The Lifter

INDIUM

Assessing a Massive 4GL Legacy Architecture for a Leading Insurer in 12 Weeks, Leveraging The Lifter

How Legacy Lifter, a key pillar of The Lifter's solution suite, analyzed >1M lines of proprietary 4GL code, mapped 8,900+ batch jobs, and delivered a data-backed IMS modernization roadmap for a North American insurance giant.

Success Story

Customer Overview

One of the largest insurance enterprises in North America operated >150 legacy applications supporting core functions, including Policy Administration, Underwriting, Claims, Billing, Payments, Agency Management, and Compliance.

Over decades, these applications were built on a **proprietary 4GL-based core platform** that evolved organically alongside the business. While stable and business-critical, the platform had become increasingly difficult to understand, maintain, and modernize due to:

- Limited and outdated documentation
- Business logic deeply embedded in legacy code (but not clear to new engineers)
- High dependency on a shrinking pool of subject matter experts
- An opaque batch-processing ecosystem with unclear dependencies

As the company planned its transition toward a **unified, modern Insurance Management System (IMS),** one challenge became clear:

They could not modernize what they did not fully understand. Before embarking on a transformation toward a unified, modern Insurance Management System (IMS), they needed a comprehensive understanding of what its existing estate actually did – both technically and functionally.

To address this, the company partnered with **Indium** and adopted their proprietary platform – The Lifter, an agentic AI platform for system discovery, analysis, and modernization blueprinting.

The Challenge

Traditional discovery and reverse-engineering approaches were not viable.

A manual assessment of the legacy estate would have required **12–18 months** of workshops, documentation cycles, and SME interviews, introducing cost, risk, and delays before modernization could even begin. This was a serious bottleneck to modernization programs that were proposed in the past.

The company needed a **faster, more reliable, and evidence-driven way** to:

- Understand what their systems actually did
- Reduce reliance on tribal knowledge
- Deeply and clearly understand hidden dependencies and operational risk
- Create an achievable modernization roadmap

The Approach: A Phased, AI-Driven Discovery Strategy

Rather than launching directly into large-scale modernization, Indium proposed a **two-phase engagement** using **Legacy Lifter.**

Phase 1 would validate whether AI-driven discovery could replace months of manual reverse engineering.

Phase 2 would scale that understanding across the enterprise to deliver a complete modernization blueprint.

Phase 1: AI-Driven Proof of Value (2 Weeks)

Objective

Establish structural and semantic confidence in the proprietary 4GL core with minimal SME dependency.

What The Lifter Did

- Parsed and analyzed over 1 million lines of proprietary 4GL code
- Built a deep structural model of the system
- Extracted embedded business rules directly from source code
- Mapped execution flows and dependencies
- Generated structured documentation and implementation-ready insights

Outcomes

- **1M+ lines of code** analyzed across **1,000+ files**
- **6,000+ business rules** extracted and linked to execution paths
- **411 implementation-ready user stories** generated
- A comprehensive, AI-generated system manual created for the first time

Result:

The proof of value conclusively demonstrated that

The Lifter could replace months of manual reverse engineering with AI-driven discovery in weeks.

With validation complete, the engagement moved into enterprise-scale blueprinting.

Phase 2: Enterprise-Scale Blueprinting (10 Weeks)

With confidence established, the company expanded the scope to understand its **entire application and operational landscape**, not just the legacy core.

Business Objectives

- Establish a comprehensive current-state view of the application estate
- Reduce SME dependency by extracting logic directly from systems
- Understand batch processing, integrations, and operational dependencies
- Classify applications by business domain and capability
- Assess technical health, risk, and future readiness
- Define a future-state IMS architecture and modernization roadmap

Enterprise Blueprinting Setup at a Glance

Discovery expanded across systems to support evidence-based modernization.

Batch & Scheduler Intelligence

Understanding how batch jobs run and depend on each other.

01

Application Portfolio & API Inventory

Seeing every application and integration in one place.

02

Business Capability Mapping

Connecting systems to real business functions.

03

Deep Analysis of the Core System

Identifying what can be modernized and what requires care.

