

# LSPedia Supply Chain Solutions

## Serial Lifecycle · OneLink · Revenue Cycle

### Industry Pilot Program Guide

For Pharmaceutical Trading Partners | Invitation Only | 12-Week Program  
Program Launch: Q3 2026

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## 1. Program Overview

LSPedia has launched OneLink, a standalone application with integrated OneScan® capabilities that addresses a significant unmet need in the pharmaceutical supply chain: the ability to manage the full lifecycle of a serialized product from sale to RMA; to process the return, recall, or withdrawal of that product; and to reconcile the financial consequences of refund and chargeback for the corresponding events with serial-level precision.

This Pilot Program invites a select cohort of pharmaceutical trading partners — including manufacturers (MAHs), wholesale distributors, and dispensers — to experience these capabilities hands-on across a structured 12-week engagement. Each trading partner plays a distinct role in the pilot, mirroring how product lifecycle events, reverse logistics, and financial reconciliation flow through the real supply chain.

### Why This Program Exists

The pharmaceutical industry has invested heavily in serialization and DSCSA compliance. Yet the financial returns from that investment remain largely unrealized: RMAs are still managed the old way, the recall process is still manual, and the revenue leakage from unchecked RMAs, chargebacks, and rebate reversals continues to erode margins.

For wholesale distributors in particular, the challenge is compounded: no industry standard exists for how manufacturers notify trading partners of recall events, downstream customer impact lists are unreliable when sites share inventory, and reverse logistics remain largely invisible when 3PLs process returns on the manufacturer's behalf.

For dispensers, sifting through recall notices for products not in their inventory consumes valuable team time. Fragmented recall processes create significant risk of missed events that directly impact patient safety and regulatory compliance. Stopping, sweeping, and returning recalled products remain largely manual and labor-intensive.

This pilot demonstrates a better way: serial-level execution, automated partner engagement, streamlined workflow, and financial truth by serial number.

## 2. How to Join

Participation is by invitation and subject to available cohort slots. The program operates on a 12-week schedule.

### Steps to Enroll

- Step 1: Complete the Participant Registration Form, designating your primary contact and executive sponsor and identifying 2–3 initial product SKUs.
- Step 2: Execute a Mutual NDA with LSPedia (template provided).
- Step 3: Receive and sign this Pilot Program Guide to confirm intent to participate.
- Step 4: Assign stakeholders to the pilot and actively participate in pilot meetings, completing the assigned tasks.

[trace@lspedia.com](mailto:trace@lspedia.com)

NDA will be provided upon registration. Pilot License will be granted upon NDA execution.

### 3. Pilot Objectives

The Pilot Program is designed to achieve the following outcomes:

- Demonstrate the end-to-end workflow for returns, RMA, and recall using Serialized Lifecycle Management (SLM) and OneLink in sequence.
- Validate that supply chain users (distributors, dispensers, and clinics) can engage with manufacturers via the OneLink mobile app, capturing data quickly and accurately through barcode scanning.
- Confirm that wholesale distributors can replace manual, fragmented processes with centralized recall event ingestion, serial-level impact scoping across thousands of downstream locations, and automated customer notifications.
- Establish baseline KPIs — including time-to-scope, time-to-close, return rate, communication tracking, product tracking, and decommissioning — and measure improvement against them over the course of the pilot.
- Collaborate on an integration plan and specification for reverse data sharing with ERP and chargeback systems to reconcile financial obligations — credits, chargebacks, rebates, and GPO fees — triggered by SLM events.
- Give participants a direct feedback channel with LSPedia's product team to shape the final release of our products.

### 4. The Three Products in This Pilot

Participants will work with the OneLink application and a combination of OneScan® modules. Each can be used independently. Together they form a closed-loop system from product movement to financial settlement.

