Strategy

Why Insurance Analytics Break Down

How Insurers Are Unifying Business Logic with a Universal Semantic Layer

Start ▶

Executive Summary

Insurance organizations operate in one of the most data-intensive and highly regulated industries.

Every decision, assessment, risk model, and customer interaction depends on accurate and secure insights. To support this, insurers need a data foundation that's consistent, governed, and reliable.

But in most organizations, that foundation is anything but consistent.

Teams rely on multiple environments, applications, and BI platforms for analytics, each operating within its own workflow. These disconnected systems introduce small definition drifts that compound over time, turning routine reporting into a structural challenge.

Insights conflict, reports don't match, and teams spend more time validating numbers than acting on them. As environments grow, this misalignment compounds across systems, teams, and reports, becoming a structural barrier to scalable analytics.

Leading insurers are addressing this by rethinking how data logic is defined and governed across the enterprise. By adopting a semantic layer to centralize business logic, they standardize definitions, connect systems, and enforce governance across their analytics environment.

This guide examines how **Fannie Mae, Helsana, Amica,** and **SAVA Insurance** used this approach to:

- Eliminate metric inconsistency by defining business logic once and applying it everywhere
- Connect fragmented systems without replacing existing BI infrastructure
- Modernize reporting while maintaining full transparency and security
- Reduce costs by consolidating redundant tools and reports

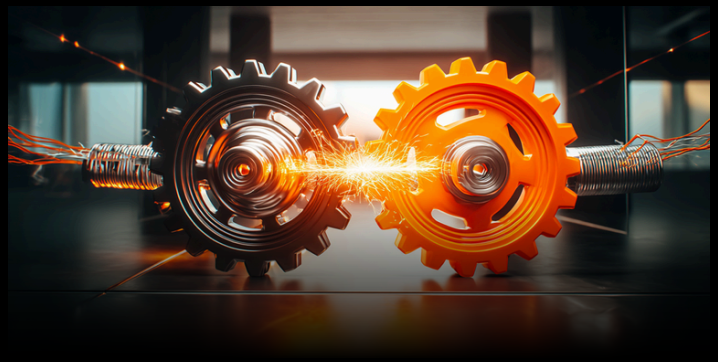
Discover how a universal semantic layer connects systems, scales insights, and supports advanced analytics for faster, more accurate decisions.

Table of Contents

Insurance Data Challenges

Insurers often spend millions on data environments, BI platforms, and supporting applications.
Yet gaps in consistency and alignment remain. The real issue is not the data itself, but the architecture surrounding it:

Metric Inconsistency Across Systems



Definitions Recreated for Every Platform

Business Logic Trapped in BI Tools

Data Governance Divided Across Departments

Table of Contents

Metric Inconsistency Across Systems

Insurers collect customer data from multiple systems, including legacy platforms, claims systems, public records, and internal analytics tools. It's there, but the logic behind it isn't aligned.

When the CFO asks to view the "Loss Ratio" for last quarter, teams run diagnostics, reports arrive, but the answers don't match.

That's because your systems don't speak the same language:

- The policy admin system calculates using daily pro-rata
- The actuarial model uses monthly accrual
- The finance system books it at point of sale

Metrics mean different things depending on the source. Without a unified data foundation, definitions fragment across teams and tools, making it difficult to scale analytics or trust cross-team reporting.

Teams spend more time reconciling reports and validating figures, turning analytics into ongoing operational work instead of a driver of decisions.

Universal Semantic Layer Advantage

A universal semantic layer defines business logic, metrics, attributes, business rules, and relationships once, then applies them everywhere: Tableau, Python notebooks, Excel, custom applications, AI models, and any future tools.

By centralizing business logic into a shared semantic foundation, insurers eliminate manual reconciliation and ensure that every system operates from the same definitions.

The shift toward enterprise-wide data access requires consistent, trusted metrics across systems.

BARC, "Data, BI and Analytics Trend Monitor 2026."

Table of Contents

Fannie Mae

Fannie Mae uses trusted insights to analyze the U.S. housing market and deliver programs, products, and tools to make housing more affordable, accessible, and efficient for everyone.

Like many insurers, its risk teams pulled data into spreadsheets and macros to collate and reconcile results. This resulted in hours of manual work, leaving less time for strategic decisions.

With Strategy as its enterprise analytics engine, Fannie Mae launched a custom reporting hub, leveraging the universal semantic layer to standardize data logic across applications.

Fannie Mae

The Federal National Mortgage Association (Fannie Mae) facilitates access to mortgage credit in the U.S. housing market. For nearly 90 years, it has been a reliable source of affordable mortgage financing, supporting homebuyers and renters nationwide.

Each report was built on consistent, governed definitions within a shared environment.

A centralized database of definitions aligned logic across applications, reducing misalignment.

Teams embedded analytics in downstream applications, eliminating the need for manual collation.

The result: cleaner insights, faster decisions, and a real-time view of risk metrics in one governed ecosystem. All built on a consistent, centralized foundation.

Powered by Strategy's universal semantic layer, the reporting hub gave Fannie Mae trusted, real-time analytics to support confident risk management at scale, ensuring it can continue delivering liquidity and stability to the U.S. housing market.

