultimately assist in the payment.

The main assurance element associated with this activity is the multiple payment methods (see [8.9](#)).

7.3.5 Payment for purchased products

Payment for purchased products is the act of placing or transferring funds from the buyer to the seller within the underlying obligations of the electronic order.

The buyer initiates this activity. The other participants are the seller, e-commerce platform operator and third-party payment service provider.

The buyer can pay by cash on delivery or make an online payment.

For online payment, the e-commerce platform operator or third-party payment service provider can be an important facilitator to support the smooth operation of the payment.

The main assurance elements associated with this activity include multiple payment methods (see [8.9](#)) and payment security rule (see [8.10](#)).

7.3.6 Delivery of purchased products

The seller initiates this activity. The other participants are the logistics service provider, e-commerce platform operator, buyer, collection agent for goods and manufacturer. The logistics service provider plays a main role of this activity.

Under the consignment of the seller, the logistics service provider transfers the product to the buyer within the committed time and location, according to the order.

The e-commerce platform operator provides support for the logistics service provider or the seller to share logistics information.

The main assurance element associated with this activity is the delivery rule (see [8.11](#)).

NOTE 1 The delivery of virtual products in e-commerce transactions, such as digital downloads of books, music, videos or other products, does not require logistics to support transfer products.

NOTE 2 In the circumstance that the seller has no inventory or does not produce products, the seller sometimes consigns other participants, including the manufacturer, to deliver products.

7.3.7 Customs clearance

The seller initiates this activity. The other participants are the buyer, e-commerce platform operator and logistics service provider.

Customs clearance is not a mandatory activity and usually occurs in the process of cross-border e-commerce transactions.

With the support of the e-commerce platform operator and logistics service provider, the seller or buyer complete the activity of customs clearances in accordance with the clearance rules of entry-exit countries.

The main assurance element associated with this activity is the customs clearance rule (see [8.12](#)).

7.3.8 Receipt with confirmation

The buyer initiates this activity. The other participants are the seller, e-commerce platform operator, logistics service provider, third-party payment service provider, collection agent for goods, and manufacturer.

The buyer confirms the receipt of products or can consign the collection agent for the goods to confirm the receipt where such collection agent for goods is available for the purpose of facilitating circumstances, such as if the buyer is unavailable when the products are delivered.

In the case of cash on delivery, the buyer needs to pay to get the products. In the case of online payment, after confirming receipt of products, the payment can be transferred to the seller as agreed.

The e-commerce platform operator provides support for certain participants to share information on the receipt with confirmation activity.

The main assurance element associated with this activity is the delivery rule (see [8.11](#)).

7.4 Activities during post-transaction phase

7.4.1 General

The following six activities can take place during the post-transaction phase:

- performance evaluation;
- resolving disputes;
- return of products;
- refund of payment;
- compensation for transaction loss;
- maintenance and technical support.

7.4.2 Performance evaluation

Performance evaluation is the act of assessing, grading, or reviewing for the purpose of establishing or verifying its performance.

The seller, buyer, third-party payment service provider and logistics service provider can initiate this activity. The other participant is the e-commerce platform operator.

Initiators can evaluate in the e-commerce transaction process. The targets of evaluation can include other participants or products through the e-commerce platform.

The main assurance elements associated with this activity include online reputation information (see [8.6](#)) and performance evaluation rule (see [8.13](#)).

NOTE Performance evaluation can be recognized as an online reputation evaluation and grading in an e-commerce transaction.

7.4.3 Resolving disputes

The seller, buyer, third-party payment service provider, logistics service provider, manufacturer and rights holder can all initiate this activity. The other participant is the e-commerce platform operator.

EXAMPLE The buyer initiates the dispute towards the seller, and other participants such as the logistics service provider can be involved. Some e-commerce platform operators facilitate the process of dispute resolution by coordinating, notifying related participants or providing necessary evidence.

The main assurance elements associated with this activity are the transaction document (see [8.8](#)) and dispute resolution rule (see [8.14](#)).

7.4.4 Return of products

Return of products is an example of providing an extra remedy, which is a remedy or protection provided to the buyer even if it is not required by the law.

The buyer initiates this activity. The other participants are the seller, e-commerce platform operator, logistics service provider, collection agent for goods and the manufacturer.