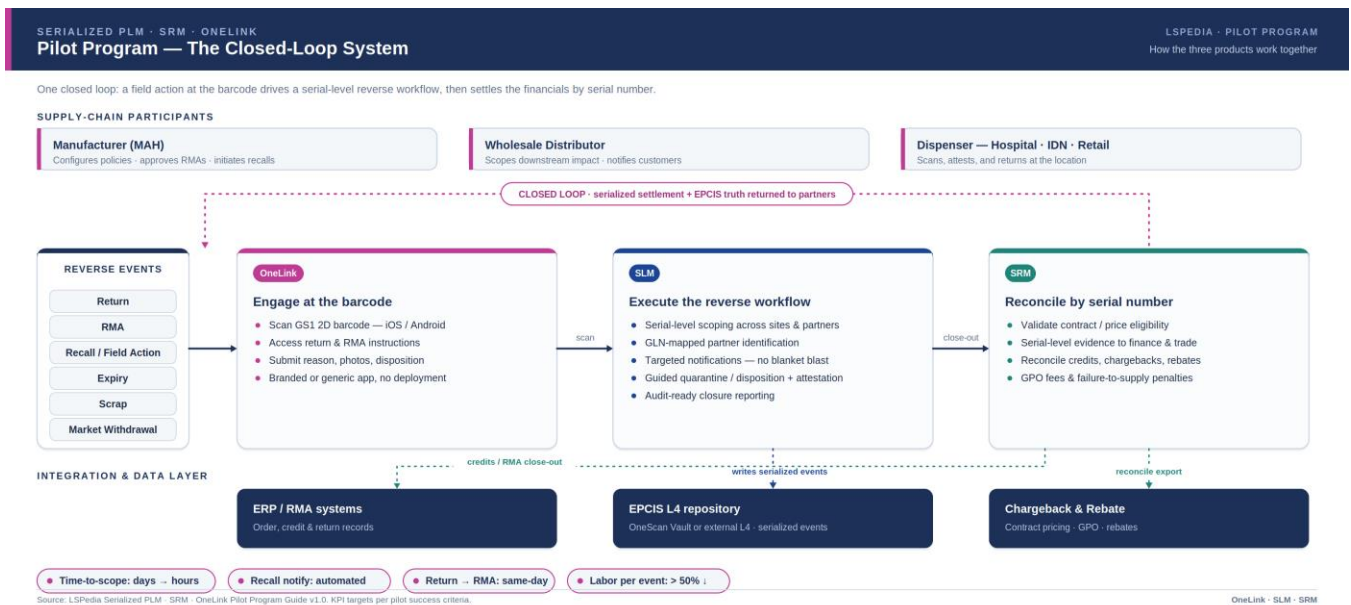
| Product  | What It Does   |
|--|--|
| <b>Serialized Lifecycle Mgmt (SLM)</b><br>Execute reverse workflow         | <ul style="list-style-type: none"> <li>• Serial-level pinpointing of impacted product across sites and trading partners</li> <li>• Orchestrated workflows: Returns, Expiries, Scrap, Market Withdrawals, Recalls</li> <li>• Automated partner notifications and guided quarantine / disposition actions</li> <li>• Attestation capture and audit-ready closure reporting</li> <li>• Up to 90% labor reduction reported by early customers</li> </ul> |
| <b>OneLink (OL)</b><br>Engage the supply chain at the barcode              | <ul style="list-style-type: none"> <li>• Mobile app that scans GS1 2D barcodes (OneLink) on product packaging</li> <li>• Supply chain users scan product to access return instructions, initiate RMAs, or receive recall notices</li> <li>• Branded or generic app on iOS and Android; no enterprise deployment required</li> <li>• Connects field actions to SLM workflows in real time</li> </ul>  |
| <b>Serialized Rev-Cycle Mgmt (SRM)</b><br>Financial truth by serial number | <ul style="list-style-type: none"> <li>• Establish workflow to validate contract or price eligibility before RMA or reversals are issued</li> <li>• Delivers traceable serial evidence for finance and trade</li> </ul>  |

| Product | What It Does  |
|---------|---|
|         | <ul style="list-style-type: none"> <li>Interface requirement with ERP and chargeback/rebate platforms</li> <li>Export every post-sale reverse logistics event with serial-level precision to reconcile RMA, chargeback, rebate, GPO fee, and failure-to-supply penalties in third-party systems.</li> </ul> |

### How They Work Together

A supply chain user scans the product’s 2D barcode via the OneLink app. This initiates a return or reversal action request. SLM scopes the affected serials, orchestrates partner notifications, and tracks disposition. For each SLM transaction, SRM delivers serial numbers involved to financial systems for credits, chargeback reversals, and rebate adjustments.

