



FINAL DRAFT International Standard

ISO/FDIS 32112

Transaction assurance in E-commerce — Relevant factors of evaluation and selection of indicators

ISO/TC 321

Secretariat: **SAC**

Voting begins on:
2024-10-04

Voting terminates on:
2024-11-29

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Published in Switzerland

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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 document 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).

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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.

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Introduction

E-commerce has revolutionized the way businesses operate and has become an important driver of economic growth worldwide. The increasing number of E-commerce users has spurred growth in other digital industries, for example, mobile technology, information and communications technology (ICT), and digital advertising. Local governments view E-commerce as a new engine of economic growth, while entrepreneurs see it as an opportunity to tap into a larger market and ensure the security of their transactions.

Meanwhile, E-commerce has been a rapidly evolving field, with various emerging "new norm" digital commerce trends such as live commerce, social E-commerce, AI-driven commerce, crowdfunding E-commerce, Internet of Things (IoT) in E-commerce, and data analytics and consumer profiling. These trends also have significant impacts related to the assurance of E-commerce transactions.

E-commerce transactions offer numerous benefits for businesses and consumers, but they also come with inherent risks, for example, fraud and abuse. As such, transaction assurance has become crucial for all interested parties. To reduce legal uncertainties and mitigate risks, the approach of carrying out evaluations is necessary. The evaluation of various targets enables E-commerce platform operators, buyers and sellers to check the safety and privacy of online transaction information, ensuring that all interested parties are satisfied with the convenience, safety and confidentiality of the entire transaction process. Moreover, the evaluation also plays an important role in market vitality, policy-making, reliability of cross-border transactions, etc.

This document provides a comprehensive evaluation approach to aid selection of indicators for various factors and themes. It elaborates four relevant factors that should be considered when carrying out evaluations of E-commerce transactions, including the quality of E-commerce transaction platforms and sites, the quality of E-commerce transaction services, the local external environments for E-commerce transactions and the sustainability of E-commerce transactions.

[Figure 1](#) illustrates the positioning of relevant evaluation factors in the transaction process. The quality of E-commerce transaction platforms and sites is evaluated with regard to their abilities and capabilities to enhance security and privacy. The quality of E-commerce transaction services is graded by the services provided throughout the process of E-commerce transactions. The local external environment for E-commerce transactions measures the impact of external aspects. The sustainability of E-commerce transactions emphasizes the impacts on the economy, society, and environment, reflecting the United Nations Sustainable Development Goals (SDGs) and the London Declaration, which was approved by members of ISO at the ISO General Assembly 2021. The London Declaration represents a push from ISO to transform the approach to climate action and advance international efforts to attain net-zero goals.

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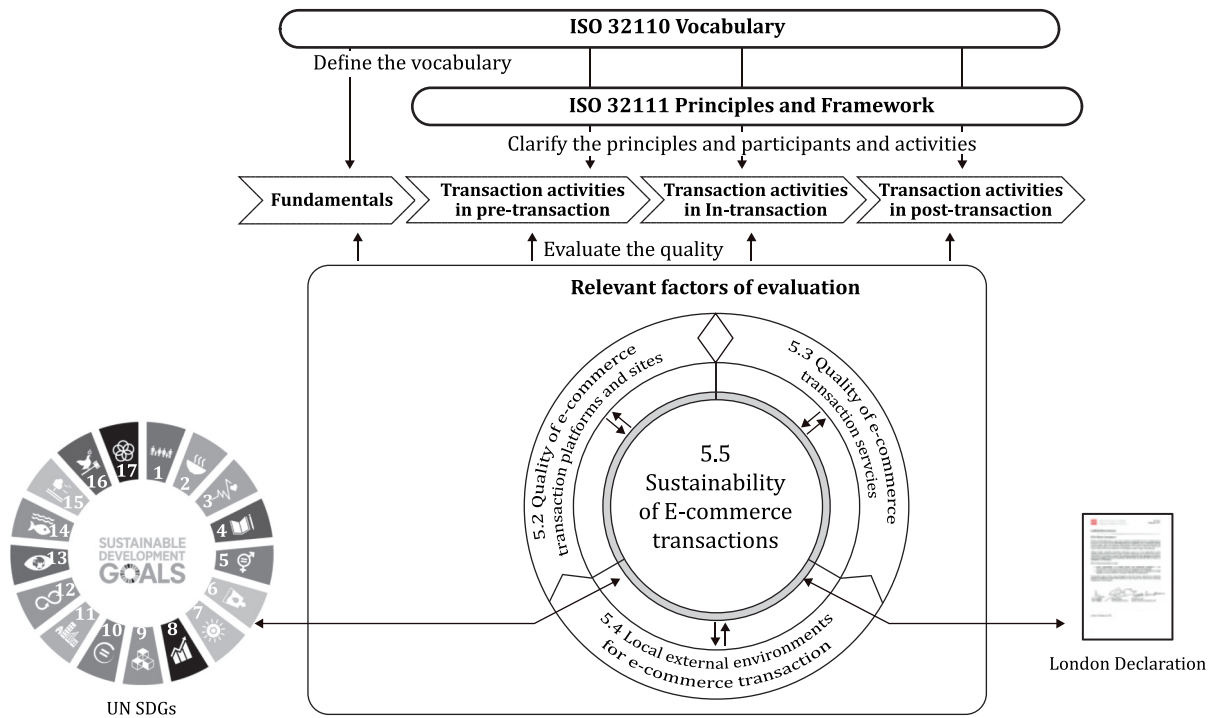


