

**Plastiks x UNDP Armenia****Comprehensive Go-to-Market Strategy**

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## 1. Introduction

### Introduction: About Plastiks

Plastiks, a green technology initiative developed by Nozama Tech Ltd., enables verifiable environmental and social impact through an accessible, Web2-friendly platform powered by blockchain. Plastiks integrates verified documentation, digital certification, and real-time dashboards to allow organizations—governments, companies, recyclers, and NGOs—to transparently demonstrate their ESG contributions.

The platform generates impact-linked digital certificates (NFTs) based on validated recovery and recycling of plastic waste, anchoring data to the blockchain for traceability, auditability, and monetization through Plastic Credits and Carbon Credits.

Plastiks is currently migrating to the Cardano blockchain, aligning with values of sustainability, scalability, and decentralized governance. Cardano's proof-of-stake architecture provides a low-energy, secure, and cost-efficient infrastructure well-suited for ESG use cases. The integration is supported by Emurgo, a founding entity of the Cardano ecosystem.

## 2. Executive Summary

Plastiks proposes a pilot project in collaboration with UNDP Armenia to implement a blockchain-based waste traceability and impact certification system in two rural Armenian communities of 20,000 residents each, specifically in Sevan and Hrazdan. The proposed solution is to deploy a blockchain-based system that enables the tokenization, traceability, and monetization of waste segregation activities at the community level in Armenia, starting with a pilot in two small communities in Armenia, where a total of 40,000 people will be involved, respectively 20,000 people in each community. The goal is to support the country's transition to Extended Producer Responsibility (EPR) by establishing a transparent, functional infrastructure on which a future Producer Responsibility Organization (PRO) can operate based on verified data.

This project will help the creation of a Producer Responsibility Organization (PRO) within the upcoming EPR legislation framework in Armenia by providing the digital infrastructure and verification mechanisms required to ensure compliance, transparency, and scalability.

The Landfill operator currently collecting from two communities of 20k (total 40k), and the voluntary PRO collecting from one of the mentioned communities and the NGO that collects all over Armenia will be on the blockchain.

The Landfill operator will expand to sixteen additional communities as it is going to become a secondary sorting station for these sixteen additional communities.

Specifically, Plastiks helps create and operate a PRO in Armenia by:

- Offering a verifiable, tamper-proof digital system to track EPR compliance.
- Enabling monetization of recovery efforts through Plastic and Carbon Credits.
- Connecting and coordinating all EPR stakeholders.
- Ensuring transparency and accountability to both regulators and producers.
- This initiative will demonstrate how blockchain can ensure transparency, accountability, and efficiency in tracking plastic recovery activities, while also enabling monetization of environmental action and private sector co-financing through ESG markets.

### 3. Strategic Context & Objectives

#### Strategic Context

Armenia is preparing to implement EPR legislation, with the draft law expected to enter into force by autumn 2026. Under EPR, producers will bear responsibility for financing and verifying the recovery and recycling of post-consumer plastic waste.

A central component of EPR implementation is the creation of Producer Responsibility Organizations (PROs)—entities that operate on behalf of producers to manage compliance. For PROs to be effective and trusted, they must rely on robust, verifiable systems to collect, validate, and report environmental data.

This pilot seeks to establish such a system using Plastiks' blockchain-based platform. It will allow for real-time tracking of waste recovery, issuance of digital impact certificates, and the development of a Plastic Credit market based on verified data. The project is intended to serve as a foundational model for national EPR execution and private-sector engagement.

The pilot will digitally connect the following partners who are the key players in the Armenian Waste Management System:

#### **Kotayk and Gegharkunik MSWM Company LLC**

Type: Source separated waste and aggregator. Residual garbage collection and landfilling operator.

Brief Description: An intermunicipal company owned by 16 municipalities in Kotayk and Gegharkunik provinces. It operates source-separated and mixed residual waste collection, performs secondary sorting of pre-sorted waste, and functions as a waste aggregator. Began operations on July 8, 2025.