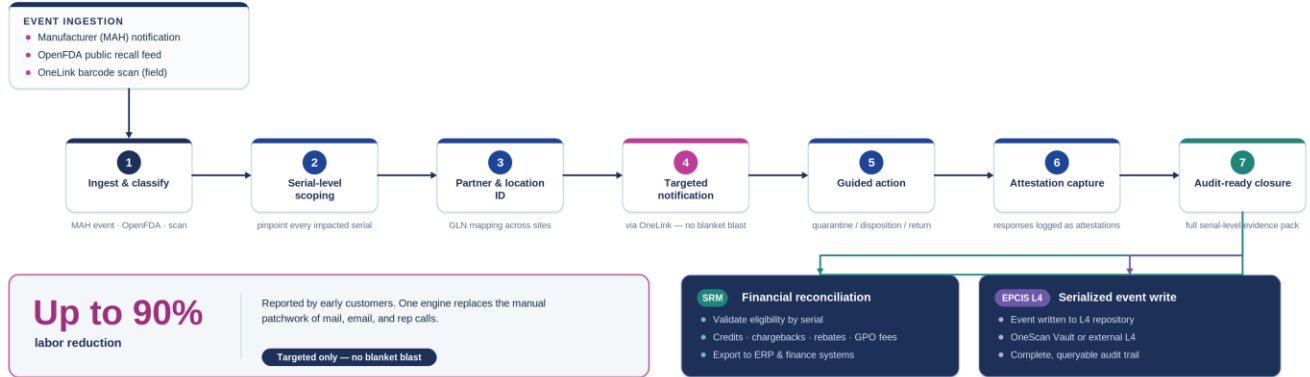
### Pilot Program – The Closed-Loop System



## SLM – The Reverse – Workflow Engine

SERIALIZED LIFECYCLE MANAGEMENT · SLM  
**SLM — The Reverse-Workflow Engine** LSPEDIA · PILOT PROGRAM  
From event ingestion to audit-ready closure

SLM orchestrates every reverse event on one engine — scoping impacted serials, engaging the right partners, and closing the loop with proof.



Source: LSPedia OneScan Investigator Datasheet v2.2 & Pilot Program Guide v1.0. Labor figure reported by early customers.

