Guide

Guideline for implementing sustainable Plastic Packaging EPR

This guideline is part of the publication Adapting to the EU Waste Framework Directive and Extended Producer Responsibility: A Practical Guide for Producers, Importers and Distributors in the Western Balkans, which presents data and recommendations on adapting to the Waste Framework Directive (WFD) and Extended Producer Responsibility (EPR) for distributors, importers and manufacturers producing packaged goods in the Western Balkans.

The first part gives an overview over the **steps businesses can take to prepare for EPR** obligations.

The second part describes **steps for establishing a Producer Responsibility Organisation** (PRO), a company or entity established by manufacturers to fulfil their legal obligations related to the collection, recycling, and disposal of waste generated by their products.

Part I

How to get ready for EPR: Steps for businesses

This section provides a practical roadmap for businesses in the Western Balkans to understand and prepare for EPR requirements related to plastic packaging. It supports companies in economies where EPR systems are already established (Bosnia and Herzegovina, North Macedonia, and Serbia) and provides actionable steps for businesses in Albania, Montenegro, and Kosovo, where EPR systems are still in the early phases of development. By engaging early, companies can reduce future compliance risks, align with EU sustainability goals, and gain a competitive edge.

Even if EPR compliance is not required yet, starting now with packaging audits, supplier assessments, and material tracking can save significant time and cost when legislation is introduced. Early movers will also benefit from reputational gains and alignment with future market access conditions in the EU.

📌 Companies that prepare early for EPR are not just meeting future legal requirements - they are gaining a competitive edge in markets where green standards are increasingly valued.

Understanding your obligations

Know the Basics
Understand what EPR entails and how it applies to different types of packaging (primary, secondary, tertiary). Clarify how your business fits into definitions such as "producer," "importer," "distributor," or "retailer." Responsibilities differ based on business role and material type (plastic, metal, glass, paperboard, etc.).

Determine your role – Supply Chain Mapping
Identify where your business sits in the packaging supply chain. Importers, for example, may have different obligations than retailers. This step is relevant even if formal EPR systems are not yet operational in your area.

Are you a distributor, retailer, importer, manufacturer, or a combination of these? Each role carries distinct responsibilities:

- Importers must ensure compliance for foreign-sourced packaging.
- Retailers may have obligations related to consumer communication or take-back programs.

Check for exemptions – Eligibility and Reporting
Understand whether your business qualifies for exemptions based on business type, production volume, or revenue. Even if your company qualifies for an exemption:

- Keep track of packing materials and sales volumes, as exemption criteria may change.
- Be aware that some exempt businesses still have reporting obligations and monitoring.

By staying informed, your company can adapt to evolving EPR regulations and maintain compliance.

Engaging with the Producer Responsibility Organisations

Identify the PRO Geographic Coverage and Types of Waste

In economies where EPR systems are active, research which Producer Responsibility Organisations (PROs) cover your materials and region. Some PROs focus on plastics or paper, others on a wider range of materials. In places preparing for EPR, stay informed about which entities may take on these roles.

Register with the PRO

If you decide to register with a PRO, provide accurate and detailed information about:

- Your products and sales quantities.
- The type, weight, and composition of your packaging materials
- A direct contact for reporting, updates, and discussions.

For future systems, set up internal processes to enable smooth onboarding.

Understand Fee Structures

Familiarize yourself with how fees are calculated. Many systems use eco-modulation, a pricing model where fees are adjusted based on the environmental impact of your packaging. Factor these costs into your product pricing and budget planning to align with sustainability goals.

Participate in Consultations

Take an active role in industry discussions by joining working groups, workshops, and consultations organised by your Chamber of Commerce, PRO and other institutions. These platforms are key for voicing business concerns, shaping fair fee structures, and developing industry best practices.

Eco-modulation is a regulatory approach designed to promote sustainable production practices. It penalizes the use of what's considered environmentally harmful materials, such as single-use plastics, while incentivizing the use of materials that minimise environmental impacts by keeping recyclable resources in circulation. This system aligns environmental goals with economic incentives, encouraging responsible choices in product design and packaging.

This approach can be applied using various criteria, including recyclability, the percentage of recycled content and the environmental impact of production processes. The aim is to support a circular economy where resources are reused, waste is minimised, and the overall environmental footprint is reduced.

