International Standard

ISO 32112

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

Assurance des transactions de commerce électronique — Facteurs pertinents pour l'évaluation et sélection des indicateurs

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Contents

Foreword

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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.

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 can also come with inherent risks, for example, fraud and abuse. As such, transaction assurance has become crucial for all interested parties involved in E-commerce. To reduce legal uncertainties and mitigate risks, the approach of carrying out evaluations is necessary. Evaluations of various targets enable E-commerce platform operators, buyers and sellers to check the security 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 represents 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.
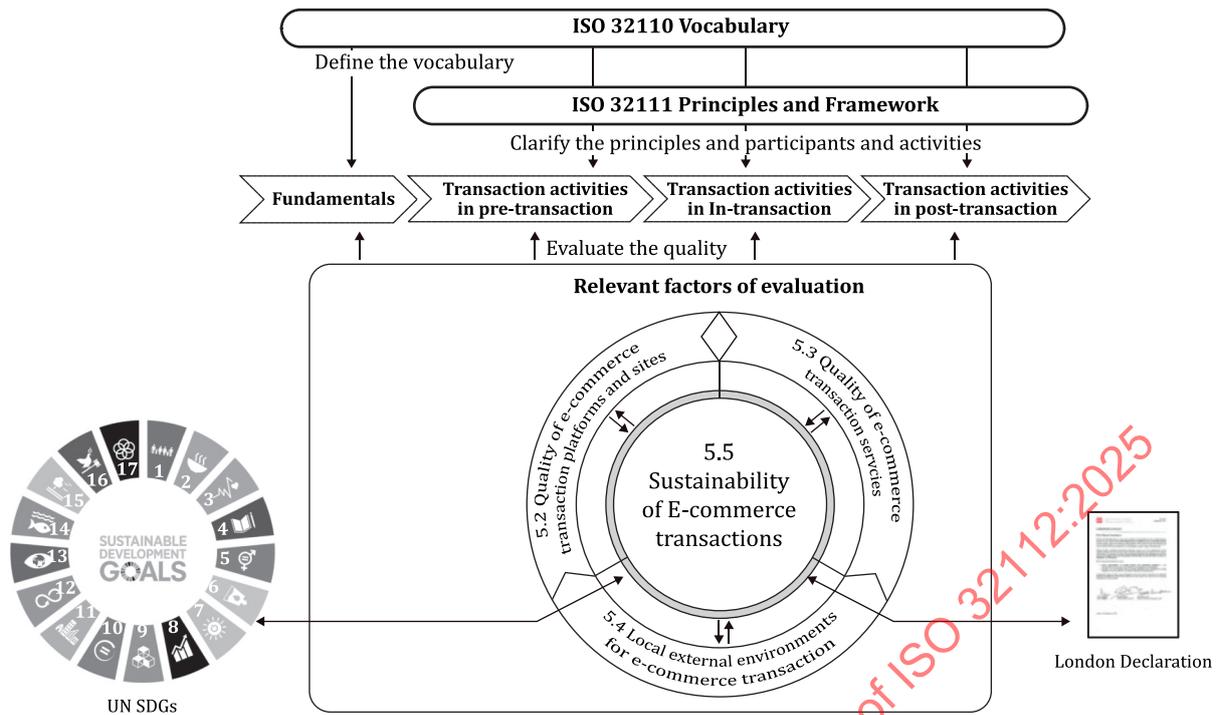
Figure 1 — Positioning of the relevant factors of evaluation

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 generally in line with the activities provided in ISO 32111, with some additional themes included to reflect the external factors that can have potential impacts on E-commerce transaction processes.