#### **Innovative Solutions for Sustainable Development (ISSD) NGO**

Type: Source separated waste collector and aggregator

Brief Description: ISSD organizes sorted collection of recyclable waste in several semi-rural communities of Armenia. They partner with public organizations, including ministries, municipalities, schools, and kindergartens, to collect recyclables. The collected waste is aggregated, baled, and sold to recycling companies. Recently, ISSD launched a pilot Deposit Return System (DRS) using reverse vending machines.

#### **ArmPack (foundation)**

Type: Voluntary Producer Responsibility Organization (PRO).

Brief Description: Officially registered in December 2024, ArmPack is a PRO pilot initiative established by Coca-Cola Hellenic Armenia, PepsiCo Armenia, and Pernod Ricard Armenia.

Started pilot operations in May 2025 to test and implement Extended Producer Responsibility (EPR) for packaging waste. Works with partners to organize collection, sorting, and recycling of packaging materials, supporting the development of Armenia's EPR system.

A fourth stakeholder will be potentially added to the project. Specifically, it will be a recycler to enable the framework for all Armenian recyclers to follow.

Here is how:

#### 1. Blockchain-Based Traceability and Verification

Plastiks enables real-time tracking of plastic waste recovery and recycling activities through blockchain technology. This ensures that:

Every recovery and recycling action is digitally certified.

Data cannot be manipulated, creating trust among stakeholders (government, producers, recyclers).

The system supports audit-ready compliance with EPR obligations.

This is essential for a PRO, which must report accurate recovery and recycling data to regulators.

#### 2. Digital Certification for EPR Compliance

Plastiks issues Digital Recovery Certificates (DRCs) tied to verified plastic recovery activities.

These certificates can be:

Traded or used by obligated producers to meet their EPR targets.

Monetized by recyclers and informal actors, creating financial incentives.

A PRO can manage this system to match obligations with certified recovery activities transparently.

#### 3. Monetization through Plastic and Carbon Credits

Plastiks enables monetization via:

Plastic Credits (linked to verified plastic waste recovery).

Carbon Credits (based on the CO<sub>2</sub> avoided through recycling).

This helps fund the PRO's operations and reward compliant waste management actors, especially in regions with limited public funding.

#### 4. Infrastructure to Connect All Stakeholders

The platform connects all actors in the waste value chain:

Producers (obligated under EPR)

Recyclers & Collectors (including the informal sector)

Government authorities

Consumers and NGOs

This ecosystem-wide visibility allows the PRO to coordinate efforts, manage data, and ensure each actor's role is tracked and compensated appropriately.

## 5. Support for Scaling and Regional Replication

Because Plastiks is modular and scalable, a PRO using its infrastructure can:

Expand coverage across multiple municipalities or sectors.

Adapt to different material flows (e.g., PET, HDPE, multilayer).

Replicate the model in neighboring countries or regions adopting EPR.

## 6. Web3 Governance for Transparency

Plastiks can integrate decentralized governance mechanisms via token voting, enabling:

Democratic decision-making in how PRO funds are used.

Stakeholder participation from recyclers, brands, and government actors.

Auditable records of decisions and fund allocation.

## In Summary:

Plastiks provides the digital blockchain infrastructure required to establish and operate a Producer Responsibility Organization (PRO) in Armenia by:

Offering a verifiable, tamper-proof system to digitally track EPR compliance.

Enabling monetization of verified recovery efforts through Plastic and Carbon Credits.

Immutably connecting and coordinating all EPR stakeholders, including producers, recyclers, and regulators.

Ensuring transparency, traceability, and accountability throughout the entire waste management chain.

Critically, the methodology developed by Plastiks is aligned with ISO standards, making it adaptable to additional waste streams beyond plastic—including carton, glass, paper, aluminum, and other packaging materials. The platform's modular architecture allows for seamless integration of new material categories within the same digital infrastructure, enabling holistic EPR compliance across multiple waste types.

This initiative will demonstrate how blockchain technology enhances trust, efficiency, and impact in environmental governance. By aligning traceability with financial incentives, it facilitates private sector co-financing, supports measurable ESG outcomes, and establishes Armenia as a regional leader in digital circular economy implementation.

