STRATEGIC BUSINESS PLAN (SBP)

Clause 2.1.2 of the ISO/IEC Directives, Part 1

ISO/TC 313
Packaging machinery

What is the main market trend?

Process automation and digitization, and evolving regulations related to safety, environmental impact and operational efficiency

What benefits can standards bring?

Increasing workplace safety for machine operators and ensuring health of consumers of packaged food, beverage, cosmetic and parmaceutical products

Who participates in standards development in this topic?

Manufacturers of packing machines, machine users, safety inspectors, regulatory authorities

What are the committee's strategic priorities?

To enhance packaging machinery safety, promote industry-wide best practices, and align with global regulatory and sustainability goals.

What actions will the committee take in the next 3 years?

Increasing workplace safety around packaging machines with highest rates of acccidents, clarifying classification of packaging machinery

Message from the Chair, Mr Andrea Malagoli:

By proactively evaluating technological advancements, market trends, and regulatory changes, we aim to anticipate challenges and seize opportunities to enhance industry practices and strengthen standardization.

About ISO/TC 313

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- Participating members →
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High-profile standards

- First publication expected in 2027→
- Access the full TC 313 work programme →

About ISO

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ISO's role in supporting the SDGs

ISO/TC 313 standards support the following SDGs

Introduction

The evolution of formal strategic planning in ISO Technical Committees is a key measure in supporting the ISO 2030 Strategy vision of making lives easier, safer and better. This document is designed to aid committees and their stakeholders in:

- Identifying benefits and vision of standardization within the committee's field of activity
- Linking benefits to higher strategic imperatives (ISO 2030 Strategy, SDGs, London Declaration Action Plan)
- Prioritizing among projects and allocating resources
- Providing transparency and communicating through a format adapted to three key audiences (general public, TMB and other TCs, and internal TC stakeholders)
- Supporting data-driven continuous improvement, including user perspectives where available
- Maintaining strategic flexibility for different market cadences

International standards embody the essential principles of global openness and transparency, consensus and technical coherence. These are safeguarded through its development in ISO Technical committees, representative of all interested parties, supported by a WTO TBT-compliant public enquiry phase.

International standards are developed through a member-driven market-centric process, where any P- member may submit a proposal for new work.

This document represents an important filter through which new work items should be considered by P-members of a committee and shall be referenced in new work item proposals submitted to the committee per clause 2.3.4 of the ISO/IEC Directives, Part 1.

Beginning in 2026, deviations from this strategy shall be rationalized in new work item proposals.

Meeting global needs

To realize our vision, we must develop consensus-based standards that are relevant and respond to current and future challenges. We must focus on getting the right standards to market at the right time, with the right content and in the right format.

Business environment and future trends

The packaging machinery industry represents a significant economic sector, with major manufacturers and exporters based in Italy, Germany, the USA, and China. However, other countries - including Japan, France, Sweden, Spain, the United Kingdom, Norway, the Netherlands, Russia and India - are also expanding their presence in the global market. An ad hoc group is currently working on a standard for the terminology and classification of packaging machines, which will serve as a reference for the relevant standards for different machine types. The classification includes:

- Filling machines
- Closing machines
- Labelling, decorating and coding machines
- Cleaning, disinfecting, sterilizing, cooling and drying machines
- Fill and seal machines
- Inspecting machines
- Packaging material and product handling machines
- Form fill and seal machines
- Cartoning machines
- Wrapping machines
- Secondary packaging machines
- Palletizers, depalletizers and ancillary machines
- Pallet wrapping machines
- Strapping machines.

ISO/TC 313 is dedicated to developing a comprehensive framework for standards aimed at ensuring the safety of packaging machines, which are extensively used across various industries