Optimizing Packaging and Materials for Sustainable Design

Minimise Packaging
Reduce packaging at the source by avoiding over-packaging, adopting concentrated formats, or exploring reusable packaging. Conduct packaging audits to identify areas for package reduction.

Use Sustainable Materials
Prioritize materials with minimal environmental impact throughout their lifecycle. Consider factors such as biodegradability, recycled content, recyclability, and the use of renewable resources.

Increase Recycled Content
Set goals to increase post-consumer recycled materials into your packaging. Work closely with suppliers to source high-quality recycled materials that that meet safety and performance standards.

Design for Recyclability
Optimize packaging for easy recycling. Avoid materials or design elements that disrupt recycling processes, such as multi-material packaging, dark colours, or certain adhesives. Use clear labelling to help consumers dispose and recycle properly.

Reduce Toxic Substances
Minimise or eliminate hazardous substances in your packaging. Implement chemical management practices and explore safer alternatives. Ensure compliance with all regulations regarding restricted materials in packaging.

Reporting and Compliance – Data Management and Auditing

Implement Data Collection Systems for Traceability
Track the packaging by weight and type of covered materials that you place on the market. Keep detailed records of your supply chain data, sales volumes, and packaging materials. Ensure full traceability of packaging throughout the supply chain from production to disposal.

Ensure Transparency and Audit Readiness
Prepare for independent audits by keeping your records well organised and up to date. Audits are not just a legal requirement. They can also be opportunities to enhance transparency and improve processes.

Exploring Alternative Solutions

Consider Alternative Collection Programs
Collaborate with manufacturers or industry groups to explore or develop alternative collection programs for specific material streams.

Innovate and Collaborate
Seek out innovative packaging solutions and partner with other companies, CSOs, material recovery centres, and research institutions to develop sustainable practices. Explore circular economy models that prioritize closed-loop systems, reuse, and refillable packaging.

Staying Informed – Continuous Learning and Engagement

Monitor Regulatory Developments
Stay up to date changes in EPR laws and regulations in your area. Subscribe to industry newsletters and legal updates and maintain regular communication with your business chamber or PRO. Establish internal processes to ensure ongoing compliance with all relevant regulations.

Seek Expert Advice – Environmental Consultants and Sustainability Specialists
Consider working with EPR and sustainability consultants. They can help optimise packaging, identify cost-effective strategies for sustainable business practices and ensure regulatory compliance, helping to reduce financial burdens while enhancing sustainability efforts.