04

The blueprinting effort unfolded across four **parallel streams.**

Batch & Scheduler Intelligence 01

One of the most opaque and operationally critical areas was the batch ecosystem.

Legacy Lifter provided end-to-end operational visibility by:

- Analyzing **8,900+ batch jobs**
- Classifying jobs as Active, Dormant, or Disabled
- Identifying execution frequency and scheduling patterns
- Mapping dependencies across applications, scripts, databases, and external services

Outcome:

What had previously been an opaque subsystem became a **traceable, dependency-mapped operational** network, aligned to underlying applications and business workflows.

Application Portfolio & API Inventory 02

Beyond the legacy core, the company needed clarity across its broader application landscape.

Using Legacy Lifter, Indium delivered the following:

- Inventoried 150+ interconnected applications
- Identified technology stacks, architectural patterns, and dependencies
- Discovered APIs and integration points automatically
- Assessed code quality, complexity, duplication, and security exposure

Key Insights:

- **499 .NET projects** across the application estate
- **3,174 endpoints** identified
- Heavy reliance on legacy SOAP/WCF services, with limited REST adoption

For the first time, leadership had a **measurable architectural baseline** to guide modernization decisions.

Business Capability Mapping 03

Technical inventory alone was not enough. The organization needed to understand how systems aligned with business operations.

The Lifter classified applications into a structured capability model:

- **L1 Domains –** Enterprise business domains
- **L2 Capabilities –** Core business capabilities
- **L3 Features –** Functional system behaviors

More than **20 enterprise domains** were identified, including Policy, Claims, Billing, Agency Management, Compliance, Finance, and Reporting.

This enabled:

- Capability coverage analysis
- Identification of redundant systems
- Discovery of functional gaps
- Alignment with the future-state IMS design

The perspective shifted from “hundreds of disconnected applications” to a **business-aligned capability landscape.**

Deep Analysis of the Core System 04

While enterprise discovery was underway, The Lifter continued deep structural analysis of the proprietary core system.

This exposed:

- Entry points across user interfaces and batch processes
- Shared logic and tightly coupled components
- Areas of higher modernization risk versus modularization opportunity

Outcome:

The organization gained clarity on **what could be modernized quickly** and **what required careful refactoring,** significantly reducing execution risk.

Technical Health & Risk Assessment

To enable confident prioritization, Legacy Lifter assessed each application across standardized metrics:

- Code quality and maintainability
- Complexity and duplication
- Technology obsolescence
- Security exposure

These were translated into **composite scores** for:

- Technical health
- Maintainability
- Future readiness
- Overall risk

Applications were categorized into **High, Medium, Low, and Critical bands,** transforming modernization planning from intuition-based sequencing into evidence-driven decision-making.

Business Impact

- Created a **single source of truth** for the application landscape
- Analyzed **1M+ lines of proprietary code** with minimal SME dependency
- Classified and assessed **150+ applications**
- Documented **8,900+ batch jobs** with execution behavior and dependencies
- Delivered capability-aligned rationalization insights
- Provided quantified technical health, risk, and readiness scores
- Defined a clear **future-state IMS architecture and modernization roadmap**

Outcome

Using **Legacy Lifter [Part of The Lifters' solution suite],** what traditionally would have taken **12–18 months of manual discovery** was delivered in **12 weeks,** with greater accuracy, deeper insight, and most importantly significantly reduced modernization risk.

The organization moved forward with modernization not just faster, but **with clarity, confidence, and control.**

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About Indium

Indium is an AI-driven digital engineering company that helps enterprises build, scale, and innovate with cutting-edge technology. We specialize in custom solutions, ensuring every engagement is tailored to business needs with a relentless customer-first approach. Our expertise spans Generative AI, Product Engineering, Intelligent Automation, Data & AI, Quality Engineering, and Gaming, delivering high-impact solutions that drive real business impact.

With 5,000+ associates globally, we partner with Fortune 500, Global 2000, and leading technology firms across Financial Services, Healthcare, Manufacturing, Retail, and Technology–driving impact in North America, India, the UK, Singapore, Australia, and Japan to keep businesses ahead in an AI-first world.

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