OneLink · SLM · SRM

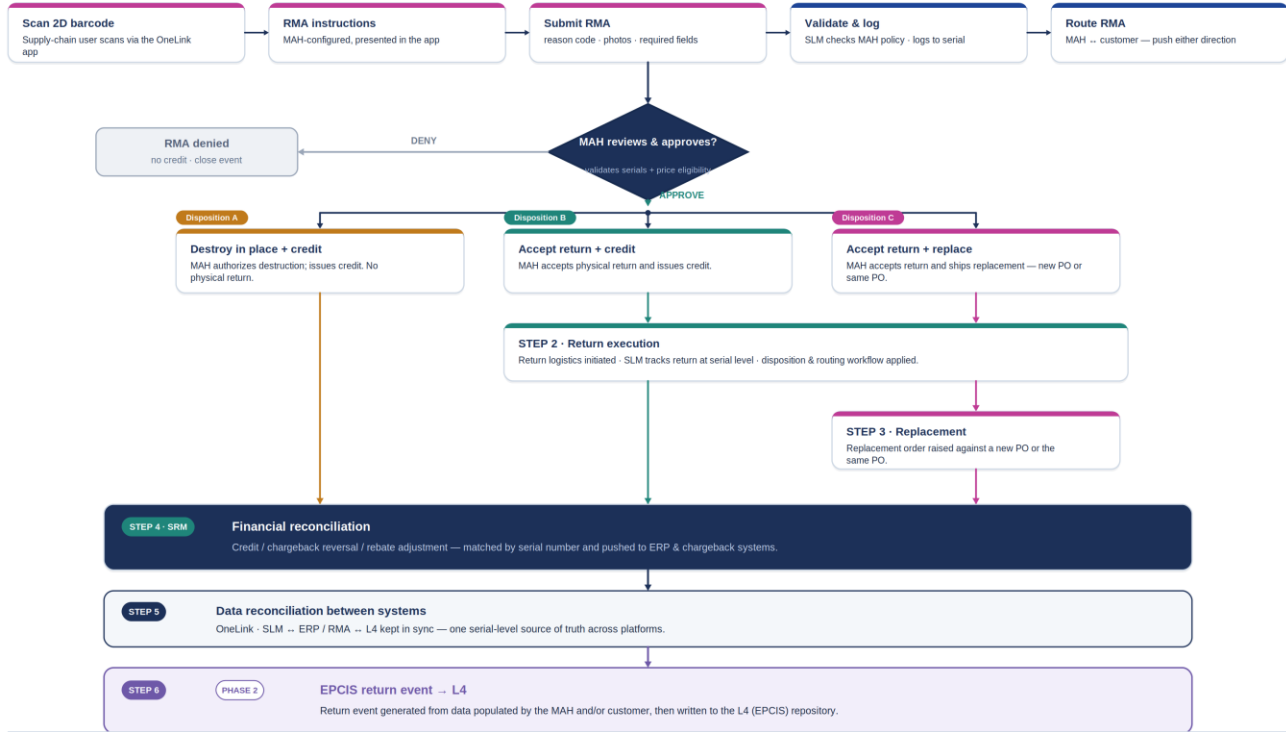
## OneLink - Workflow

ONELINK FOR MANUFACTURERS · DIGITAL LINK  
**OneLink — RMA → Return → Replacement → Reconciliation** LSPEDIA · PILOT PROGRAM  
Works with or without OneScan

**INTEGRATION** OneLink runs with or without OneScan. Non-OneScan MAHs integrate via their ERP / RMA system + a separate L4 (EPCIS) repository. OneScan customers use OneScan Vault as their L4. OneLink can execute the RMA, return, replacement, and reconciliation end-to-end.

SEQUENCE 1 · RMA → 2 · Return → 3 · Replacement → 4 · Financial recon → 5 · Data recon → 6 · EPCIS → L4 Phase 2

**STEP 1 · RMA**



Source: LSPedia OneLink · SLM · SRM Pilot Program Guide v1.0. Phase 2 = EPCIS return-event generation.

**OneLink – Use Case Map**

**One 2D barcode. Many use cases.**  
The same GS1 OneLink barcode a partner scans for a return can drive recall, financial reconciliation, compliance, and engagement.

| REVERSE LOGISTICS   | FINANCIAL RECONCILIATION   | DATA & COMPLIANCE  | ENGAGEMENT   |
|---|--|--|--|
| <p><b>Returns &amp; RMA</b></p> <p>Scan to initiate a return or RMA. MAH-configured instructions, serial-level logging, and approval.</p> | <p><b>Chargeback &amp; rebate recon</b></p> <p>Serial-level evidence reconciles chargebacks, rebates, and GPO fees. Reverse overpayments with proof.</p> | <p><b>EPCIS return events (L4)</b></p> <p>Generate return / disposition events from MAH &amp; customer data, written to the L4 repository. (Phase 2)</p> | <p><b>Promotions &amp; offers</b></p> <p>Communicate product promotions, offers, and campaigns to partners and patients through the barcode.</p> |
| <p><b>Recall / Field Action</b></p> <p>Targeted serial-level recall notices, in-app quarantine instructions, and attestation capture.</p> | <p><b>Credit reconciliation</b></p> <p>Match credits to returned or destroyed serials. Validate contract &amp; price eligibility before issue.</p>       | <p><b>Data reconciliation</b></p> <p>Keep OneLink · SLM ↔ ERP / RMA ↔ L4 in sync — one serialized source of truth.</p>                                   | <p><b>Authentication &amp; info</b></p> <p>Verify authenticity and surface product, expiry, and usage information on scan.</p>                   |

Source: LSPedia OneLink · SLM · SRM Pilot Program Guide v1.0. Reverse logistics & financial reconciliation are pilot-scope; engagement use cases extend the same barcode.