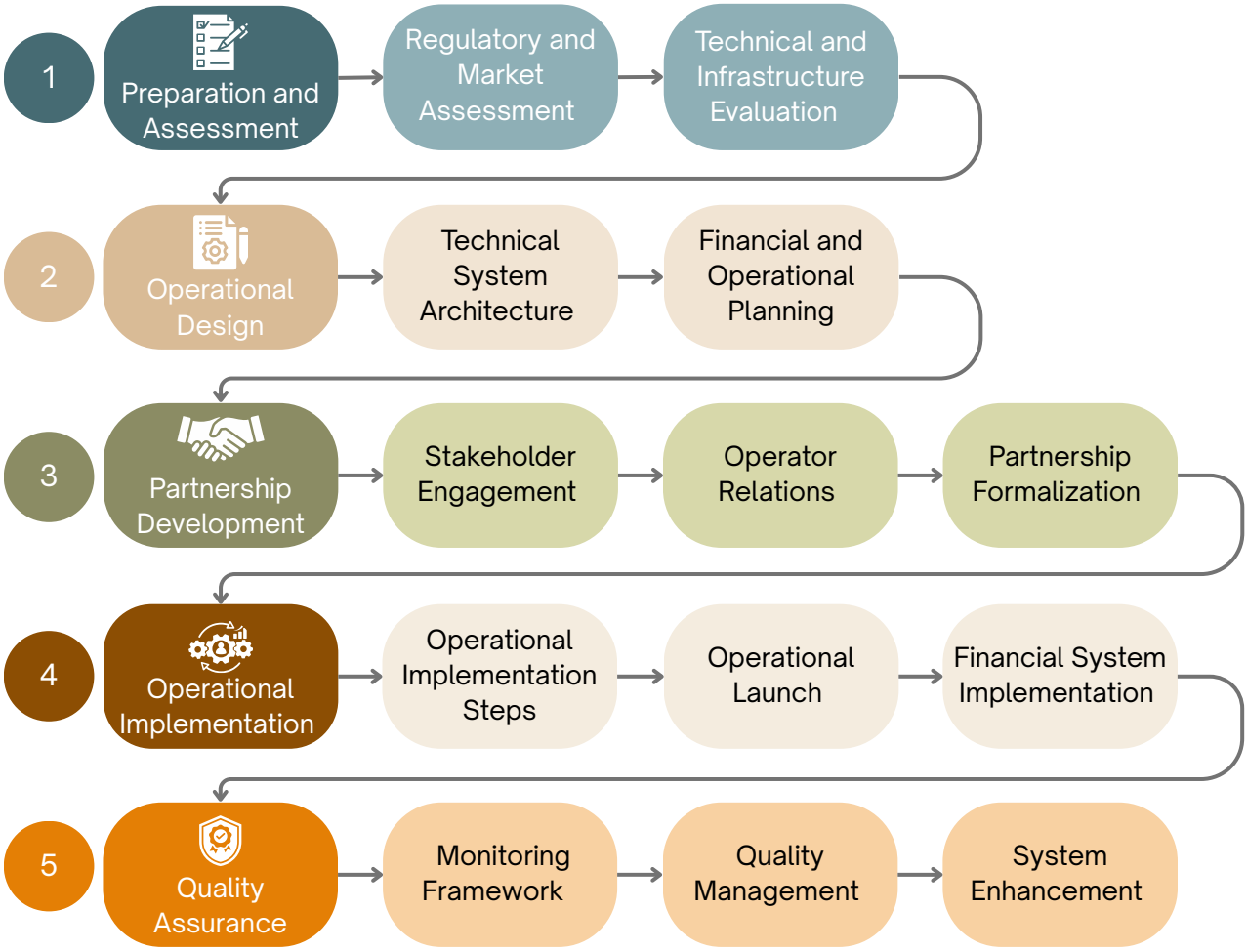
Part II

Establishing a successful PRO

This section provides guidance on how to establish an effective Producer Responsibility Organisation (PRO) in the context of the Western Balkans, where the implementation of EPR varies widely. While Bosnia and Herzegovina, North Macedonia and Serbia already have functioning EPR systems with active PROs, Albania, Montenegro, and Kosovo are still in the early stages of developing legal frameworks and operational models.

Target Audience: This chapter is aimed at government authorities, chambers of commerce, environmental NGOs, industry associations, and private-sector actors involved in shaping or supporting the formation of PROs, particularly in settings where EPR systems are emerging or undergoing reform.

The roadmap below suggests five stages for establishing or strengthening a PRO, tailored to different levels of market maturity.



1 Preparation and Assessment

A well-structured preparation and assessment phase lays the foundation for for the successful development of a PRO in the Western Balkans. It provides a structured approach to accommodate both emerging and established EPR systems, ensuring that all relevant actors are aligned and equipped for the stages that follow.

Regulatory and Market Assessment

Lead Responsibility:
Business Initiative Group, leading companies in the packaging sector

Analysis of current EPR regulations and requirements

The first step in establishing a PRO is understanding the legal landscape. Leading companies in the packaging sector should conduct a detailed review of both national and EU-level EPR regulations. This includes identifying

- compliance obligations,
- deadlines,
- financial responsibilities,
- reporting requirements,
- technological standards.

Businesses should also pay close attention to new or upcoming regulations that may influence their operations in the near future. Studying these systems can help businesses understand what works well, where challenges may arise, and how different company sizes and sectors have successfully adapted. This knowledge can reduce risks, shorten implementation timelines and support smarter planning.

Market volume and material flow assessment

Effective planning for an EPR system requires a solid understanding of package material flows. Companies need to evaluate the types and quantities of packaging they place on the market and track how these materials move through the supply chain - from production or import to disposal. Such information is essential for estimating system costs, determining infrastructure needs, and setting realistic goals. It also establishes a baseline for measuring the future performance of the PRO and evaluating its environmental impact.