	worldwide. These machines present significant hazards that can result in serious injuries to operators. To address these concerns, the Committee actively monitors technological advancements, market dynamics, and regulatory changes. Innovations in automation, digitalization, and smart manufacturing are redefining industry standards, while shifts in the global supply chain and increasing sustainability requirements influence market trends. Moreover, evolving regulations related to safety, environmental impact, and operational efficiency continue to shape the sector. By proactively evaluating these factors, ISO/TC 313 strives to anticipate emerging challenges and take advantage of new opportunities to improve industry practices and drive effective standardization.
 **Benefits of standards and vision for standardization in the field of activity**	In a rapidly evolving business landscape shaped by automation, digitalization, and regulatory requirements, the development of packaging machine safety standards will provide substantial benefits to the industry. The future standards created by ISO/TC 313 will address emerging technological trends and market demands, offering a unified approach to machine safety and performance. By defining clear safety requirements and best practices, these standards will support manufacturers in designing safer, more efficient machinery, thereby reducing workplace injuries and minimizing liability risks. Key benefits of these standards include: • Providing technical solutions to meet safety regulations and legal requirements • Supporting machine manufacturers and safety authorities with a common safety framework • Enhancing the competitive positioning of machine manufacturers • Advancing sustainability and contributing to socio-economic development. For businesses, compliance with standardized safety protocols facilitates market entry, strengthens supply chain reliability, and builds consumer confidence. Regulators and industry stakeholders benefit from a globally consistent framework that ensures uniform safety and quality. Ultimately, these standards will drive innovation, sustainability, and efficiency, enabling the industry to navigate evolving challenges while maintaining the highest safety and performance standards.
 **Reflections on current publications and their market impacts**	Although ISO/TC 313 has yet to publish a standard, its future publications on packaging machine safety are expected to have a significant impact, building on existing safety standards in the machinery sector. The planned standards will benefit a broad range of stakeholders: • Industry players, including SMEs: these standards will enhance product quality, efficiency, and safety while reducing risks and improving competitiveness. Compliance with international standards may also open new market opportunities. • Governments: aligning national regulations with international standards will facilitate regulatory compliance, improve public safety, and promote harmonized legislation. • Conformity assessment bodies: the standards will streamline certification processes, ensuring consistency in safety evaluations and fostering market transparency. • Universities and research institutions: researchers and educators can leverage these standards to drive innovation, improve technical training, and prepare future professionals in the field of packaging machinery safety. Overall, ISO/TC 313 future standards have the potential to support trade, profitability, and sustainability, creating a safer, more competitive, and transparent global market.
 **Sustainability and climate change**	ISO/TC 313 aligns with several Sustainable Development Goals (SDGs) and their specific targets, reinforcing its commitment to safety, innovation, and sustainable industrial practices. The key SDGs it supports include: SDG 3: Good Health and Well-Being • 3.9: Reduce illnesses and deaths caused by hazardous chemicals and pollution -- Unsafe packaging machines can pose health risks, particularly in industries such as food, pharmaceuticals, and cosmetics. • 3.D: Strengthen capacity for risk management of health risks -- Developing standardized safety measures help mitigate risks for machine operators.

SDG 8: Decent Work and Economic Growth

- 8.2 Achieve higher levels of economic productivity through diversification, technological upgrading, and innovation -- Standardization fosters the adoption of advanced technologies and improves manufacturing processes in packaging machinery.
- 8.3 Promote policies that support productive activities, decent job creation, and safe working environments -- Ensuring machine safety reduces workplace injuries, leading to safer and more efficient work environments.
- 8.8: Protect labour rights and promote safe and secure working environments for all workers -- Machine safety standards help minimize workplace hazards and ensure compliance with safety regulations.

SDG 9: Industry, Innovation, and Infrastructure

- 9.2 Promote inclusive and sustainable industrialization and increase industry's share of employment and GDP -- Safer and more efficient packaging machines contribute to industrial growth and global competitiveness.
- 9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and adoption of clean technologies -- Standardized safety practices in packaging machinery support sustainable production and energy-efficient operations.
- 9.5 Enhance scientific research and upgrade industrial technologies -- Encouraging innovation in packaging machinery leads to improved safety, efficiency, and sustainability in manufacturing.

By aligning with these SDGs, ISO/TC 313 plays a crucial role in promoting safer workplaces, driving technological progress, and supporting global sustainability efforts in the packaging machinery sector.

All voices heard

We need to ensure that we attract and retain the best experts and enable everyone to participate. We must listen to all voices, both in the development of standards and when making decisions as an organization.

Stakeholder mixture and engagement

ISO/TC 313 brings together a diverse range of stakeholders, ensuring that the development of packaging machine safety standards is well-informed, balanced, and effective. The main stakeholder groups involved in the standardization program include:

Manufacturers of Packaging Machines

These stakeholders provide essential technical expertise, contributing insights into the design, production, and safety features of packaging machinery. Their participation helps ensure that the standards are both technologically advanced and feasible for implementation in manufacturing.

