

# Auto Insurance Endorsements with TIBCO CEP and SOA

## ORGANIZATION

The client is a prominent property and casualty insurance provider specializing in auto insurance programs. With a strong emphasis on non-standard auto policies, this segment constitutes over 90% of its premium portfolio. Additionally, the client underwrites standard and preferred personal auto insurance, monoline commercial auto insurance, and classic collector automobile insurance. Operating in 44 states and supported by a robust network of more than 12,000 independent agents, the client has established itself as a leader in the auto insurance market.

## CHALLENGE

As the 2nd largest provider of non-standard automobile insurance in the United States, the client processes an average of 2,000 to 5,000 policies daily, with over 95% originating from agents. Policy endorsements—which involve recalculating premiums, processing customer forms for e-signatures, applying state-mandated rules, and issuing updated policy declarations—are critical to the business. Previously, these endorsements were handled manually by Customer Service Representatives (CSRs), leading to the following challenges:

- **Complexity in Training:** Managing intricate endorsement rules increased CSR onboarding and training times.
- **Limited Scalability:** The manual process could not accommodate the high daily policy volumes, causing delays and increasing risk exposure.
- **Compliance Risks:** Human errors resulted in regulatory non-compliance, untimely updates, and incorrect cancellations.
- **Rule Application Inefficiency:** Business users struggled to modify and deploy endorsement rules consistently and effectively.
- **Inconsistent Customer Experience:** The lack of uniformity in generating notes and notifications led to dissatisfaction among customers and agents.
- **Premium Leakage:** Delayed policy updates, such as failure to remove discounts or adjust premiums when forms were not submitted on time, resulted in revenue losses.

The client needed an efficient, scalable, and automated solution to process endorsement requests while ensuring accuracy, compliance, and customer satisfaction.

## Technical Landscape

The client's growth through acquisitions resulted in a fragmented technology ecosystem. Transitioning from a mainframe-based system to .Net and Java-/J2EE-based platforms introduced challenges due to the lack of unified architectural modernization. Limitations of the legacy systems included:

- **Batch-Driven Processes:** These resulted in poor customer experiences and limited process visibility.
- **Delayed Error Reporting:** Errors were communicated to CSRs through post-process reports, rendering them non-actionable in real time.

- **Tightly Coupled Logic:** Business rules were embedded and duplicated across multiple systems, creating inefficiencies and inconsistencies.
- **Data Redundancy:** Duplication and lack of governance hindered effective business processes and rules management.
- **DLL-Based Architecture Issues:** Frequent memory leaks, version control challenges, and deployment refresh issues destabilized the solution.

## TECHNICAL SOLUTION

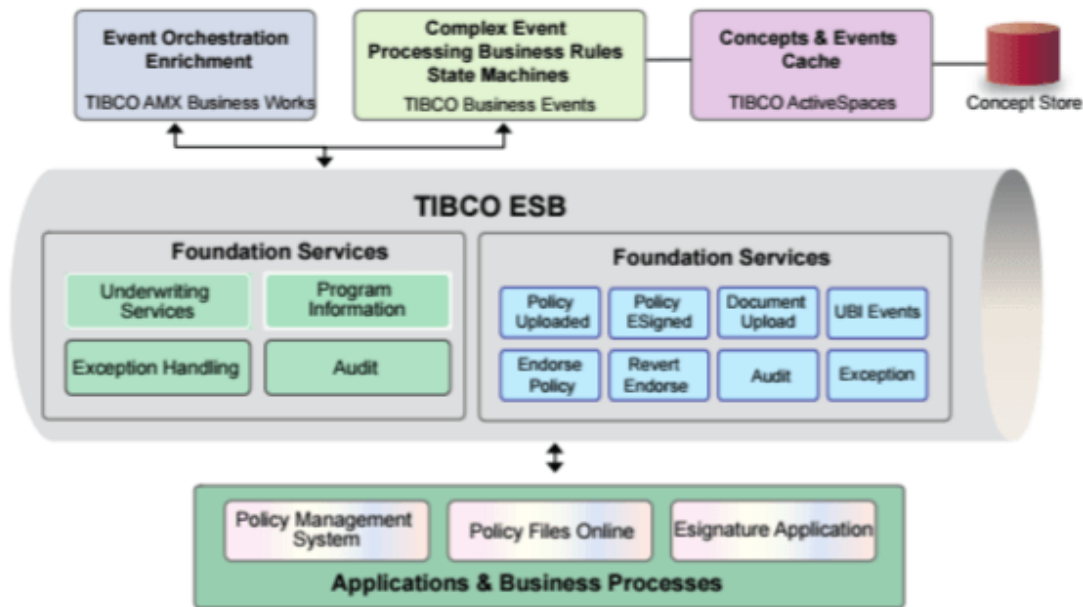
XTIVIA designed and implemented a robust, scalable, and low-maintenance Service-Oriented Architecture (SOA) and Complex Event Processing (CEP)-based solution to automate the endorsement process. This cutting-edge system ensured real-time processing, operational efficiency, and seamless scalability.