Technical and Infrastructure Evaluation

Lead Responsibility: Technical committee of business representatives

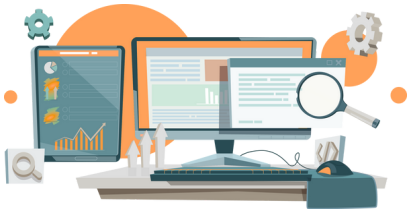
Assessment of current waste management arrangements

Technical committees should thoroughly assess each member company's waste management system. This includes analyzing collection methods, sorting procedures, and company-specific disposal strategies. The assessment should quantify different types of packaging materials, identify existing recycling agreements, and map out waste pathways in detail. Establishing this baseline will help pinpoint areas that require improvement to ensure compliance with EPR regulations.

Data management systems review

An effective data management system is essential to the successful implementation of EPR. Businesses must assess their ability to track packaging materials, monitor waste flows, and provide compliance reports. This review should examine software systems, data collection methods, and reporting procedures.

The goal is to identify weaknesses in the current systems and determine necessary improvements or new solutions to meet EPR reporting requirements and support informed decision-making.



Governance structure development

A well-defined governance framework is essential for long-term success. Founding members should establish clear roles and responsibilities, transparent decision-making processes, and structured mechanisms for member input and representation. The governance model must include appropriate checks and balances to ensure accountability and transparency while maintaining operational efficiency. Key components include committee structures, voting rights, board membership, and dispute resolution procedures. The framework should be adaptable to support growth while remaining stable and effective.

Buildings relationships with PROs

Establishing strong partnerships with existing PROs in North Macedonia, Bosnia and Herzegovina and Serbia provides valuable isnights and opportunities for collaboration. This requires ongoing communication, knowledge sharing and, where appropriate, formal agreements and partnerships. Learning from experienced PROs can accelerate system development and help avoid common pitfalls. Additionally, regional coordination through these partnerships can enhance operational efficiency and create cost-saving synergies. Regular meetings, joint initiatives, and shared learning activities will further strengthen these relationships for mutal benefit.

2 Operational Design

Technical System Architecture

Lead Responsibility: Technical Committee of Business Representatives

Establishing a robust technical infrastructure is the foundation of effective EPR operations. This involves developing reporting systems, tracking tools, and data management platforms to support key functions such as producer registration, fee calculation, waste collection tracking and material flow monitoring. The system architecture must be capable of expending with operational growth, secure, ensuring data protection and compliance and compatible with existing corporate systems. The system architecture needs to be strong enough to manage intricate tasks while still being adaptable to change as needs and technology do.

Collection and processing infrastructure

This phase focuses on developing the operational framework and physical infrastructure needed for efficient waste collection and processing. Key tasks include:

- Establishing transport routes for optimal waste movement.
- Identifying sorting and processing facilities to maximize efficiency.
- Mapping collection points based on factors such as population density, geographic spread, and existing waste management capacity.

Collection point networks and accessibility

A network of collection points must be designed for both user convenience and operational efficiency. A thorough assessment of population density, business hubs, and existing waste infrastructure helps determine optimal locations. Key considerations include:

- Vehicle accessibility and efficient routing.
- Proximity between collection points for better coverage.
- Space allocation for different container types while maintaining fair access for all users.

Priority should be given to high-traffic areas such as shopping malls, business districts, and residential complexes. Additional collection points should be installed to address any service gaps. Special attention must be given to accessibility for elderly and disabled individuals, ensuring inclusive and equitable waste disposal solutions.

Transportation logistics and routing

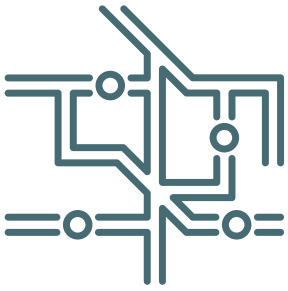
Effective transportation networks are critical for successful implementation of EPR systems. Route planning must be optimized to reduce costs while maintaining reliable service levels. To ensure timely collection from all locations, routes should maximize vehicle utilisation, minimise environmental impact, and reduce fuel consumption.