OneLink · SLM · SRM

## 5. Who Should Participate

This program is open to pharmaceutical trading partners across the supply chain. The ideal participant is experiencing one or more of the following challenges:

- Manual, email-based processes for returns, recalls, or market withdrawals
- Difficulty matching returned product to original customer contracts and pricing
- Difficulty identifying and communicating with indirect customers — such as dispensers and clinics — beyond the wholesale level
- Overpayment on RMAs, chargebacks, or rebate reversals due to lack of serial-level verification
- Compliance exposure from incomplete audit trails for recall or field action events
- Interest in leveraging GS1 OneLink2D barcodes for supply chain engagement

| Ideal Participant            | Business Problem  | Key Stakeholders   |
|------------------------------|---|--|
| <b>Manufacturer (MAH)</b>    | <ul style="list-style-type: none"> <li>• Manual returns and recall workflows</li> <li>• Opaque supply chain beyond direct customers</li> <li>• Credit and chargeback overpayments due to lack of serial visibility</li> <li>• Limited engagement with downstream supply chain partners</li> <li>• Compliance exposure from incomplete audit trails</li> </ul> | <ul style="list-style-type: none"> <li>• VP/Head/stakeholder of Quality or Regulatory Affairs</li> <li>• Supply Chain / Serialization Lead</li> <li>• Head of Trade / Finance / RevOps</li> <li>• IT or ERP Integration Owner</li> <li>• Executive Sponsor (SVP Operations and CFO)</li> </ul> |
| <b>Wholesale Distributor</b> | <ul style="list-style-type: none"> <li>• No industry-standard recall notification. Manufacturers notify via snail mail, email, or sales reps, creating a fragmented and unreliable alert process</li> <li>• Limited downstream customer impact visibility with thousands of customer locations and shared</li> </ul>  | <ul style="list-style-type: none"> <li>• VP/Stakeholders of Operations / Distribution</li> <li>• Serialization / Compliance Lead</li> <li>• VP/Head/stakeholder of Quality or Regulatory Affairs</li> <li>• Procurement &amp; customer service stakeholders</li> </ul>                         |

| Ideal Participant                                 | Business Problem  | Key Stakeholders   |
|---|---|--|
|   | <p>inventory across sites. DSCSA data alone cannot reliably identify who holds affected product</p> <ul style="list-style-type: none"> <li>Disjointed reverse logistics. Customers engage directly with 3PL return providers, leaving the distributor without complete return visibility or serial-level reconciliation</li> <li>Manual downstream communication at scale. Notifying hundreds of thousands of customer endpoints per recall event is labor-intensive and inconsistent</li> <li>Coverage gap for non-DSCSA products. 40% of recall events involve OTC and medical device items not covered by EPCIS, requiring a phased traceability approach</li> </ul> |  |
| <b>Dispenser (Hospital, IDN, Retail Pharmacy)</b> | <ul style="list-style-type: none"> <li>No streamlined way to filter out recalls irrelevant to their inventory</li> <li>Manual process to take action on recalls at the location level</li> <li>Blanket quarantine instructions causing over-removal of product</li> <li>Labor-intensive, manual attestation and compliance documentation</li> <li>Delayed or missed notification of recalls leading to patient safety risk</li> </ul>   | <ul style="list-style-type: none"> <li>Chief Pharmacy Officer / VP Pharmacy</li> <li>Director of Pharmacy Operations</li> <li>Medication Safety / Compliance Lead</li> <li>Central Fill / Receiving Manager</li> </ul> |

## 6. Program Structure — 12-Week Schedule

The program advances through six phases over 12 weeks, progressing from configuration through live workflow testing of returns, RMA with revenue reconciliation, and recall — before closing with results review and next steps.

| Phase                                   | Weeks | Activities  | Deliverables  |
|---|-------|---|---|
| <b>Phase 1 Onboarding &amp; Kickoff</b> | 1-2   | <ul style="list-style-type: none"> <li>NDA execution</li> <li>Participant registration and welcome package</li> </ul> | <ul style="list-style-type: none"> <li>Signed NDA</li> <li>Completed registration form</li> <li>Kick-off meeting recording</li> </ul> |