Figure 2 illustrates the corresponding relationship between this document and the activities provided in ISO 32111. Subclause 5.3 outlines the basic factors of services related to 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. Additionally, the themes identified in 5.4 partially align with in-transaction and post-transaction activities, such as performance evaluation.
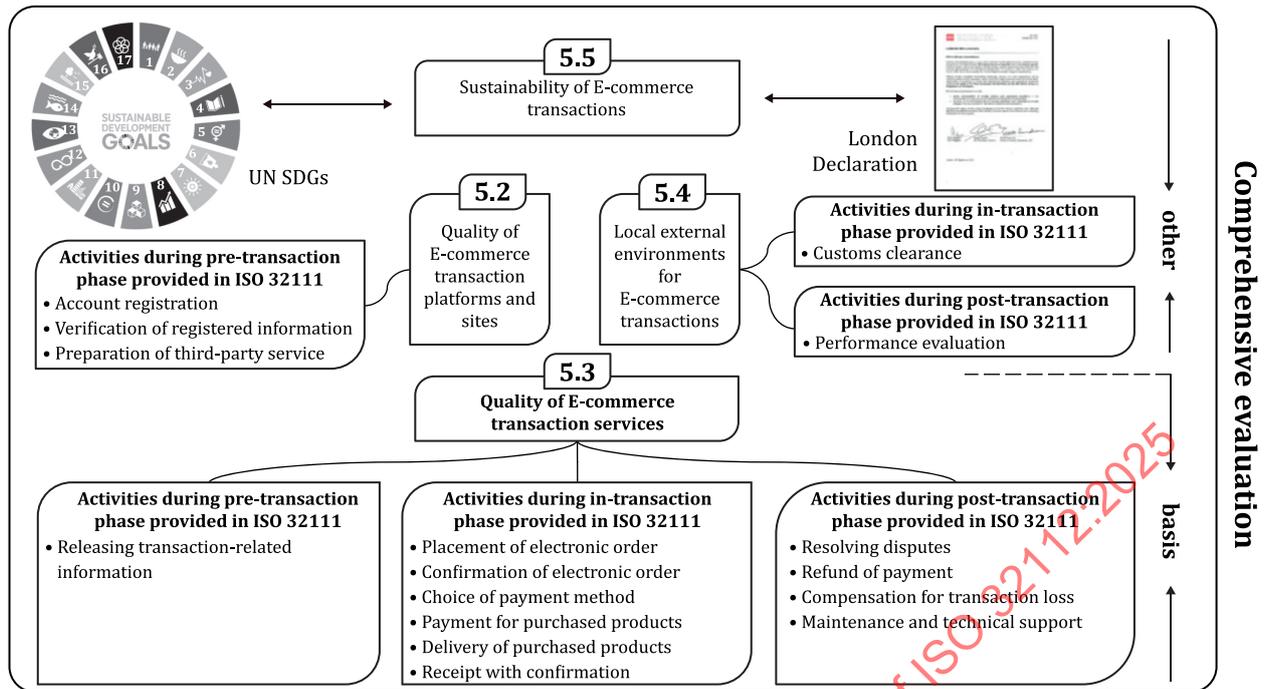
Figure 2 — Relationship between this document and the activities provided in ISO 32111

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, etc., to ensure the security and trustworthiness of online 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, and 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.

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

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-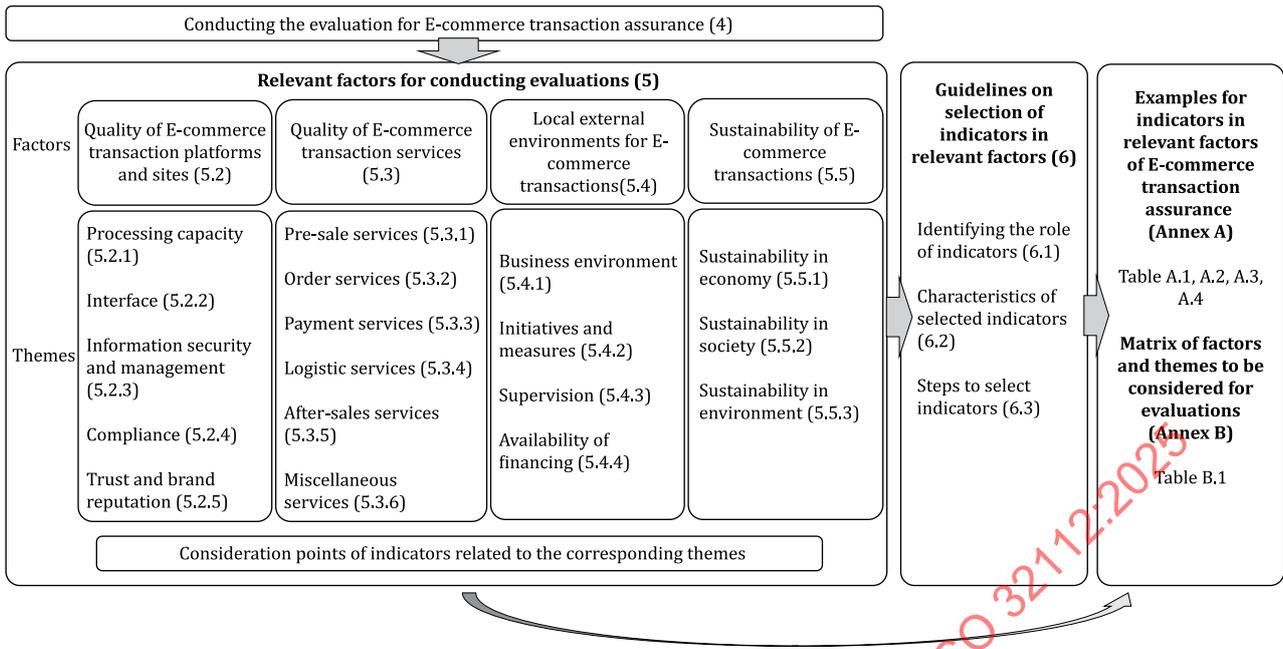commerce transaction evaluation indicators that enables monitoring and improvement of the quality of E-commerce transactions.

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 obtain 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 can prioritize customer service, while a larger one can focus on cost reduction and efficiency. Regardless of the context, it is essential to consider the relevant consideration points when choosing 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.