### Project Objectives

1. Accredit Kotayk and Gegharkunik MSWM Company LLC, Innovative Solutions for Sustainable Development (ISSD) NGO and ArmPack (foundation).
2. Deploy Plastiks' three-step accreditation process, covering documentation, operational proof, and on-chain certification.
3. Anchor all verified data to the Cardano blockchain, ensuring transparency and decentralized auditability.
4. Deliver real-time dashboards to UNDP Armenia and to Kotayk and Gegharkunik MSWM Company LLC, Innovative Solutions for Sustainable Development (ISSD) NGO and ArmPack (foundation) to visualize verified impact and activity.
5. Develop roadmaps to transform certificates into monetizable Plastic Credits and Carbon Credits.

### Use Case Alignment with UNDP and EPR Mandates

This pilot aligns with the goals of both UNDP Armenia and the upcoming EPR legislation by:

Enabling transparent, verifiable environmental accounting

Supporting blockchain-based traceability and certification

Facilitating private-sector co-financing of impact

Creating a scalable model for EPR implementation

Launching credit markets for verified plastic and carbon impact

## 4. Go-to-Market Strategy

Go-to-Market Strategy for Plastiks – UNDP Armenia Pilot

### 1. Go-to-Market Strategy

#### Target Customer Segments

- Primary: UNDP Armenia, Armenian government ministries (Environment, Economy), municipalities preparing for EPR implementation.
- Secondary: Producer Responsibility Organizations (PROs), multinational FMCG brands active in Armenia (e.g., PepsiCo, Coca-Cola), local recyclers, landfill operators.
- Tertiary: ESG-focused investors, NGOs, and donors supporting waste management and climate action.

#### Unique Value Proposition (UVP)

Plastiks provides a verifiable, blockchain-based traceability system that transforms waste recovery data into monetizable Plastic and Carbon Credits, enabling governments, corporates, and NGOs to demonstrate transparent ESG impact and finance circular economy initiatives.

#### Positioning Statement

Plastiks empowers Armenia to lead the region in digital environmental governance, offering a blockchain-based certification and traceability infrastructure that accelerates EPR readiness while unlocking private-sector co-financing through credit markets.

#### Acquisition Channels

- Organic: UNDP Armenia networks, government engagement, sustainability forums, blockchain-for-impact events, earned media around Armenia's EPR transition.
- Paid: Thought leadership content (LinkedIn, industry journals), targeted campaigns to corporates subject to EPR.
- Partnerships: UNDP Armenia, Emurgo (Cardano ecosystem), local recyclers, landfill operators, global FMCG brands (PepsiCo, Coca-Cola), NGOs in waste and climate action.

#### Launch Plan

- Pre-Launch (Jul–Aug 2025): Project approval, stakeholder onboarding, public communications with UNDP Armenia, alignment with EPR policy narrative.
- Launch (Sep–Oct 2025): Accreditation of first entity, platform onboarding, issuance of first digital certificates, live dashboard demonstration to UNDP/government.
- Post-Launch Growth (Nov 2025+): Expansion to additional entities, activation of Plastic Credit marketplace, onboarding corporate sponsors, scaling communications to position Armenia as a pioneer in blockchain-based EPR.

## KPIs for GTM Success

- Number of accredited entities onboarded (target: 2+ in pilot phase).
- Verified plastic waste tracked (tons).
- Plastic Credits and Carbon Credits issued.
- Corporate sponsors engaged ( $\geq 2$ ).
- Media mentions and public awareness indicators (regional/international coverage).

## 2. Market Penetration Strategy

### Market Entry Approach

Niche-first: Pilot in a single Armenian rural community of 20,000 residents, then scale nationally with PROs and government adoption.

### Scaling Plan

- Short-term: Deliver pilot successfully, prove credibility of blockchain-based traceability.
- Medium-term: Expand to 5+ municipalities and onboard PROs in Armenia.
- Long-term: Export the Armenia EPR model to other CIS and Caucasus countries (Georgia, Kazakhstan, Ukraine).

### KPIs

- Active PROs onboarded.
- National EPR adoption rate supported by Plastiks system.
- Number/value of credits traded.
- International replication (new country entries).