Figure 1 — Positioning for the relevant factors of evaluation

By following the systemic approach outlined in this document, indicators can be selected by interested parties based on the framework of factors, themes defined under the factors and consideration points under the themes. This approach ensures a comprehensive evaluation of E-commerce transaction assurance, which is helpful to improve customer experience, ensure fairness and justice, and minimize negative impacts on the environment.

This document provides an assessment method for the use of indicators and relevant factors, so that it can later serve as a reference for improving quality levels throughout the entire process. The themes of the relevant factors are in accordance with the activities provided in ISO 32111, with some additional themes included to reflect the external factors that can potentially impact the E-commerce transaction process.

[Figure 2](#) illustrates the corresponding relationship between this document and the activities provided in ISO 32111. Specifically, [5.3](#) outlines the basic factors of transaction assurance, which correspond to the activities that occur in the pre-transaction, in-transaction, and post-transaction stages. The themes provided in [5.2](#) partially relate to pre-transaction activities, such as account registration defined in ISO 32111. On the other hand, the themes identified in [5.4](#) partially align with in-transaction and post-transaction activities, such as performance evaluation.

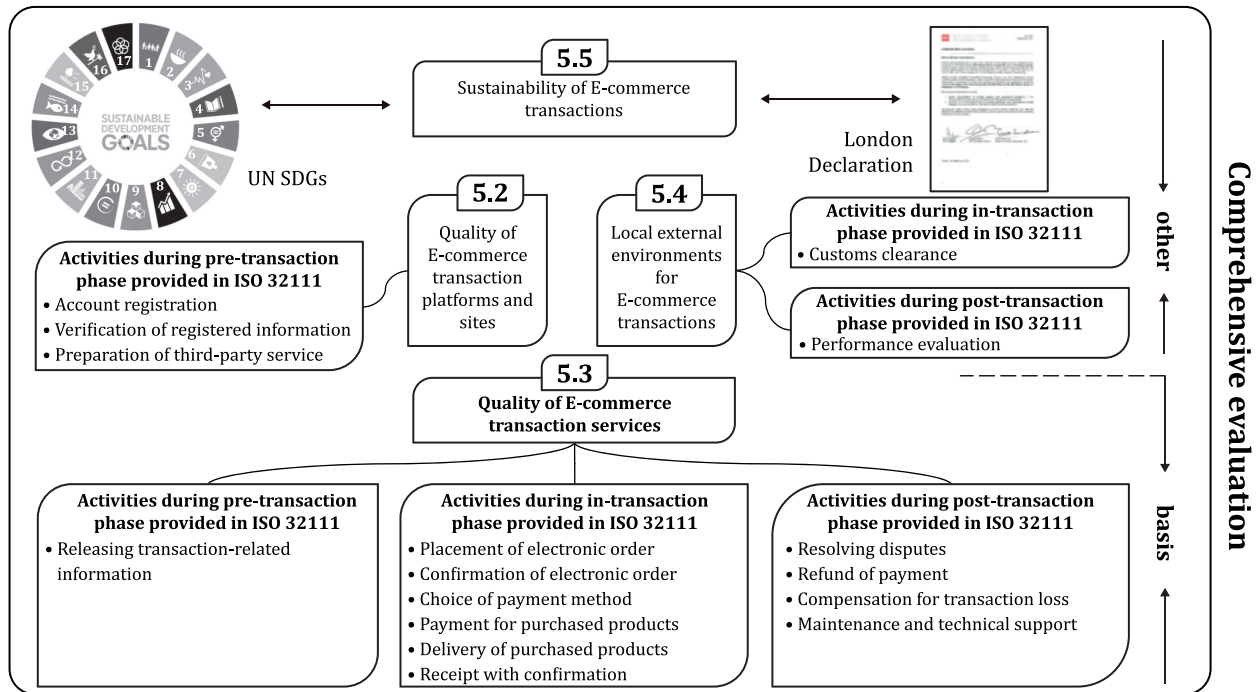


Figure 2 — Relationship between this document and the activities provided in ISO 32111