4.1.2 Why are evaluations useful?

Evaluations play an important role in safeguarding buyers from various risks, including scams, counterfeit goods, misleading advertisements, or poor-quality products, thereby ensuring the safety of their purchases as expected. Evaluations also contribute to enhancing the quality of E-commerce transactions, catering to the diverse needs of different interested parties involved as below:

— A high-quality transaction environment is crucial to ensure the reliability and trustworthiness of buyers and to provide equal opportunities for various sellers, especially small and medium enterprises (SMEs), in various E-commerce transactions;

— The establishment of diversified services can efficiently enhance service quality and facilitate seamless integration with the overall transaction process;

— A safe, secure and efficient E-commerce transaction environment guided by the evaluation results to promote market vitality and social creativity;

— The sustainability concerns related to social and environmental factors in E-commerce transactions, as promoted by the UN and the London Declaration, can be noted by different interested parties.

It is possible to maintain competitiveness and to improve transactions by conducting an evaluation that compares performance with industry benchmarks and best practices. The results of evaluations contribute to the quality and credibility of E-commerce transactions, improving the external environment of E-commerce transactions and supporting decision-making.

4.2 Benefits of conducting evaluations by various interested parties

4.2.1 Who should be involved when conducting evaluations?

Evaluations and improvements based on the evaluation results are useful when establishing a trustworthy E-commerce environment. By gathering objective feedback and providing valuable insights, evaluations benefit all parties involved, including buyers, sellers, E-commerce platform operators, service providers, neutral parties, research institutes and local governments.

This document is beneficial for various interested parties as below:

— E-commerce platform operators and sellers can use it to assess the quality of E-commerce transactions, being enabled to display these measures on their platforms to strengthen trust in a relationship with buyers and mitigate fraud risks.

— Service providers can gain insight about how to improve their services by looking at the evaluation results. For example, payment service providers can measure the safety and security of transactions using relevant indicators. They can also display verified logos or seals on their websites or service pages in line with the evaluation results.

— Neutral parties, such as third-party auditors or certification bodies, can use the indicators framework and methods provided in this document to assess and verify the trustworthiness of E-commerce transactions. They can provide certification or auditing services in due course.

— Research institutes can refer to this document for researching and developing evaluation methods specifically tailored to E-commerce transactions.

— Local governments, aiming to enhance institutional construction and management approaches, can use this document to foster local E-commerce growth and gain valuable insights into the long-term development of the E-commerce sector.

4.2.2 Where and when can the results of evaluations be used?

The evaluations are applicable for various platforms and sites at different stages of the transaction process, i.e. pre-transaction, in-transaction, and post-transaction, in accordance with the definitions in ISO 32111. Evaluations are useful when more efficient and higher quality services are desired. Performance-based

evaluations can be conducted to enhance industry performance. These assessments can provide buyers with information on the performance and reliability of different E-commerce platforms and sites. Social media could provide channels that can be used to share these assessment results, allowing buyers to make well-informed decisions about where to make their purchases.

Additionally, evaluations also contribute to the development of E-commerce-related industries in cities or industry parks. When optimizing the external environment to support the growth of the E-commerce related industries, evaluations can provide valuable insights and recommendations. This further contributes to the formation of consulting services and promotes the development of consulting and certification, ultimately improving the quality of E-commerce transaction platforms and sites, as well as the local external environments.

However, acknowledging the limitations of relying solely on evaluation results is important. For example, E-commerce platform operators can lack transparency and be inclined towards favouring positive evaluations, as sellers can have incentives to maintain a higher rating. Neutral parties should remain unbiased and avoid any attempts at compromises.

It is important to note that tracking buyers for analytical purposes should not occur without their consent. Only necessary information for the transaction process may be tracked, and this should be limited to the absolute minimum. Additionally, buyers should be informed about this tracking.

The interested parties can determine the frequency of evaluations based on their specific needs, including product development and enhancement, user experience design, technical improvements, customer support and training, regulatory authorities, and research. This will enable users to effectively evaluate E-commerce transaction protection.

4.3 Adopting the evaluation approach using indicators

Conducting evaluations by following a step-by-step procedure can be beneficial. Indicators play an essential role in assessing E-commerce transactions by utilizing both qualitative and quantitative methods. The following steps can be included in the procedure:

— clarifying the purposes of evaluation: interested parties can identify specific factors and themes based on their individual needs (see Annex B).

— selecting indicators: interested parties can choose indicators based on the specific consideration points (see Clause 5) in line with the identified factors and themes. An approach for selecting indicators, as described in Clause 6, can be employed.

— collecting data: based on the selected evaluation indicators, the evaluation questionnaire can be designed to conduct a survey for gathering data from various interested parties. Data can also come from the monitoring and operating of E-commerce platforms and sites.

— analysing evaluation results: the values of indicators can be calculated based on the collected data and the evaluation results analysed.

— implementing improvement measures: if applicable, take measures for improvement within a specified timeframe based on the evaluation results and provide feedback to relevant interested parties to track progress on identified improvements.

Interested parties can regularly conduct evaluations, such as annually or quarterly, to assess relevant matters, review improvements, and continuously enhance performance.