## 3. Branding & User Acquisition

### Branding

- Core Message / Identity: "Verified Sustainability – Turning waste recovery into trusted, tradable impact."
- Tone of Voice: Transparent, collaborative, innovative, policy-aligned.
- Visual Identity: Plastiks green-tech brand adapted with Armenian pilot co-branding (logos of Plastiks, UNDP, Emurgo, local partners).

### User Acquisition Channels

- Policy integration workshops with government and UNDP.
- Direct outreach to corporates (FMCG, retail).
- ESG and blockchain sustainability conferences.
- Media campaigns showcasing Armenia as a pioneer in digital EPR.

## 4. Individual Project Roadmap (Post-Accelerator Sustainability)

### Short Term (0-6 months)

- Launch pilot with 1-2 accredited entities.
- Deliver real-time dashboards to UNDP Armenia.

- Issue first batch of Plastic Credits.
- Secure at least 2 corporate sponsors.

#### Medium Term (6–18 months)

- Expand platform coverage to 5+ municipalities.
- Formalize collaboration with Armenia's first PRO.
- Establish Plastic & Carbon Credit marketplace integrations.
- Secure regional partnerships with multinationals operating in Caucasus.

#### Long Term (18+ months)

- Nationwide deployment as Armenia enforces EPR law (2026).
- Monetize verified credits in global ESG markets.
- Replicate model in other countries adopting EPR.
- Position Plastiks as the regional standard for blockchain-based EPR compliance and impact monetization.

### Pilot Project Work Plan – UNDP Armenia

#### Pilot Project Work Plan

##### Verifiable Waste Recovery System

In collaboration with UNDP Armenia

#### Executive Summary

This pilot project with UNDP Armenia will implement a blockchain-based waste traceability and impact certification system in two rural communities of 20,000 residents each: Sevan and Hrazdan.

The solution deploys a system that enables tokenization, traceability, and monetization of waste segregation activities at the community level in Armenia.

#### Key objectives:

- Provide a verifiable, tamper-proof digital system to track EPR compliance.
- Enable monetization of recovery efforts through Plastic and Carbon Credits.
- Connect and coordinate all EPR stakeholders.
- Ensure transparency and accountability for regulators and producers.
- Demonstrate how blockchain can increase transparency, accountability, and efficiency in tracking recovery activities, while enabling monetization of environmental action and private-sector co-financing through ESG markets.

#### Stakeholder Accreditation

Kotayk and Gegharkunik MSWM Company LLC

Type: Source-separated waste and aggregator; residual garbage collection and landfill operator.

Description: An intermunicipal company owned by 16 municipalities in Kotayk and Gegharkunik provinces. It manages both source-separated and mixed residual waste collection, secondary sorting, and waste aggregation. Operations began July 8, 2025.

Innovative Solutions for Sustainable Development (ISSD) NGO

Type: Source-separated waste collector and aggregator.

Description: ISSD organizes recyclable collection in semi-rural communities in partnership with ministries, municipalities, schools, and kindergartens. The collected waste is aggregated, baled, and sold to recycling companies. Recently, ISSD launched a pilot Deposit Return System (DRS) using reverse vending machines.

ArmPack (foundation)

Type: Voluntary Producer Responsibility Organization (PRO).

Description: Registered in December 2024 and initiated by Coca-Cola Hellenic Armenia, PepsiCo Armenia, and Pernod Ricard Armenia. Pilot operations started in May 2025 to implement Extended Producer Responsibility (EPR) for packaging waste. ArmPack coordinates collection, sorting, and recycling while supporting the development of Armenia's EPR system.

Recycler (TBD)

A fourth stakeholder will potentially be added, representing a recycler to establish a model framework applicable to all Armenian recyclers.

#### Project Objectives

1. Accredit Kotayk and Gegharkunik MSWM Company LLC, ISSD NGO, and ArmPack Foundation.
2. Deploy Plastiks' three-step accreditation process (documentation review, QMHS review, operational review, on-chain certification).
3. Anchor all verified data to the Cardano blockchain for transparency and decentralized auditability.
4. Deliver real-time dashboards to UNDP Armenia and all accredited stakeholders to visualize verified impact and activity.
5. Develop roadmaps to convert certificates into Plastic Credits and Carbon Credits.