| Phase                                    | Weeks | Activities  | Deliverables  |
|--|-------|---|---|
|  |       | <ul style="list-style-type: none"> <li>Kick-off meeting: program overview, objectives, roles</li> <li>Participant shares 2-3 product SKUs and return/recall workflow</li> <li>LSPedia assigns SLM &amp; OneLink pilot License</li> </ul>  | <ul style="list-style-type: none"> <li>Workflow intake document</li> <li>Pilot license granted</li> </ul>   |
| <b>Phase 2 Solution Setup</b>            | 3     | <ul style="list-style-type: none"> <li>LSPedia configures SLM and OneLink for participant products</li> <li>Participant reviews product setup and return instructions</li> <li>OneLink barcode and app configuration</li> <li>System connectivity check (EPCIS, ERP sandbox if applicable)</li> </ul>   | <ul style="list-style-type: none"> <li>Configured pilot environment</li> <li>OneLink app (branded or generic)</li> <li>Return instruction setup confirmed</li> <li>Connectivity sign-off</li> </ul>   |
| <b>Phase 3 RMA &amp; Revenue Cycle</b>   | 4-6   | <ul style="list-style-type: none"> <li>Manufacturer user creates an RMA event</li> <li>Supply chain user scans barcode and initiates RMA via OneLink app</li> <li>Manufacturer reviews RMA request, validates serial number(s) and contract-price eligibility</li> <li>Review audit trail for product and communications evidence and feedback session</li> </ul>               | <ul style="list-style-type: none"> <li>RMA-to-SRM reconciliation tested</li> <li>Credit and chargeback reversal outputs reviewed</li> <li>Evidence pack sample</li> <li>Week 9 feedback report</li> </ul>   |
| <b>Phase 4 Return &amp; DL Workflows</b> | 6-7   | <ul style="list-style-type: none"> <li>Manufacturer user creates a return event</li> <li>SLM tracks serial-level return events and communication with partners• Supply chain user scans barcode and initiates return via OneLink app</li> <li>Participant tests return request, routing logic, and disposition workflow</li> <li>Feedback session on return workflow</li> </ul> | <ul style="list-style-type: none"> <li>Return workflow tested end-to-end</li> <li>OneLink app scan demo</li> <li>SLM return event log reviewed</li> <li>Week 7 feedback report</li> </ul>   |
| <b>Phase 5 Recall / Field Action</b>     | 10-11 | <ul style="list-style-type: none"> <li>Manufacturer initiates recall in SLM</li> <li>SLM ingests manufacturer events and public domain recall events</li> <li>SLM scopes impacted serials and sends targeted notifications (no blanket blast)</li> </ul>  | <ul style="list-style-type: none"> <li>Recall event executed in pilot environment</li> <li>Targeted notification log</li> <li>DL-driven quarantine confirmation</li> <li>SRM recall financial summary</li> <li>Week 11 feedback report</li> </ul> |

| Phase                                   | Weeks | Activities   | Deliverables   |
|---|-------|--|--|
|   |       | <ul style="list-style-type: none"> <li>Supply Chain users receive serial-level impact list mapped to downstream GLN endpoints</li> <li>SLM events export, discussion for 3<sup>rd</sup> party integration for financial credits, chargebacks, and rebate reversals</li> </ul>  |  |
| <b>Communicate promotions</b>           | 12    | <ul style="list-style-type: none"> <li>Manufacturer initiate promo</li> <li>Create a distribution list</li> <li>opt-in &amp; opt-out</li> <li>Manage messaging interval</li> </ul>   |  |
| <b>Phase 6 Results &amp; Next Steps</b> | 12    | <ul style="list-style-type: none"> <li>Participant presents observations and key findings</li> <li>LSPedia delivers pilot summary report (KPIs, event logs, evidence packs)</li> <li>Discussion of transition from Pilot to implementation, and production deployment</li> <li>Collect final feedback, case studies, and testimonials</li> </ul> | <ul style="list-style-type: none"> <li>Pilot summary report</li> <li>KPI baseline vs. pilot results</li> <li>Commercial proposal (Post pilot)</li> <li>Pilot completion certificate</li> </ul> |

## 7. Pilot License

The pilot grants participants a pilot license to test the SLM and DL solutions in a progression that mirrors the real-world lifecycle of a product field action and reverse action. Each stage builds on the stage prior.

### Step 1 — Return (SLM + OneLink)

A supply chain user (distributors and dispensers) scans the product's 2D barcode using the OneLink mobile app. The app presents return instructions configured by the manufacturer; the user submits a return request with reason code, photos, and disposition preference. SLM receives the request, validates it against the manufacturer's return policy, triggers notifications to relevant partners, and logs the event against each serial number.