5 Relevant factors for conducting evaluations

5.1 General

This clause elaborates the four factors with associated themes and considerations when conducting evaluations of transactions in E-commerce. The factors include the quality of E-commerce transaction platforms and sites, the quality of E-commerce transaction services, the quality of local external

environments for E-commerce transactions, and the sustainability of E-commerce transactions. To some extent, these four factors align with the objectives of the London Declaration, which supports the integration of climate science and facilitates necessary transitions. Each factor contains several themes with respective considerations. Figure 4 illustrates the four factors and 18 themes below. These consideration points can support the selection of indicators when performing evaluations in different contexts. Annex A provides examples of possible indicators that respond to different considerations, themes and factors. Annex B compares the themes among interested parties.
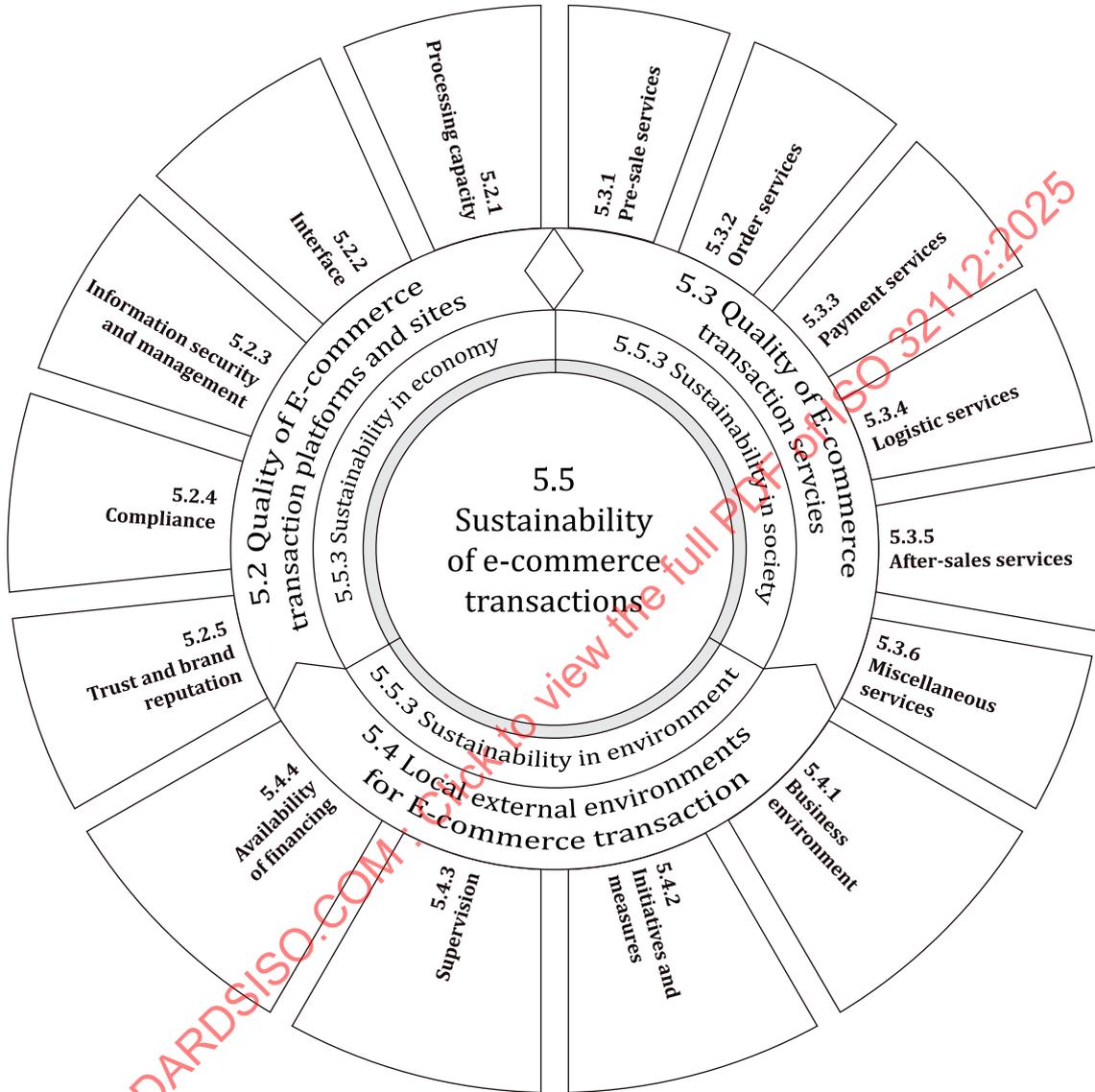
Figure 4 — The structure of factors and themes

5.2 Quality of E-commerce transaction platforms and sites

5.2.1 Processing capacity

E-commerce transaction platforms and sites should have processing capacity that is:

— functional, which means, being able to ensure smooth functioning of foundational E-commerce features, including account registration and sign-up processes, searching on websites and mobile applications specifically designed for sellers;