Various factors can cause returns, such as breach of contract or for the purpose of consumer protection.

The buyer can initiate this activity through the e-commerce platform, and the seller reviews the return application. The buyer sends the products back to the seller usually with the assistance of the logistics service provider if the seller approves the return application.

The e-commerce platform operator sometimes facilitates and supervises this activity.

The main assurance element associated with this activity are the return and refund rules (see [8.15](#)).

NOTE The buyer can also authorize the collection agent to send products back.

7.4.5 Refund of payment

Refund of payment is an example of providing an extra remedy.

The seller or buyer initiates this activity. The other participants are the e-commerce platform operator and third-party payment service provider.

The buyer can initiate the refund application through the e-commerce platform, and the seller reviews and approves the refund application. The third-party payment service provider sometimes assists in this activity.

The seller and buyer conduct the activity of refunding according to contract or agreed rules.

The e-commerce platform operator can facilitate and supervise this activity.

The main assurance element associated with this activity are the return and refund rules (see [8.15](#)).

7.4.6 Compensation for transaction loss

Compensation for transaction loss is the act of counteracting damage, loss or errors. Compensation can be monetary or non-monetary. Compensation for transaction loss is in addition to a contractual remedy and is an example of providing an extra remedy.

The seller, buyer, e-commerce platform operator, third-party payment service provider, logistics service provider, manufacturer and rights holder can initiate this activity.

EXAMPLE The buyer can initiate a compensation application towards the seller and manufacturer when they deem that the e-commerce transaction causes damage or loss to them.

The e-commerce platform operator can assist to provide coordination and transaction evidence in the process of compensation for the transaction loss.

The main assurance elements associated with this activity are the transaction document (see [8.8](#)) and compensation rules (see [8.16](#)).

7.4.7 Maintenance and technical support

Maintenance and technical support are the acts of guaranteeing the product can perform its required function. Maintenance of products retains or restores the product to a state in which it can perform

its required function, e.g. repair, replacing of product parts, software updates. Technical support of products supports the buyer in using the product correctly and properly, e.g. instructions and technical training in installation.

The seller or manufacturer initiates this activity. The other participants are the e-commerce platform operator and buyer.

The seller or manufacturer conducts maintenance and technical support for products purchased in accordance with contract provisions. The buyer can obtain maintenance and technical support with the support of the e-commerce platform operator.

The main assurance element associated with this activity is the maintenance and technical support rule (see 8.17).

8 Assurance elements

8.1 General

The assurance elements associated with activities throughout the e-commerce transaction process have a significant impact on the assurance of the e-commerce transaction in accordance with the overview in Clause 4. Participants can identify and consider the assurance elements affecting the e-commerce transaction as comprehensively as possible in order to identify potential risks in e-commerce transaction activities effectively in order to take possible measures to avoid them. Figure 3 provides the e-commerce transaction assurance elements and relevant participants.

Assurance elements	Seller	E-commerce platform operator	Buyer	Third-party payment service provider	Logistics service provider	Software service provider	Collection agent for goods	Manufacturer	Rights holder
Identity information (8.2)	○	●	○			○			
Qualification information (8.3)	○	●	○			○		○	○
Terms of use (8.4)	○	●		○	○	○			
Third-party service rule (8.5)	○	●		○	○	○			
Online reputation information (8.6)	○	●	○	○	○				
Product information (8.7)	●	●						○	○
Transaction document (8.8)	○	●	○	○	○		○		
Multiple payment methods (8.9)	○	●		●					
Payment security rule (8.10)	○	●	○	●					
Delivery rule (8.11)	○	●			●		○	○	
Customs clearance rule (8.12)	○	○	○		○				
Performance evaluation rule (8.13)	○	●	○	○	○				
Dispute resolution rule (8.14)	○	●	○	○	○			○	○
Return and refund rules (8.15)	●	●		○	○		○	○	
Compensation rules (8.16)	○	●	○	○	○			○	○
Maintenance and technical support rule (8.17)	●	○						●	

Key

- in charge
- in support

Figure 3 — E-commerce transaction assurance elements and relevant participants

[Annex C](#) provides information on assurance elements and associated transaction activities in the transaction process. The assurance elements provided in this document are considered important and can be associated with multiple activities.

8.2 Identity information

Identity information is a set of data that differentiate one individual or organization from others in e-commerce, e.g. personal or company name, registered number.