This requires analyzing traffic patterns, seasonal variations in waste volumes and vehicle capacity constraints to develop flexible routing solutions. Additionally, contingency plans should be in place to address potential disruptions such as equipment failures, traffic congestion, or unexpected surges in waste collection.

Sorting facility requirements and locations

Sorting facilities are essential nodes in the EPR infrastructure, requiring careful consideration of their location, technological needs, and capacity. These facilities should be strategically placed to minimise transportation distances while ensuring efficient access to major roadways and end markets for recovered materials.

Facility design should incorporate up-to date sorting technologies that optimize material recovery rates, account for current waste volumes and allow for future expansion. The layout must provide sufficient space for receiving areas, processing lines, sorted material storage, and staff facilities, while maintaining flexibility to adapt to evolving material streams and quality standards.



Financial and Operational Planning

Lead Responsibility: Finance and Business Engineering Committee

Business model and financial projections development

Developing a comprehensive business model and financial projections requires detailed financial modeling that considers various variables and scenarios. Over the years, the committee must generate accurate estimates covering capital needs, operating expenses, and income streams. To ensure robustness under different circumstances, these estimates should include sensitivity testing, growth scenarios, and market analysis. The business plan must strike a balance between financial viability and environmental efficacy, factoring in both short-term implementation costs and long-term operational needs. During the initial implementation phase, when expenditures may be high and revenue streams are still growing, special attention should be given to cash flow management.

Membership fee structure calculation

Designing an equitable and sustainable fee structure is crucial for the system's success. The committee must consider several factors, including package volumes, material types, recycling costs, and market conditions when determining the fee structure. Eco-modulation concepts should be integrated into the fee structure to ensure sufficient revenue for system operations while offering financial incentives for environment friendly packaging choices. The committee must also assess the competitive impact of fees on various business sizes and industries. A well-structured system that maintains equity and ensures long-term viability can be established. The fee structure should include regular review procedures to allow adjustments based on system performance and market developments.

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Infrastructure investment planning

To develop comprehensive investment plans for essential infrastructure, a detailed assessment of current capabilities and future needs is necessary. The planning committee must develop innovative investment strategies that balance immediate operational requirements with long-term system growth. These plans should include precise cost estimates, scheduling considerations, and funding sources for key infrastructure components such as data management platforms, sorting facilities, and collection systems. The investment strategy should also explore opportunities to leverage existing local government infrastructure and potential partnerships to optimize capital allocation. Establishing clear and fair cost-sharing agreements requires careful consideration of equitable distribution of financial burdens among stakeholders.

3 Partnership Development

Stakeholder Engagement

Lead Responsibility: Business partners from initiating companies

Industry engagement and stakeholder collaboration

Successful EPR implementation requires proactive engagement with industry associations, chambers of commerce and other key stakeholders. These relationships offer valuable market insights, knowledge-sharing opportunities and platforms for collaborative action. Regular participation in industry forums and working groups helps businesses stay informed about best practices, regulatory developments and emerging challenges. This collaborative approach also strengthens the collective voice of the business community in shaping EPR policies and implementing strategies.

Identification and engagement of potential members

Identifying and interacting with prospective member businesses requires a well-planned strategy that incorporates marketing and communication efforts. Priority should be given to businesses that generate significant amount of packaging waste or already have environmental obligations. This process involves:

- Conducting market research to identify key stakeholders across industries such as manufacturing and retail.
- Developing industry-specific engagement strategies.
- Increasing potential members' interest and commitment through personal contact, educational seminars and clear demonstration of benefits to increase interest and commitment.

Businesses already implementing sustainable practices should receive special attention, as they may serve as early adopters and advocates for the EPR system.

Business membership criteria and requirements

Strong partnerships with waste management companies are critical to the success of EPR. To establish these partnerships, detailed proposals should be developed outlining specific roles, responsibilities, and mutual benefits. These proposals should cover financial agreements, performance metrics, service standards and operational requirements.

A balanced approach that accounts for both current capabilities and future advancements is essential.

Operator Relations

Waste management partnership development

Developing strong partnerships with waste management companies and municipalities requires a strategic approach focused on operational efficacy and long-term sustainability. The process should begin with a comprehensive assessment of the region's waste management landscape, identifying operators with established collection networks, adequate processing capacity and a proven track record of successful operations.