— customizable, which means, offering flexible solutions that can expand to accommodate increased demand and providing alternative options to suit buyers' personal preferences, including product

customization and personalized recommendations, one-click ordering, receipt with confirmation, and search functionality for e-shops/e-stores. It is crucial to ensure that buyers are not tracked without their knowledge. Safeguarding buyers' personal registered information and privacy is of paramount importance;

— responsive and dynamic, which means, being equipped with the ability to adapt and react effectively, which includes timely releasing of transaction-related information, verification of registered information, prompt response to requests, capacity of maintaining low latency, redundancy and failover, timely updated search functions, and a convenient verification and approval process;

— stable and error-free, which means, being capable of handling a high-frequency trading volume while offering functions such as ease of maintenance and technical support, quick recovery, cache efficiency, load balancing effectiveness, etc.

5.2.2 Interface

E-commerce transaction platforms and sites should have interfaces that are:

— authentic and validated, which means, being able to provide valid and accurate information or feedback and transaction progress information to users, visitors, or third parties associated with an E-commerce platform;

— user-friendly, which means, being designed for easy navigation that enables users to be easily directed to the sellers' entries, online dispute resolution (ODR), maintenance and technical support, searching functionality, user onboarding, and ensuring a consistent clarity in design, typography, readability and multilingual support;

— regularly assessed and maintained, which means, being capable of carrying out quality assessment through client feedback, performance monitoring, and secure testing.

5.2.3 Information security and management measures

E-commerce transaction platforms and sites should have information security and management measures that are:

— well-protected, which means, being capable of ensuring safety and security for transaction databases by means of utilizing transaction databases in a legal and secure manner, physical security measures, database backup-restore, permissions or access control, etc;

— confidential, which means, ensuring the prevention of transaction related-information leakage throughout the entire process of E-commerce transactions to protect user privacy;

— integral, which means, being capable of ensuring that all necessary transaction details are stored and accurate;

— effective and robust, which means, providing operational support, such as timely processing, reliable tracing and permissions or hierarchical access control for transaction-related information.

NOTE   For further information on information security, refer to ISO/IEC 27001.

5.2.4 Compliance

E-commerce transaction platforms and sites should have compliance measures that are:

— integrated and information consolidated, which means, being outfitted with all necessary information, including terms and conditions, software, resolving disputes, connectivity, contact information, and preparation of third-party services;

— transparent and verifiable, which means, capable of being open to the public and easily accessible for query, browsing, and future retrieval;

— well-connected and easily available, which means, being designed for a clear, measurable and understandable platform, helping various sellers or buyers to handle transactions efficiently;

— compatible, which means, being able to ensure that an E-commerce transaction platform complies with all relevant statutory and regulatory requirements in the jurisdictions where the transaction occurs locally;

— reliable, which means, being incorporated with intellectual property protection measures to promptly address any potential intellectual property rights (IPR) infringements.

5.2.5   Trust and brand reputation

E-commerce transaction platforms and sites should cultivate trust and brand reputation that is:

— objective and accurate, which means, being able to assure the true and valid provision of information, such as product descriptions, credit of e-shops/e-stores and reviews by buyers;

— fair, which means, being able to ensure that everyone has equal opportunities to participate in the E-commerce transactions. For example, the reviews of the E-commerce platforms and sites should be accessible to everyone, ensuring equal access for small and medium-sized enterprises, and offering assistance to individuals with disabilities who wish to participate in transactions;

— promptly responding, which means, being capable of addressing issues such as fraudulent behaviours in a timely manner;

— immutable and discoverable, which means, being able to ensure publicly available information related to the E-commerce transactions, such as brand information, logistic information, reviews, and assessment information of e-shops/e-stores, etc., is easy to access and understand. Additionally, any changes made to this information should be transparent and clearly visible to all.

NOTE   For further information on brand, refer to the ISO 20671 series.

5.3   Quality of E-commerce transaction services

5.3.1   Pre-sale services

The quality of pre-sale services in E-commerce transactions should be evaluated in terms of:

— various contact options available, which means, being equipped with a variety of channels, including online, telephone, and personalized consulting services, as well as multi-language support, empowered customer service representatives, and integration of artificial intelligence (AI) systems and chatbots, that efficiently handle any inquiries or concerns related to pre-sales customer services;

— quick and agile, which means, being capable of prioritizing responses to enquiries and time commitments;

— streamlined and accessible, which means, being equipped with multiple channels for obtaining comprehensive product information and lodging complaints, by means of interactive and real-time live room influencer responses, phone, email, online and human or AI-powered customer services, which are easily accessible and efficiently handled;

— well-established, which means, being designed for the placement of electronic orders, incorporation of order tracking, record-keeping, and customer relationship management (CRM) integration to cater to buyers who demand further consultation or confirmation of electronic orders.