Participants such as the seller or buyer can deliver identity information in the activities of account registration (see [7.2.2](#)), verification of registered information (see [7.2.3](#)) and releasing transaction-related information (see [7.2.5](#)).

Measures taken by the e-commerce platform operator to check the authenticity of identity information of the seller or buyer can be helpful to e-commerce transaction assurance in terms of preventing internet fraud.

The e-commerce platform operator can claim liabilities when failing to fulfil the seller's responsibilities to ensure authenticity of identity information in accordance with transaction regulations, agreements, or other provisions. Meanwhile, security should be considered in terms of identity information.

8.3 Qualification information

Qualification information is a set of data that validate that one individual or organization is qualified to engage in certain activities in e-commerce.

A product license is required for certain products sold in e-commerce. Qualification information can be an important assurance element in the activities of account registration (see [7.2.2](#)), verification of registered information (see [7.2.3](#)) and releasing transaction-related information (see [7.2.5](#)).

The seller or buyer can be required to provide appropriate licensing or qualification information for certain products depending on the requirements of different markets or jurisdictions.

In such cases, the establishment of a mechanism to ensure the authenticity of qualification information at the time of registration can promote e-commerce transaction assurance.

8.4 Terms of use

Terms of use is an important assurance element directly associated with the activity of releasing transaction-related information (see [7.2.5](#)), which also affects all the activities throughout the e-commerce transaction process.

The e-commerce platform operator provides terms of use to e-commerce transaction participants to manage and support their behaviour. The seller, buyer, logistics service provider and third-party payment service provider conduct e-commerce transaction activities in accordance with it.

Terms of use can include contents on operation instructions, procedures, obligations and rights of different participants in the e-commerce transaction process. Terms of use can be published or updated on the e-commerce platform in time for the convenience of participants to obtain and understand.

NOTE In many circumstances, return and refund, compensation, maintenance and technical support rules can be part of the terms of use.

8.5 Third-party service rule

The third-party service rule is an important assurance element in the activity of preparation of third-party service (see [7.2.4](#)).

The third-party service rule can support the e-commerce platform operator or seller in preparing for suitable third-party service, such as the logistics service provider and third-party payment service provider.

The e-commerce platform operator and third-party service providers, such as the third-party payment service provider and logistics service provider, can set up rules for their own services. The e-commerce platform operator usually interacts with the third-party service providers in network connecting and data transmitting within agreed rules. The authenticity of the third-party service provider and the security of transmitting data can be prioritized issues to be addressed when deciding and enforcing the third-party service rule.

The establishment and implementation of mechanisms for inspection, evaluation and cancellation of third-party service providers can be considered for the sake of ensuring safe and reliable third-party services.

NOTE 1 The delivery rule (see [8.11](#)) normally covers, e.g. qualification, transportation capability, storage capability, clearance capability, informatization capability and reputation.

NOTE 2 The rule of the third-party payment service provider covers, e.g. qualification, capital compliance, reputation, stability and security of the payment system.

8.6 Online reputation information

Online reputation information includes a series of data of grading, reviewing, or online reputation evaluation results.

Online reputation information is also an important assurance element in the activity of releasing transaction-related information (see [7.2.5](#)) and performance evaluation (see [7.4.2](#)). Online reputation information shows the credibility of participants involved and can affect the decision making of other participants.

The e-commerce platform operator can take measures, such as verification, grading or evaluating, to manage the online reputation information of each participant and enable relevant parties to disclose online reputation information.

Concerning online consumer reviews, e-commerce platform operators should act in accordance with ISO 20488:2018.

NOTE The seller's online reputation information can be one important factor that impacts the buyer's decision making in e-commerce transaction activities.

8.7 Product information

Product information is a set of data that describes a product in an e-commerce transaction, e.g. materials, technical specifications, size and weight and photographs.

Product information matters in e-commerce due to the lack of physical access to products, which is a major assurance element in the activities of account registration (see [7.2.2](#)), verification of registered information (see [7.2.3](#)) and releasing transaction-related information (see [7.2.5](#)). Obtaining product information that is accurate in terms of the actual products matters in e-commerce transaction assurance.