### Our Approach:

1. **Transition to Real-Time Processing:** Replacing batch-driven processes with event-driven, real-time workflows improved responsiveness and visibility.
2. **Event Instrumentation:** Existing applications were modified to generate events for critical policy milestones.
3. **Event Correlation and Pattern Detection:** Events were cached, patterns identified, and correlations established using a CEP platform.
4. **Real-Time Decisioning:** Business rules were applied dynamically using an inferencing engine for real-time decision-making.

### TIBCO BusinessEvents CEP Capabilities Utilized:

- **Event Subscription:** Subscribed to events like Policy Issued, Policy Suspended, and UBI Device Connected.
- **State Management:** Maintained state models to trigger time-sensitive processes such as policy endorsements based on e-signature submissions.
- **Automated Actions:** Suspended or canceled policies if required proofs were not furnished within specified timeframes.
- **Event Correlation:** Triggered compensatory actions, such as reverting endorsements when forms were received.
- **High-Performance Caching:** Delivered scalability and ensured seamless processing during high transaction volumes.



## BUSINESS RESULT

The automated endorsement process was successfully deployed across all target states, delivering significant business benefits:

- **Operational Efficiency:** The automated solution streamlined endorsements, reducing CSR training time and minimizing risk exposure through consistent and accurate policy updates.
- **Regulatory Compliance:** Automated rule application ensured consistent adherence to state regulations across all policies.
- **Revenue Optimization:** Timely updates to policies eliminated premium leakage by applying accurate adjustments.
- **Enhanced Customer Experience:** CSRs could focus on high-value activities, improving interactions with customers and agents.

## KEYWORDS

Insurance Automation, Policy Endorsement Optimization, TIBCO BusinessEvents, Service-Oriented Architecture (SOA), Complex Event Processing (CEP), Auto Insurance Technology, Event-Driven Workflows, Real-Time Business Decisioning, Customer Experience in Insurance, Non-Standard Auto Policies, Regulatory Compliance in Insurance, Premium Leakage Prevention, High-Performance Caching, Event Correlation and Pattern Detection, Insurance Workflow Automation

## SOFTWARE

TIBCO™ Products: BusinessWorks, EMS, Hawk, BusinessEvents, TIBCO SDK, and TIBCO Administrator; Analytics and Data Handling: Teradata

## ABOUT XTIVIA

At XTIVIA, we've been providing IT solutions and consulting services for over 30 years with a wide range of services, including technology assessments, IT service and asset management, software development, data analytics, cloud migration, DevSecOps, ERP, and enterprise content management. Dedicated to each discipline, ensuring that our clients receive the best possible service. Through strategic acquisitions, we've acquired talented people who are experts in their industries, passionate about what they do, and committed to providing exceptional service to our clients. Whether you need to improve your IT infrastructure or implement new software solutions, XTIVIA is here to help you achieve your business goals. XTIVIA has offices in Colorado, New York, New Jersey, Texas, Virginia, and India. [www.xtivia.com](http://www.xtivia.com)