## Alignment with UNDP and EPR Mandates

This pilot supports both UNDP Armenia's objectives and Armenia's upcoming EPR legislation by:

- Enabling transparent, verifiable environmental accounting.
- Supporting blockchain-based traceability and certification.
- Facilitating private-sector co-financing of impact.
- Creating a scalable model for EPR implementation.
- Establishing credit markets for verified plastic and carbon recovery.

## Implementation Design

3 STEP Accreditation Process (for each entity):

1. Registration and documentation upload.
2. Operational validation (geo-tagged media, timestamps).
3. On-chain authorization to issue digital impact tokens.

Cardano smart contracts will cover:

- Verification logic and certificate issuance.
- Ownership records and wallet management.
- Interactions with ESG marketplaces.

## Pilot Location and Stakeholders

- Communities: Sevan and Hrazdan (20,000 residents each, ~90 minutes from Yerevan).
- Institutional Partner: UNDP Armenia.
- Technology Provider: Plastiks (ISO 9001:2015 certified by Eurocert).
- Blockchain Infrastructure: Cardano.
- Local Stakeholders: Kotayk and Gegharkunik MSWM Company LLC, ISSD NGO, ArmPack Foundation.

## Project Timeline

### Project Kickoff – September 16

- Introduction to 3 STEP accreditation process.
- Onboarding walkthrough.
- Presentation of full timeline.
- Q&A session.

## Accreditation & Roadmap Design

- Waste Actor 1: Sept 19 – Oct 19 → Onboarding Oct 27 → First test verification & credit issuance Oct 31.
- Waste Actor 2: Sept 25 – Oct 25 → Onboarding Oct 31 → First test verification & credit issuance Nov 5.
- Waste Actor 3: Sept 29 – Oct 29 → Onboarding Nov 6 → First test verification & credit issuance Nov 18.
- Waste Actor 4: Oct 2 – Oct 30 → Onboarding Nov 10 → First test verification & credit issuance Nov 17.

#### Consolidated Milestones

- Initial verification & credit issuance for all actors: Nov 25.
- Roadmap execution (subject to credit sales): Dec 3.
- Carbon Credit Certification: TBD.

#### Project Team

##### UNDP Armenia

- Nelli Minasyan

##### Plastiks

- Project Management: André Vanyi-Robin
- Methodology & Verification: Delfina Achinelly
- Onboarding: Trym Lyngset
- Verification: Estefania Brito

## 5. Pilot Project Work Plan & Timeline

### Project Timeline

- Proposal Approval: August 12
- Project Kickoff: August 22
- Accreditation & Roadmap Design: August 25
- Public Communications: August 28
- Platform Onboarding: September 15
- Initial Verification & Credit Issuance: September 25
- Roadmap Execution: October 25
- Carbon Credit Certification: TBD

## 6. Conclusion

### Conclusion

This pilot presents a strategic opportunity to position Armenia as a regional leader in digital environmental governance. By integrating blockchain technology, ESG traceability, and private sector engagement, the initiative establishes a scalable, auditable, and future-ready model for Extended Producer Responsibility (EPR) implementation.

Plastiks enables the creation and operation of a Producer Responsibility Organization (PRO) in Armenia by:

Providing a verifiable, tamper-proof digital system to track compliance with EPR legislation.

Enabling monetization of verified recovery efforts through Plastic and Carbon Credits.

Connecting and coordinating all relevant stakeholders, from producers to recyclers to regulators.

Ensuring full transparency and accountability across the entire value chain.

This initiative will serve as a demonstration of how blockchain can enhance trust, efficiency, and impact in waste management systems. By aligning environmental action with financial incentives, it opens pathways for private sector co-financing, supports measurable ESG outcomes, and paves the way for regional replication of Armenia's leadership in sustainable development.

UNDP Armenia's leadership in testing and scaling this model will not only support national compliance goals but also establish Armenia as a regional innovator in sustainable digital infrastructure for plastic waste recovery and recycling.