This document is applicable for gathering various information to evaluate E-commerce transactions. The tracking of essential buyers' information is solely conducted for the purpose of evaluating the E-commerce transaction process. This is done to protect buyers' personal information and to ensure cyber-security and privacy of the online transaction information for E-commerce platform operators, buyers and sellers.

This document is beneficial for a diverse range of interested parties, such as E-commerce platform operators, sellers, service providers, neutral parties, research institutions and local governments, to ensure the security and trustworthiness of transactions. This approach facilitates the identification of areas for improvement and enables the implementation of measures to assure E-commerce transactions, ultimately improving service quality and customer satisfaction, contributing to the economy, society and the environment.

Figure 3 provides an overview of the main contents and the logical structure of this document. Clause 4 pertains to the evaluation of E-commerce transaction assurance, while Clause 5 covers relevant factors, themes, and consideration points. Clause 6 provides guidelines and procedures for selecting indicators. Annex A presents examples of indicators that align with the relevant factors, themes, and consideration points, and Annex B outlines various relevant factors and themes that interested parties can choose based on their respective context and interests.

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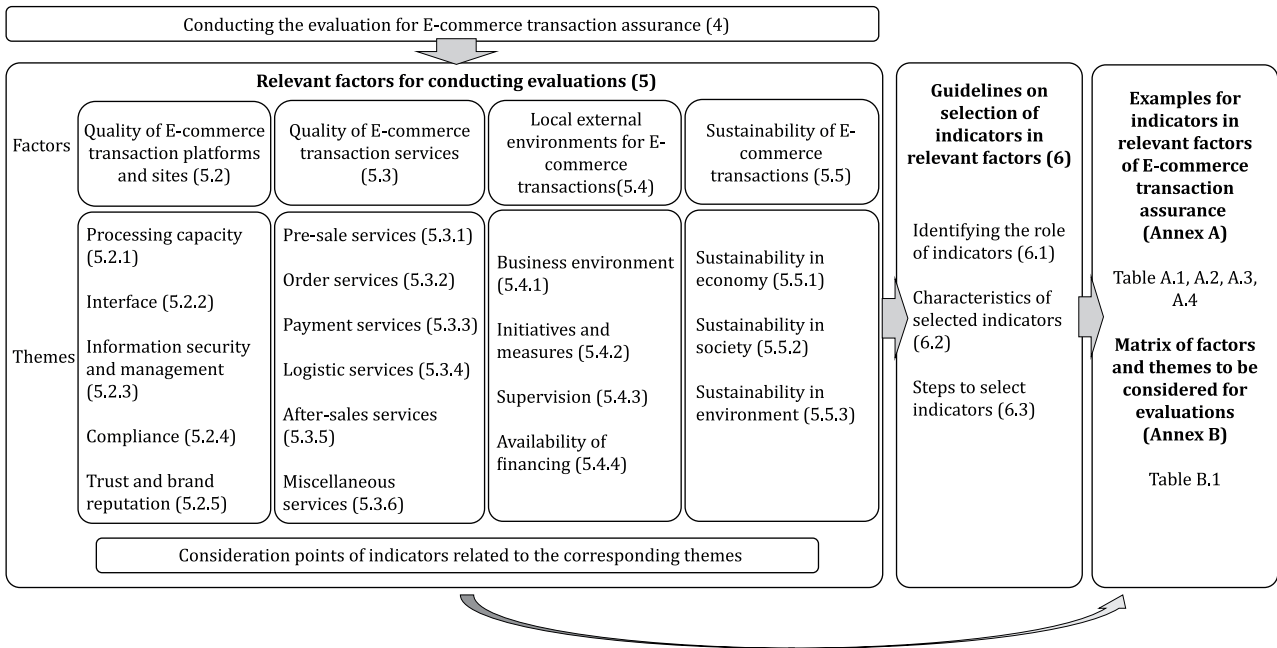