Key operational factors, such as collection coverage, material handling guidelines, quality standards and reporting requirements, must be clearly defined. Establishing transparent communication channels and structured engagement procedures will enhance collaboration while maintaining operational flexibility.

Service agreement framework

The relationship between the EPR system and waste management operators must be governed by a clear, comprehensive, and legally binding service agreement. This framework should define critical aspects, including:

- Service scope
- Performance standards
- Pricing mechanisms
- Quality requirements
- Reporting obligations

Special attention should be given to monitoring systems, performance indicators, and procedures for resolving operational challenges. To ensure system growth while maintaining operational stability, the agreement structure should incorporate flexible provisions on waste volume. Elements include service specifications, key performance indicators, payment conditions and dispute resolution protocols.

Operational integration planning

Effective operational integration requires meticulous planning to ensure seamless coordination between waste management operators and the EPR system. The integration strategy should encompass all operational touchpoints, including collection scheduling, material handling protocols, data exchange mechanisms, and quality control procedures.

- Key components of the planning process include:
- Establishing clear procedures
- Specifying clear lines of communication between stakeholders
- Developing systems to manage daily operations efficiently
- Addressing short-term operational needs and long-term system development requirements.
- Providing detailed schedules for phased integration.
- Incorporating measures for process optimisation, staff training and system testing.

Partnership framework documentation

The partnership framework documentation serves as a foundation for managing collaborative relationships within the EPR system. It outlines operational procedures, decision-making procedures, roles and responsibilities, and the organisational structure of the partnership.

The documentation should clearly define membership categories, participation prerequisites, and compliance obligations. Essential components include operational guidelines, communication protocols, responsibility matrices, and organisational charts. To maintain flexibility while ensuring operational stability, it must also specify procedures for framework updates and modifications. To guarantee the long-term viability of the partnerships, special emphasis should be given to recording risk allocation, dispute resolution protocols, and partnership evolution methods.

A well-structured partner onboarding process is critical to integrating new partners into the EPR system while maintaining operational continuity. This process should include comprehensive orientation programs, technical training, system access setup, and operational integration planning. Key elements of onboarding include:

- Performance verification procedures
- Training requirements and role assignments
- Detailed onboarding timelines
- System integration milestones and operational readiness assessment

Requirements for documentation, methods for confirming compliance, and processes for performance monitoring are crucial elements for a successful PRO. A well-designed feedback system ensures ongoing process improvements while maintaining consistent engagement standards.

4 Operational Implementation

System deployment and testing

System deployment and testing involve setting up the necessary infrastructure, including software platforms, data management systems, and operational frameworks, to support implementation. This phase begins with configuring system parameters, defining workflows, and assigning user roles before proceeding with rigorous testing. Testing includes functionality validation, stress testing, and real-world simulations to identify potential issues and optimize performance. Any detected bugs or inefficiencies are addressed before full-scale deployment to ensure reliability and compliance with industry standards.

Integration activation

Integration activation ensures seamless connectivity between system components, enabling interoperability and efficient data exchange. This process links important operational modules such as financial tracking, reporting mechanisms, and logistics management to create a unified workflow.

Key integrations include API connections with external databases, synchronization with regulatory reporting platforms, and automated data-sharing with waste management operators. A well-executed integration reduces manual interventions, minimises errors, and improves overall efficiency.

User training and onboarding

User training and onboarding are critical for a smooth transition and optimal system utilisation. This phase includes structured training sessions, comprehensive user manuals, and hands-on demonstrations tailored to different stakeholder groups.

Key training components cover:

- System navigation
- Reporting procedures
- Compliance requirements
- Troubleshooting mechanisms

To further support users, onboarding strategies may include pilot programs and dedicated support hotlines, providing guidance and assistance during the transition into the new system.

Operational Launch

Collection network activation

The collection network activation phase marks the final step in setting up designated collection points for efficient waste collection. Successful implementation requires close coordination with municipalities, waste management operators, and local businesses to streamline the collection process. To ensure smooth operations, clear guidelines must be provided to all stakeholders, covering waste sorting, drop-off procedures, and collection frequency.