The buyer generally understands the products and makes purchase decisions through video, pictures, and text information displayed by the seller on the e-commerce platform, instead of actually seeing or touching it. The seller can be held responsible for the accuracy of product information.

As an important component of product information, quality information can be a major concern in e-commerce transactions. The accessibility of quality information in an e-commerce platform can greatly affect purchasing decisions.

Measures taken by the seller and e-commerce platform operator to monitor or check product information can support the assurance of product information accuracy. A mechanism or solution on product information sharing and tracing can be one of the measures to assist in preventing or coping with issues such as fake products and product safety issues.

8.8 Transaction document

The transaction document can act as key evidence for related e-commerce participants to prove completion of their obligations under a transaction and protect their legitimate rights, which is an important assurance element associated with the activity of placement of electronic order (see [7.3.2](#)), confirmation of electronic order (see [7.3.3](#)), resolving disputes (see [7.4.3](#)) and compensation for transaction loss (see [7.4.6](#)).

The transaction document can be any electronic document generated in an e-commerce transaction process. A common transaction document can include an electronic order and electronic invoice.

Measures or mechanisms to preserve the transaction document can support its authenticity and accountability, which are important factors for e-commerce transaction assurance.

The transaction document should be kept for a proper period.

8.9 Multiple payment methods

The multiple payment methods are payment options that the buyer can choose to pay for a product in an e-commerce transaction, such as cash on delivery and online payment.

Providing multiple payment methods can give the buyer an opportunity to choose the most suitable choice of payment method (see [7.3.4](#)) and can also facilitate the activity of payment for purchased products (see [7.3.5](#)).

The e-commerce platform operator is expected to deliver different payment methods for the seller and buyer. The buyer usually selects from the provisions of payment method to pay for products they purchased. The third-party payment service provider can provide support for different payment methods.

NOTE The payment method can be limited due to the provisions of the e-commerce platform operator or seller.

8.10 Payment security rule

The payment security rule is a set of specifications that can support relevant participants in protecting data and financial security.

The payment security rule is an important assurance element in the activity of payment for purchased products (see [7.3.5](#)) due to its financial nature.

The e-commerce platform operator and third-party payment service provider can take measures to ensure payment security in accordance with their own responsibilities, obligations, and relevant regulations.

Caution from buyers also matters. Buyers can take measures to improve payment security, such as password management or double checking of payment information.

8.11 Delivery rule

The delivery rule is an important assurance element in the activity of delivery of purchased products (see [7.3.6](#)) and receipt with confirmation (see [7.3.8](#)), as it can provide guidance for the other participants, such as the seller and logistics service provider, to fulfil their commitments in those activities.

The delivery of products should be at the right place and on time in accordance with the requirements of the other participants such as the buyer. The logistics service provider can achieve higher satisfaction by following the delivery rules in the e-commerce transaction process.

NOTE The delivery rule can be part of the third-party service rule (see [8.5](#)).

8.12 Customs clearance rule

The customs clearance rule includes requirements or procedures for procuring permission from a country's governing administration, through its customs authority, to either take goods out of its territory (export) or have goods enter its territory (import).

The customs clearance rule is an important assurance element in the activity of customs clearance (see [7.3.7](#)) which generally occurs in cross-border e-commerce.

The customs clearance rule of cross-border e-commerce can be different from that of traditional international trade, and there are specific clearance channels and rules for the e-commerce transaction.

The customs clearance rule can provide guidance for related participants to ensure the smooth and timely clearance of products. The seller, e-commerce platform operator and logistics service provider should be aware of what kind of customs clearance rule is necessary in the exit-export destination and what kind of measures they can take to meet requirements of the destination region or country.

8.13 Performance evaluation rule

The performance evaluation rule is an important assurance element for the activity of performance evaluation (see [7.4.2](#)).

The performance evaluation rule includes any guidelines specified by each e-commerce platform operator. For example, the e-commerce platform operator can establish and implement an effective evaluation rule to ensure that participants are able to engage in grading or commenting.

NOTE The e-commerce platform operator can delete the comments that violate laws or rules.

8.14 Dispute resolution rule

The dispute resolution rule includes actions or instructions to be followed by relevant participants in handling a dispute.

The dispute resolution rule is an important assurance element of the activity of resolving disputes (see [7.4.3](#)), which provides guidance for related participants to handle disputes properly.