5.3.2   Order services

The quality of order services in E-commerce transactions should be evaluated in terms of:

— timely updated, which means, being capable of ensuring the accuracy and completeness of transaction-related information, including descriptions, delivery dates, precise and holistic real-time order tracking, and notices;

— communicable and reachable, which means, being assured of smooth communication between the sellers and buyers, such as real-time interaction between influencers and buyers in live streaming studios;

— interoperable, which means, being designed to ensure seamless and timely processing of orders, such as automatic order confirmation emails, real-time inventory management, mobile-compatible guest checkout options, and fast delivery options, especially for cross-border transactions, up-to-date currency exchanges, custom duties and confirmations of the electronic order. They should also be compatible with pre-sales services (see 5.3.1) and after-sales services (see 5.3.5);

— transaction records documented, which means, assuring that confirmation of electronic orders are safely stored for a specified retention period for accountability and future reference. Additionally, they should provide order history and account integration.

NOTE   For further information on order confirmation, refer to ISO/IEC 18000.

5.3.3   Payment services

The quality of payment services in E-commerce transactions should be evaluated for:

— multiple options available, which means, being able to offer a choice of payment methods for products, such as cash on delivery, online payment, post office remittance, e-banking, and credit cards, etc;

— countable and proactive, which means, being capable of promptly and effectively addressing any queries, ensuring the traceability of payment information in transactions;

— secured and safe, which means, being able to ensure payment information is used and interconnected safely between platforms, sellers, buyers, logistics, and other recipients;

— adaptive and resilient, which means, being equipped to manage transaction risks, payment failures, and frauds against transactions and payments, and to implement measures such as payment verification, instant notification, and reconfirmation to prevent and mitigate issues.

5.3.4   Logistic services

The quality of logistics services in E-commerce transactions should be evaluated for:

— complete and extensive, which means, being able to offer account management, delivery of purchased products, inventory management, innovative warehousing management, and customs clearance to support logistics for all transactions;

— traceable and query-able, which means, being able to track the entire logistics process from dispatch, distribution, and last-mile delivery of purchased products to the final consumer. Real-time tracking and SMS or email notifications can enhance the customer experience;

— confidential, which means, being able to ensure that the logistics details match between sellers and E-commerce platforms whilst protecting the privacy and data security of related participants;

— tailor-made, which means, outfitting with personalized logistics options such as custom packaging, specialized transport, vendor-managed inventory, urban distribution, door-to-door pickup, and other last-mile delivery solutions;

— reversed, which means, being able to offer a reverse logistics system that can manage the return, repair, recycling, or disposal of goods from their final destination to a resource hub, maximizing the value recovery from returns while minimizing waste and environmental impact (see 5.5.3).

5.3.5 After-sales services

The quality of after-sales services in E-commerce transactions should be evaluated for:

— flexible and selective, which means, providing multiple hassle-free and flexible product return or replacement options, such as no-reason-required replacements, trial periods for returns, and a range of alternatives for replacement;

— efficient and refundable, which means, being equipped with various refund options, such as refunds according to contract or agreed rules, and customer retention offers. An E-commerce customer service representative can determine open refund cases;

— customer-centric, which means, addressing complaints and reviews from buyers, being accessible to various unbiased dispute resolution mechanisms, and being provided with feedback to improve customer satisfaction;

— reasonable and insured, which means, being able to offer a variety of compensation for transaction loss and insurance options, including clear guidelines on claims, margin compensation, exemptions, compensation standards, and coverage;

— straightforward and evident, which means, being outfitted with prompt and genial service responses, and clearly defined terms that are easily understood;

— interactive, which means, being capable of facilitating real-time engagement between sellers and buyers with features such as live Q&A sessions, product demonstrations, and instant feedback mechanisms to enhance the shopping experience.

NOTE   For further information on customer satisfaction, refer to ISO 10008.

5.3.6 Miscellaneous services

Miscellaneous services in E-commerce transactions can be evaluated for:

— clear and useful, which means, being able to provide guidance or courses for opening and operating e-shops/e-stores, such as seller success stories or case studies, as well as performance analytics and insights;

— skilled and capacity-enabled, which means, being capable of refining communication and presentation skills, having an in-depth understanding of products, enhancing interactive abilities and demonstrating technical proficiency by influencers in live streaming studios. It also means establishing a comprehensive training system that includes pre-job training, on-the-job training, skills training, seminars, digital marketing workshops, and vendor education programs;

— specialized, which means being able to provide professional support teams in live commerce, such as operating multi-channel networks (MCNs), excelling in product selection, possessing adept video production skills, and managing technical setups involving equipment, lighting, and audio adjustments in live commerce;

— marketing-enabled, which means, being able to offer various marketing approaches, such as E-commerce shopping festivals, promotions, pop-up advertisements, localized marketing campaigns, and digital and offline promotional events for brands.

5.4 Local external environments for E-commerce transactions

5.4.1 Business environment

The local external business environment for E-commerce transactions should be evaluated for:

— collaborative and credible, which means, being able to involve different interested parties in order to exchange information. For example, organizing associations or events to exchange industry information, including transaction policies and technology trends;

— adaptable, which means, being able to adapt to various changes, such as providing training on new technologies, or adjusting the management approach to respond to the changing industry trends;

— resilient, which means, being capable of responding and recovering from crises such as public health emergencies, through measures including rebuilding trust and coordinating supply chains.