Table of Contents

Definitions Recreated for Every Platform

For insurers, the challenge isn't identifying risks. It's reconciling insights. To build a complete loss ratio report by customer segment, an analyst may need to export data from four different systems:

- Policy details (Duck Creek)
- Claims amounts (Guidewire)
- Payment status (Mainframe billing system)
- Customer segments (Salesforce)

As these systems don't share a common data model, analysts must combine them manually in Excel and reconcile mismatched policy IDs.

Even when systems do exchange data, analysts often recreate definitions, mappings, and calculations across platforms.

Each system ends up with its own version of the same logic.

As a result, teams work with conflicting metrics because KPIs are defined differently. Finding errors meaks you have to repeat the reconciliation process, delaying decisions and affecting customer relationships.

The issue extends beyond reporting.

Without a shared data foundation, insurers struggle to enable self-service analytics, scale AI initiatives, or support real-time decision making across the organization.

Universal Semantic Layer Advantage

A universal semantic layer connects existing systems and maps them into one shared business model.

It unifies policy, claims, billing, and customer data into one source of truth. Data still lives within preferred workflows, but logic and context become consistent everywhere.

This makes business meaning portable, reduces conflicting reports, and helps insurers make faster, more confident decisions.

Table of Contents

Helsana

Like many insurers, Helsana was dealing with definitions and logic scattered across systems, reports, and teams. Data was spread across multiple warehouses, locked in siloed systems, and tied to inconsistent reporting tools.

With a backlog of nearly 2,000 reports across different environments, this fragmented data system was costing Helsana more than 2 million Swiss francs (CHF) annually, factoring in licenses and maintenance fees.

Helsana began its transformation by replacing Cognos and Qlik with Strategy's modern BI platform, bringing every dashboard, report, and analytic workflow into one governed environment.

Helsana

Helsana Versicherungen AG is Switzerland's largest health and accident insurer, trusted by more than 2.1 million individuals for comprehensive coverage and care. With 22 general agencies and 20 outlets nationwide, Helsana protects customers against illness, accidents, and more—providing peace of mind through every stage of life.

Next, it leveraged Strategy's universal semantic layer, retiring thousands of redundant legacy reports.
This aligned teams on shared definitions, metrics, and development standards, eliminating ambiguity and redundancy.
It also accelerated delivery across Helsana's analytics landscape.

Instead of maintaining 2,000 separate reports (each with its own embedded business logic), teams could now build dashboards that pull from centrally governed metric definitions.

90% less reports

Helsana turned 2,000 reports into just 200 user-friendly, self-service dashboards.

+ CHF 1.3 million

Reported annual savings after data consolidation with Strategy's solutions.

Table of Contents

Business Logic Trapped in BI Tools

Across many insurance organizations, the analytics stack often looks like this:

- Loss Ratio calculations live in 247 *Cognos* reports
- Reserve models are embedded in *Qlik* dashboards
- Pricing logic exists in *Excel* macros

Logic is controlled by individual tools instead of a central, governed source of truth. When critical calculations exist inside specific tools, they can't be reused, governed, or scaled across the organization.

As a result, logic becomes inconsistent across reports, dashboards, and scripts, making errors harder to detect. Over time, definitions split, reports don't align, and teams lose trust in their metrics.

Without a shared layer to govern logic, insurers lose access to consistent, governed insights and struggle to scale self-service analytics or AI initiatives.

Universal Semantic Layer Advantage

A universal semantic layer decouples business logic from legacy reports, SQL, and tool-specific models.

It sits above existing data environments, working across cloud and on-prem environments by design.

This allows organizations to modernize analytics, strengthen governance, and support advanced use cases without replacing their existing data infrastructure.

Organizations are moving beyond departmental analytics toward enterprise-wide data access and consistency.

BARC, "Data, BI and Analytics Trend Monitor 2026."

Table of Contents

Amica

Amica maintained over 600 dashboards across two separate reporting environments. This setup made it difficult for users to understand what data they were viewing and where to find the information they needed.

Amica began evaluating how to modernize reporting and improve usability without disrupting day-to-day operations.

To address this complexity, Amica leveraged the universal semantic layer and focused on four key changes:

Founded in 1907, Amica is the longest-standing mutual insurer of automobiles in the United States. Offering home, life, marine and umbrella insurance, as well as annuities, Amica is renowned for its financial strength and exceptional, award-winning customer service.

Consolidate Access	Standardize Context	Reduce Complexity	Improve Usability
1	2	3	4
Into a single, governed experience to reduce fragmentation across environments.	Users could clearly distinguish between operational and point-in-time data.	Decommissioned unused dashboards and reports across the department.	Made analytics easier to navigate and understand for everyday users.

Amica's department could now quickly distinguish between operational and point-in-time data, **reducing confusion and enabling faster, data-driven analytics**. With one unified, governed environment, Amica can expand self-service analytics confidently while maintaining data quality and consistency.

Table of Contents

Data Governance Divided Across Departments

A claims adjuster in California doesn't need medical underwriting data from applicants in New York. A customer representative shouldn't have access to litigation files meant only for the Legal department.