The e-commerce platform operator can establish and implement the dispute resolution rule to facilitate an e-commerce transaction dispute resolution with the support of other participants.

NOTE Regional or local rules on the dispute resolution rule can apply.

8.15 Return and refund rules

The return and refund rules can include conditions or procedures to be followed by relevant participants in the activity of return and refund.

The return and refund rules are an important assurance element of the activities of return of products (see [7.4.4](#)) and refund of payment (see [7.4.5](#)), which can support the assurance of the rights and interests of all participants to ensure the rights and interests of all participants, including extra protection that goes beyond what legislation can offer.

The e-commerce platform operator or seller can establish and implement return or refund rules in accordance with the characteristics of the e-commerce transaction, and with the responsibilities and

obligations of different participants; however, the e-commerce platform operator and seller can have different return and refund rules which can be addressed in terms of use (see [8.4](#)).

Participants, such as the seller, logistics service provider and third-party payment service provider, should be aware of and accept the return and refund rules.

8.16 Compensation rules

Compensation rules can include conditions or procedures to support relevant participants in handling the activity of compensation.

Compensation rules are an important assurance element to better protect the rights and interests of participants in the activity of compensation for transaction loss (see [7.4.6](#)).

In the e-commerce transaction through the e-commerce platform, the e-commerce platform operator can establish and implement compensation rules in accordance with the responsibilities and obligations of different participants.

NOTE In the e-commerce transaction process through the e-commerce platform, compensation in advance can be adopted by the e-commerce platform operator as per agreed terms and conditions to support the protection of the rights and interests of participants.

8.17 Maintenance and technical support rule

The maintenance and technical support rule provides the terms to support relevant participants in handling the activity of maintenance and technical support.

The maintenance and technical support rule is an important assurance element in the activity of maintenance and technical support (see [7.4.7](#)).

The seller or e-commerce platform operator or manufacturer provides the maintenance and technical support rule in accordance with relevant regulations, technical standards, or contractual agreements and other requirements.

The e-commerce platform operator can supervise the implementation of maintenance and technical support service to ensure the legitimate rights and interests of the seller, manufacturer, buyer and other participants involved.

Annex A

(informative)

List of principles in e-commerce and equivalent activities

Principles (Clause 5)	Activities during the transaction process (Clause 7)
Authenticity (5.2)	Account registration (7.2.2)
	Verification of registered information (7.2.3)
	Preparation of third-party service (7.2.4)
	Releasing transaction-related information (7.2.5)
	Placement of electronic order (7.3.2)
	Confirmation of electronic order (7.3.3)
	Payment for purchased products (7.3.5)
Accountability (5.3)	Releasing transaction-related information (7.2.5)
	Placement of electronic order (7.3.2)
	Confirmation of electronic order (7.3.3)
	Payment for purchased products (7.3.5)
	Delivery of purchased products (7.3.6)
	Customs clearance (7.3.7)
	Receipt with confirmation (7.3.8)
Accessibility (5.4)	Performance evaluation (7.4.2)
	Account registration (7.2.2)
	Preparation of third-party service (7.2.4)
	Releasing transaction-related information (7.2.5)
	Choice of payment method (7.3.4)
	Payment for purchased products (7.3.5)
	Performance evaluation (7.4.2)
	Resolving disputes (7.4.3)
	Return of products (7.4.4)
	Refund of payment (7.4.5)
Security (5.5)	Compensation for transaction loss (7.4.6)
	Maintenance and technical support (7.4.7)
	Account registration (7.2.2)
	Verification of registered information (7.2.3)
	Preparation of third-party service (7.2.4)
	Releasing transaction-related information (7.2.5)
	Placement of electronic order (7.3.2)
	Confirmation of electronic order (7.3.3)
	Payment for purchased products (7.3.5)
	Performance evaluation (7.4.2)

Principles (Clause 5)	Activities during the transaction process (Clause 7)
Privacy (5.6)	Account registration (7.2.2)
	Verification of registered information (7.2.3)
	Preparation of third-party service (7.2.4)
	Releasing transaction-related information (7.2.5)
	Placement of electronic order (7.3.2)
	Confirmation of electronic order (7.3.3)
	Payment for purchased products (7.3.5)
	Performance evaluation (7.4.2)

STANDARDSISO.COM : Click to view the full PDF of ISO 32111:2023