5.4.2 Initiatives and measures

Local initiatives and measures for E-commerce transactions should be evaluated regarding for:

— incentivized, which means, being equipped with incentive measures to encourage more participants to engage in the E-commerce industry;

— instructive and facilitative, being designed to create initiatives that promote the growth of cross-border E-commerce and facilitate investment in E-commerce transaction infrastructure;

— impartial and protective, which means, being outfitted with relevant measures to encourage the involvement of start-ups and small- and medium-sized participants in E-commerce transactions.

5.4.3 Supervision

Supervision from local external environments for E-commerce transactions should be evaluated for:

— multifaceted and polycentric, which means, being outfitted with government surveillance, neutral party supervision, or media supervision;

— equitable, which means, being equipped with supervision to ensure that all concerns from sellers and buyers can be addressed in a fair and transparent communication environment;

— swift, which means, being able to ensure that entities being supervised respond swiftly to address concerns and outcomes of E-commerce transactions in a timely manner.

5.4.4 Availability of financing

Availability of financing in local external environments for E-commerce transactions should be evaluated for:

— easily obtainable, which means, offering financing opportunities for small and medium-sized enterprises, including credit, guarantees, financial leases, bonds, insurance, funds, and investments from internal or external sources;

— proactive, which means, being able to offer active and professional financing assistance to ensure that they remain aligned with their business objectives.

5.5 Sustainability of E-commerce transactions

5.5.1 Sustainability in economy

Sustainability in economy related to E-commerce transactions should be evaluated for:

— new-norm empowered, which means, adopting cutting-edge technologies, such as unmanned storage facilities, mobile payments, digital wallets, blockchain-based solutions, non-contact services, unmanned delivery, or artificial intelligence (AI) systems, to improve the buyer experience, increase business efficiency, and reduce costs;

— innovative, which means, being capable of adopting practices like livestreaming, social commerce, and group buying to enhance the buyer's experience and improve transaction volume;

— inclusive, which means, being able to encourage equal opportunities in innovation and entrepreneurship for everyone, which can improve inclusiveness;

— resource-efficient and resilient, which means, ensuring that the processes along the E-commerce supply chains are resource-conscious, including sustainable procurement, selecting sustainable manufacturers, and sustainable sales.

5.5.2 Sustainability in society

Sustainability in society related to E-commerce transactions should be evaluated for:

— engaging and supportive, which means, being capable of empowering multiple sellers, including small and medium-sized enterprises and isolated countryside sellers, to increase employment rate and promote product sales in small and medium-sized cities and rural areas;

— diversified and productive, which means, being designed to increase cross-border exchange opportunities, to provide more interaction methods for cross-border sellers to interact by using social E-commerce platforms, for example, and to improve the diversity of product sales and interactions between sellers and buyers;

— cost-effective and convenient, which means, capable of providing more convenient options that help to alleviate poverty and enable human beings living in far areas or with mobility issues to purchase goods easily.

5.5.3 Sustainability in environment

Sustainability in environment related to E-commerce transactions should be evaluated for:

— environment-friendly, which means, adopting sustainable practices such as reducing products' carbon footprint, using renewable energy sources, minimizing pollution emissions, offering net-zero carbon labels, publishing ESG reports and reducing the usage of harmful chemicals and pollutants;

— reduced, reused and recycled (3R) adopted, which means, encouraging the recycling of packaging materials, reusing electronic devices, reducing waste through reverse logistics (see 5.3.4), and reducing energy consumption through sustainable practices.

NOTE   This sub-clause directly responds to the request of the London Declaration, which is to foster the active consideration of climate science and associated transitions in the development of all new and revised International Standards and publications.

6 Guidelines on selection of indicators in relevant factors

6.1 Identifying the role of indicators

Indicators are useful when measuring the performance of E-commerce transaction activities. They can be used for various purposes or scenarios, such as tracking the performance of a platform over a specific period (e.g., by year or by quarter) to monitor changes over time or comparing with other targets to identify advantages or lag behinds.

Proper indicators can help to:

— encourage the establishment of various evaluations on performance;

— assess quality and efficiency;

— provide quantifiable results;

— communicate at the same level and from the same perspective;

— understand the performance easily;

— enhance the security and trustworthiness within E-commerce transactions;

— identify problems and bottlenecks throughout the transaction processes.

Overall, indicators play a critical role in providing assurance and trust to all parties involved. Indicators can be applicable to various scenarios of E-commerce transactions. They can be used by operators of E-commerce platforms, sellers, payment service providers, or neutral parties to assure E-commerce transactions.

6.2 Characteristics of selected indicators

When selecting indicators, the following characteristics should be considered:

— The composition of all the indicators should represent the relevant factors in a balanced manner.

— Each indicator should reflect the implications and characteristics of evaluated E-commerce transactions, and the selected indicators should be reasonable.

— Each indicator can be clearly defined, and the concept of each indicator should be simple and easy to understand.

— Each indicator should be measurable, and each piece of data should be collectable and retrievable.