### Step 2 — RMA (SLM + OneLink)

A supply chain user (distributors and dispensers) scans the product's 2D barcode using the OneLink mobile app. The app presents RMA instructions configured by the manufacturer; the user submits an RMA request with reason code, photos, and required fields by manufacturer. SLM receives the request, validates it against the manufacturer's RMA policy, triggers notifications to relevant stakeholders, and logs the event against each serial number. The manufacturer approves the RMA before any credit is released.

### Step 3 — Recall / Field Action (SLM + OneLink)

The manufacturer (MAH) initiates a recall or market withdrawal in SLM. SLM automatically ingests recall events from OpenFDA and direct manufacturer notifications, replacing the fragmented patchwork of snail mail, email, and rep calls that wholesale distributors currently depend on. SLM instantly scopes all impacted serial numbers, identifies which trading partners hold affected inventory, and sends targeted OneLink notifications to those partners only. There is no blanket blast.

Wholesale distributors receive a precise, serial-level impact list for their downstream customers, including mapped GLN endpoints, eliminating the guesswork caused by shared inventory across sites. Partners receive quarantine instructions in the app and their responses are logged as attestations.

### Step 4 — Revenue Lifecycle Management

Discuss revenue exposure and data set required for financial systems. Collaborate on financial reporting. Agree to data elements and API spec for integration.

## 8. What We Ask — and What You Get

| Participant Commits To  | LSPedia Provides  |
|---|---|
| <ul style="list-style-type: none"> <li>Execute NDA prior to kickoff</li> <li>Assign a primary contact and executive sponsor</li> <li>Provide 2-3 product SKUs with return/recall workflow documentation</li> <li>Attend kick-off meeting and two scheduled review sessions</li> <li>Complete feedback surveys at Weeks 7, 9, and 11</li> <li>Participate in a 45-minute final debrief session</li> <li>Optional: share a brief testimonial or case study quote</li> </ul> | <ul style="list-style-type: none"> <li>Bi-weekly pilot meeting organization</li> <li>Fully configured pilot environment at no cost</li> <li>OneLink mobile app (branded upon request)</li> <li>All training materials: guides, videos, and work instructions</li> <li>Weekly office hours during active pilot weeks</li> <li>Pilot summary report with KPIs and evidence pack</li> <li>Commercial proposal for production deployment</li> </ul> |

## 9. Pilot Success Criteria

At the conclusion of the pilot, LSPedia and the participant will jointly evaluate the program against the following KPIs:

| KPI                                    | Current State (Baseline)       | Pilot Target                  | Pilot Actual |
|--|--------------------------------|-------------------------------|--------------|
| Time to scope impacted serials         | Days to weeks                  | Hours                         |              |
| Recall notification                    | Days to weeks (manual polling) | Automated                     |              |
| Return-request-to-RMA cycle time       | 3-10 business days (manual)    | Same day (automated workflow) |              |
| Over-return rate                       | To be baselined by participant | Measurable reduction          |              |
| Labor hours per recall or return event | To be baselined by participant | > 50% reduction               |              |
| Audit evidence completeness            | Incomplete / fragmented        | Full serial-level audit pack  |              |

## 10. Confidentiality

All materials shared as part of this program are confidential and proprietary to LSPedia Inc. Participants are required to execute a Mutual NDA prior to the kickoff meeting. LSPedia will treat all participant business

information and feedback with equal confidentiality. Pilot results will not be published or shared externally without the participant's written consent.

## Program Acceptance

By signing below, the participant confirms receipt of this Pilot Program Guide, agrees to the Confidentiality terms in Section 10, and confirms intent to participate in the LSPedia Serialized PLM · SRM · OneLink Pilot Program.

| <b>LSPedia Inc.</b>   | <b>Participant Organization</b>  |
|---|--|
| Authorized Signature:<br>_____<br><br>Name: Riya Cao<br><br>Title: Chief Executive Officer<br><br>Date: _____ | Authorized Signature:<br>_____<br><br>Name: _____<br><br>Title: _____<br><br>Date: _____ |