Insurers must control data access and ensure only the right people view sensitive information. They must also comply with strict data governance requirements, including:

HIPAA: protect PHI, log all access

SOC 2 / ISO 27001: demonstrate security controls

State regulations: restrict PII access, maintain audit trails

GDPR / CCPA : enforce data rights, track data lineage

Universal Semantic Layer Advantage

A universal semantic layer centralizes security, access controls, and governance across fragmented tools and data environments.

Instead of managing security separately in each tool, a universal semantic layer defines access rules once.

This allows insurers to view region-specific data accurately (e.g., claims adjusters see only active claims in their region).

But when departments use different tools, proving compliance becomes a manual audit nightmare.
If a user is added in Tableau but Snowflake permissions are not updated, sensitive data can become visible to people who were never meant to see it.

Even a single oversight exposes deeper weaknesses in access management processes that leadership and regulators take seriously. It can undermine governance controls, damage customer trust, and create long-term reputational risk.

Table of Contents

Sava Insurance

SAVA's advanced analytics use cases, such as fraud detection, rely on highly sensitive data. However, SAVA operated in a complex insurance environment that included:

- Multiple heterogeneous core systems
- Separate data warehouses across group companies
- Constantly evolving schemas, objects, and definitions

With thousands of disparate data sources, SAVA needed to protect sensitive data while enforcing consistent definitions, controlled access, and reusable logic across teams and systems.

SAVA began addressing these challenges by building a governed intelligence layer, reporting the following outcomes:

SAVA INSURANCE GROUP

SAVA Insurance is part of the SAVA Insurance Group and one of the leading insurance and reinsurance companies in Southeastern Europe. Headquartered in Slovenia, SAVA operates across more than 110 markets worldwide, delivering reinsurance, asset management, and retirement solutions.

Consistent Definitions

Teams accessed a centralized set of documented business definitions to improve consistency.

Governed Data Access

Role-based security, auditability, and controlled access were applied to sensitive data.

Clear Data Lineage

Leaders gained visibility into data documentation and ownership to support regulatory reviews.

The result was a more structured and transparent data foundation that **reduced duplication and strengthened governance.** It allowed SAVA to support advanced analytics use cases, including fraud detection, while maintaining tighter control over sensitive data across its environment.

Table of Contents

The Mosaic Promise

Mosaic, Strategy's Universal Semantic Layer, sits between your data infrastructure and analytics tools, defining business metrics once and enforcing them consistently across systems. Instead of *"Loss Ratio"* being calculated 50 different ways across Tableau, Python, Excel, and actuarial models, it is defined once in Mosaic and applied everywhere. This provides the foundation for consistent metrics, governed security, and portable business logic across your entire analytics ecosystem.

Consistent Metric Definitions

With Mosaic as the governed semantic layer, data quality is no longer dependent on individual reports or teams. Business metrics are defined and enforced centrally, and any changes are inherited across dashboards, models, and reports.
No manual work, no drift, no reconciliation.

Unified Insights

Mosaic aligns policy, claims, billing, and customer data into a single, governed source of truth. Insights are no longer shaped by the tool used to access them. Teams operate with the same logic, eliminating cross-team disputes and accelerating decisions.

Enhanced Portability

Mosaic decouples business logic from your entire infrastructure: data warehouses, cloud platforms, BI tools, and applications. Change becomes architectural rather than disruptive. Insurers can modernize platforms, migrate technologies, or introduce AI capabilities without rebuilding core metrics.

Improved Governance

Mosaic centralizes governance and access policies across environments, ensuring consistent role-based controls and audit visibility. Sensitive data remains protected while analytics teams retain the flexibility to innovate within secure boundaries.

Table of Contents

Insurer's Solution of Choice

IInsurance is evolving with AI-driven underwriting, real-time risk models, and predictive claims analytics. But without a governed data foundation, these initiatives struggle to deliver reliable results. Insurance operations must get four things right:

Consistent definitions (not 50 versions of a KPI)	**Connected systems** (not manual CSV exports)	**Portable business logic** (not locked in legacy BI tools)	**Centralized governance** (not fragmented security across tools)

Many modernization efforts fail because insurers focus on replacing tools rather than addressing these issues. They need a data foundation that centralizes data logic, prioritizes governance, and delivers the flexibility to modernize a BI stack without re-work or delays.

That's what Strategy Mosaic delivers.

Insurance leaders like Fannie Mae, Amica, Helsana, and SAVA Insurance are using Strategy Mosaic to unify fragmented data environments, and the results speak for themselves:

- **Helsana:** Reduced 2,000 reports to 200 dashboards, saving CHF 1.3M annually
- **Fannie Mae:** Eliminated hours of manual reconciliation in risk reporting
- **Amica:** Consolidated two BI environments into one governed platform
- **SAVA:** Enabled fraud detection with governed, consistent data definitions

For insurers, the challenge is no longer just connecting data. It is making business logic portable, governed, and reusable across analytics, operations, and AI.

Explore Strategy Mosaic →

Strategy

Table of Contents