Users of Packaging Machines

Operators and industries that rely on packaging machines play a critical role in shaping the standards. Their input ensures that safety measures address real-world operational challenges, enhancing usability and efficiency while prioritizing worker safety.

Safety Inspectors and Governmental Bodies

Regulatory authorities and safety inspectors ensure that the standards align with national and international safety regulations. Their involvement helps integrate public safety considerations, ensuring compliance with legal frameworks and fostering safer industrial practices.

Developing country perspectives

For developing nations, the adoption of international packaging machinery standards provides several advantages, including:

- Improved Market Access: compliance with globally recognized standards facilitates entry into international markets, making it easier for manufacturers to compete on a larger scale.
- Enhanced Product Quality: standardization promotes consistent manufacturing practices, leading to higher-quality and more reliable packaging machines.
- Alignment with Global Regulations: adhering to international safety and performance standards helps manufacturers meet regulatory requirements, reducing trade barriers and ensuring product acceptance in different regions.

By fostering a harmonized approach to packaging machine safety and performance, standardization supports industrial growth, competitiveness, and economic development while ensuring safer and more efficient machinery worldwide.

ISO Standards used everywhere

To encourage the widespread use of ISO standards and attract experts to the development process, we must clearly demonstrate the benefits of using ISO standards.

Coordination and cohesion

ISO/TC 313 actively works alongside other ISO committees and organizations to ensure its standards are aligned with global safety and technological advancements. Key collaborations include:

- ISO/TC 199 – Safety of Machinery: coordination with this Committee ensures consistency in safety principles and best practices across the machinery sector.
- IEC (International Electrotechnical Commission): collaboration with IEC helps integrate electrical and electronic safety considerations into packaging machine standards.
- Cybersecurity and Emerging Standards: as digital security becomes increasingly relevant, ISO/TC 313 engages with emerging cybersecurity standards to address risks related to automation and smart manufacturing.

To strengthen its role in addressing future challenges, ISO/TC 313 is exploring the following opportunities for further integration:

- Expand liaisons with cybersecurity-focused Committees and other relevant Groups.
- Establish new joint working groups (JWGs) to develop guidelines on digital security and other emerging risks.
- Enhance cross-sector collaboration to prevent duplication of work and ensure a comprehensive approach to packaging machine safety.

National adoption perspectives

National adoptions will be reported after the first ISO/TC 313 standards are published.

Conformity assessment	The standards developed by ISO/TC 313 will include test specifications, reproducible test requirements, and test methods to ensure the proper application of safety features in packaging machines. These elements will help verify compliance with safety measures throughout the machine's entire lifecycle, from design to decommissioning. The standards will establish clear guidelines for testing and verifying that safety measures are correctly implemented and maintained over time. Instructional requirements will be incorporated to ensure that safety protocols are followed at every stage, from installation and operation to maintenance and disposal.

ISO TC 313 Strategic Objectives

Objectives	Responsible SC or WG (if applicable)	Proposed actions	Priority (HIGH, MEDIUM, LOW)
To establish standardized safety requirements for packaging machinery, ensuring compliance with global regulatory frameworks and reducing workplace accidents.	WG 1	To publish ISO/CD 24158-1 as a foundational standard on general safety requirements for packaging machinery	HIGH
To harmonize terminology and classification of packaging machines, facilitating consistency across international markets and regulatory bodies.	AHG 1	To develop a standard on "Terminology and Classification of Packaging Machines", ensuring a common framework for industry stakeholders.	HIGH
To develop test specifications and conformity assessment criteria, enabling reproducible testing and verification of safety measures throughout a machine's lifecycle.			LOW
To promote the adoption of clean technologies and energy-efficient practices, reducing the environmental footprint of packaging machinery.			LOW
To enhance stakeholder engagement, ensuring active participation from manufacturers, regulatory bodies, machine operators, and researchers in the standardization process.			HIGH
To collaborate with other ISO Committees and industry organizations, integrating cybersecurity,			MEDIUM

digitalization, and smart manufacturing principles into packaging machine safety standards.			
To support market access for developing economies, aligning packaging machine safety standards with global trade requirements to facilitate industrial growth.			HIGH