Figure 3 — Overview of the main contents and logic in this document

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Transaction assurance in E-commerce — Relevant factors of evaluation and selection of indicators

1 Scope

This document provides the description of relevant factors for evaluating E-commerce transactions, which can help in identifying indicators, evaluation toolkits and an approach for selection of indicators. This document focuses on E-commerce transaction assurance by providing the relevant factors of evaluations including quality of E-commerce transaction platforms and sites, quality of E-commerce transaction services, local external environments for E-commerce transactions and sustainability of E-commerce transactions. This document also explains the way to set up a set of E-commerce transaction evaluation indicators that enables monitoring and improvement of the quality of 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 32111, *Transaction assurance in E-commerce — Principles and framework*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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/>

3.1

relevant factor

specific aspect that is significant or important in a particular situation or context

Note 1 to entry: These factors are considered to be relevant because they have a direct impact on the outcome, decision, understanding or analysis of the situation.

3.2

theme

specific or detailed topic or area under each *relevant factor* (3.1)

Note 1 to entry: By identifying and exploring themes within relevant factors, users can gain more detailed information of each factor.

3.3

consideration point

specific issue that must be taken into account when making a decision on selecting an *indicator* (3.4)

Note 1 to entry: Consideration points are important because they can provide more appropriate actions. For example, a small e-store may prioritize customer service, while a larger one may focus on cost reduction and efficiency. Regardless of the context, it is essential to consider the relevant consideration points to choose the most appropriate indicators for each theme.

3.4 indicator

quantitative, qualitative or descriptive measure

Note 1 to entry: Each indicator in this document can align with the consideration point in this document.

[SOURCE: ISO 6707-3:2022, 3.10.8, modified – Note 1 to entry has been added.]

3.5 evaluation

assessment of a deliverable against defined criteria

Note 1 to entry: In this context, a deliverable is E-commerce transactions.

Note 2 to entry: The defined criteria for evaluation are an indicator system of evaluation for E-commerce transactions that aligns with relevant factors, themes and consideration points.

[SOURCE: ISO/IEC 19792:2009, 4.1.7, modified – Note 1 to entry and Note 2 to entry have been changed.]

3.6 user

visitor or registered individual or organization that uses services of an E-commerce platform

[SOURCE: ISO 32110:2023, 3.2.17]

4 Conducting evaluations for E-commerce transactions

4.1 Understanding the context of conducting evaluations

4.1.1 What are the purposes and features of evaluations?

Evaluations play an important role in ensuring the quality of E-commerce transactions. They can be conducted as one-time, periodic, or long-term assessments to monitor the related activities and provide guidance for improvement.

Evaluations for E-commerce transactions serve several purposes as below:

- providing comprehensive and quantitative references for multiple interested parties;
- identifying potential vulnerabilities and risks to ensure the integrity and effectiveness of E-commerce transactions;
- identifying areas that should be improved, where E-commerce transactions can use to foster sustainable development and ongoing innovation.

Evaluations for E-commerce transactions have the following features:

- evaluating the quality of various aspects of E-commerce transactions, which covers the entire process of E-commerce transactions, before, during and after the transactions;
- using objective standards for evaluation, which can be measured and verified, rather than purely relying on personal judgments;
- offering self-evaluation and third-party evaluation options that utilize the approach of evaluation with indicators;
- providing a reference point when assessing the effectiveness and efficiency of the E-commerce transactions.