Transportation system implementation

Efficient transportation is crucial for moving collected materials from collection points to sorting and processing facilities. This phase involves designing optimized routes, scheduling pickups, and coordinating with waste transport operators to minimize costs and environmental impact. Key factors such as vehicle capacity, fuel efficiency, and regulatory requirements must be carefully considered to ensure smooth logistics. Implementing real-time tracking systems can further enhance fleet management, ensuring smooth logistics and operational efficiency.

Initial operations monitoring

Initial operations monitoring evaluates the performance of collection and transportation systems to identify potential inefficiencies and opportunities for improvement. This process involves tracking key performance indicators such as collection rates, transportation efficiency, and system compliance with regulatory requirements. Regular audits, stakeholder feedback, and data analysis play a crucial role in refining processes and overcoming operational challenges.

Financial System Implementation

Collection network activation

To activate fee collection effectively, the PRO must establish clear and regular communication with stakeholders. This includes outlining fee structures, deadlines, and compliance obligations. Automated invoicing and digital payment options streamline the process, reducing administrative work. Establishing transparent mechanisms for accurate fee calculations helps prevent disputes, builds trust and secures necessary funds for system operations.

Payment system launch

Launching a well-executed payment system ensures collected fees are processed efficiently and allocated appropriately for operations, infrastructure, and regulatory compliance. This step involves integrating secure transaction platforms, establishing financial controls, and defining procedures for handling payments, refunds, and penalties for non-compliance.

Initial financial tracking setup

Setting up financial tracking ensures robust monitoring of revenue, expenses, and overall financial performance. This process involves implementing accounting frameworks, data reporting tools, and compliance checks to maintain financial transparency and accountability. Regular audits and performance evaluations help assess fund utilisation, cost-effectiveness, and opportunities for financial optimization. A well-structured financial tracking system supports operational sustainability, enabling continuous improvements and long-term success.

5 Quality Assurance

Monitoring Framework

At this stage, the PRO establishes a standardized system to track and assess their compliance with EPR regulations. This framework integrates data from various sources, including waste collection points, recycling facilities, and supply chain partners, ensuring real-time monitoring of product lifecycles and environmental impact. By maintaining a centralized system, the PRO can efficiently oversee its sustainability initiatives and identify areas for improvement.

Compliance Verification

Once the monitoring framework is in place, the PRO must ensure that its processes align with legal and regulatory requirements. This involves conducting audits, verifying documentation, and collaborating with external stakeholders such as regulatory agencies and municipalities. Compliance verification helps PROs avoid penalties, maintain credibility, and demonstrate their commitment to environmental responsibility.

Performance Analysis and Reporting

The PRO analyzes collected data to measure recycling rates, waste reduction efforts, and overall environmental impact. These insights are compiled into reports for regulatory bodies, members, and the public. This reporting helps organisations refine their strategies, improve sustainability performance, and enhance transparency in their environmental commitments.

Quality Management

A multilayered quality control system should be implemented to ensure consistent performance across the EPR ecosystem. This framework encompasses operational standards, material processing criteria, and data management while integrating advanced technologies such as tracking systems and sensor-based analysis. The system goes beyond mere compliance, aiming to drive continuous improvement.

The PRO must establish a systematic and comprehensive audit approach to verify compliance and identify opportunities for improvement. The program should include annual comprehensive audits, quarterly performance reviews, and continuous monitoring. The audit process should be designed to generate actionable insights and promote transparency across all members.

Additionally, the PRO should establish a standardized framework for classifying and testing packaging materials. This approach focuses on developing a flexible yet precise system to categorize materials, assesses their recyclability, and define contamination thresholds. The goal is to create a dynamic classification methodology that can adapt to technological advances while maintaining consistent standards across different markets.

System Enhancement

Continuous Improvement Process

In this phase, the PRO should establish a dynamic performance evaluation system that goes beyond traditional metrics. The approach involves developing advanced key performance indicators, conducting regular system reviews, and implementing an adaptive management strategy.
The goal is to build a flexible framework that supports iterative refinement, evidence-based decision-making, and continuous learning. The PRO should actively engage in knowledge sharing platforms that promote collaborative learning and capacity building.
This approach ensures preparedness and keeps the organisation up to date with innovate methods and emerging developments in waste managment, while also fostering cross-border collaboration.