— Each indicator should be regularly updated to reflect the current situation, which enables decisions and adjustments to be made effectively.

6.3 Steps to select indicators

The procedure for selecting indicators should include eight steps, as shown in Figure 5:

— Step 1: achieving a comprehensive understanding of the specific context. It is important to map out the characteristics, needs, and challenges of interested parties involved before identifying the purposes of evaluations;

— Step 2: conducting top-level design to determine the evaluation framework for E-commerce transactions;

— Step 3: identifying relevant factors and themes;

— Step 4: analysing consideration points related to indicators;

— Step 5: selecting specific indicators based on the consideration points for the different relevant factors and themes. Examples of selecting indicators are provided in Annex A;

— Step 6: assessing operability of indicators, which includes verifying that they can be clearly defined with a calculation formula, that the data for the indicators can be easily collected, and that the data sources are traceable. If any of the selected indicators fail to meet these criteria, the procedure should return to step 2;

— Step 7: providing definitions and calculation methods for the indicators;

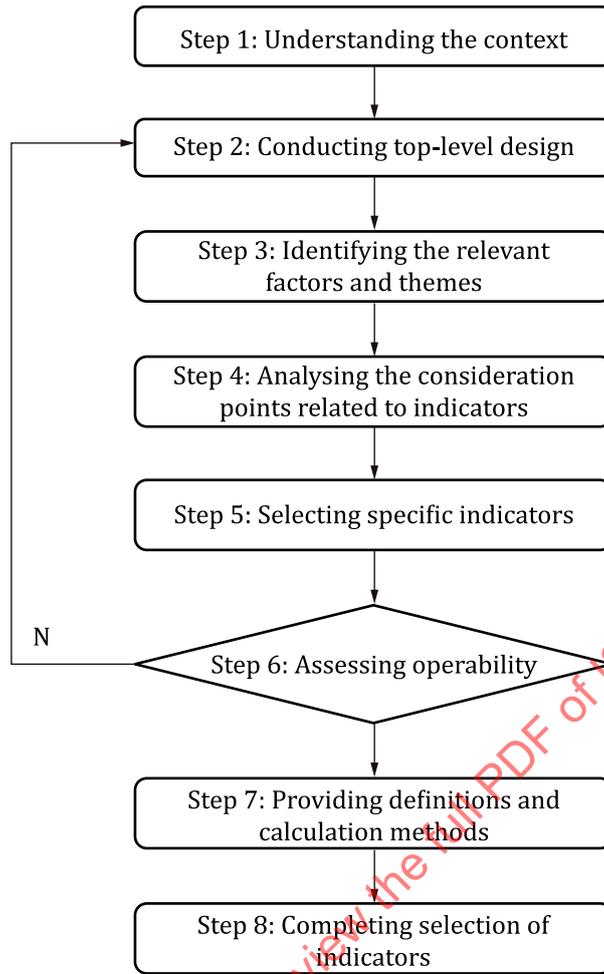— Step 8: completing the selection of indicators.

Figure 5 — Steps to select indicators

Annex A
(informative)

Examples for indicators in relevant factors of E-commerce transaction assurance

Tables A.1 to A.4 provide examples for indicators aligned with the relevant factors, themes, and consideration points. Each table corresponds to a specific factor, which includes several themes and consideration points. See 5.2 to 5.5 for reference on the specific indicators.

These tables reflect the corresponding relationship between themes, consideration points, and indicators in each specific factor. The indicators shown in these tables are only examples. Users can choose indicators in line with their own context or needs. If users do not know how to select indicators, they can use the examples directly.

Table A.1 — Example indicators for quality of E-commerce transaction platforms and sites

Themes	Consideration Points	Indicators (Examples)
5.2.1 Processing capacity	Functional	Load time, mobile responsiveness, and the number of errors or broken links on the webpage
	Customizable	Percentage of customers who utilize personalized options
	Responsive and dynamic	Average time it takes to resolve system maintenance issues
	Stable and error-free	Error rate, peak load capacity
5.2.2 Interface	Authentic and validated	Percentage of sellers or products that have verified badges or seals
	User-friendly	Number of clicks or steps required for users to access customer support or FAQs (frequently asked questions)
	Regularly assessed and maintained	Percentage of users that successfully complete a task and facilitate designers in identifying user experience issues
5.2.3 Information security and management	Well-protected	Number of occurrences where customer data was accessed without proper authorization
	Confidential	The number of occurrences of transaction information is leaked during a specific period of time
	Integral	The percentage of transaction details that are accurately saved or stored
	Effective and robust	Percentage of transactions that comply with access control policies and rules
5.2.4 Compliance	Integrated and information consolidated	Percentage of transactions where all relevant information was provided accurately and clearly
	Transparent and verifiable	Percentage of publicly available transaction data
	Well-connected and easily available	Increasing volumes of users and transactions without significant degradation in performance
	Compatible	Frequency of updates and changes made to the e-platform in response to regulatory changes
	Reliable	Number of infringement complaints received and resolved within a given period of time