



# Enabling Seamless Third-Party Integrations and Middleware Optimization for a Global No-Code Insurance Platform





## Key Issues

- Lack of defined principles and coding standards for middleware integration.
- Integration inconsistencies with third-party systems and marketplaces.
- Performance issues due to tightly coupled modules and synchronous workflows.
- No retry logic or monitoring for dead-letter messages in the Service Bus.
- Absence of real-time alerts and proactive monitoring.
- Low maintainability and reusability across integration flows.

## Solutions

Aspire implemented a standardized, high-performance integration framework using Azure Logic Apps, Functions, and Service Bus. By shifting to asynchronous workflows, introducing reusable components like Liquid templates, NuGet packages, and policy fragments, and

## About the Customer

The customer is a pioneering InsurTech organization that offers a no-code core insurance platform enabling insurers to build, configure, and launch digital insurance products rapidly. Headquartered in London and founded in 2012, the company serves a growing client base with over 200+ professionals. The platform empowers insurers and MGAs to innovate and scale by digitizing the complex insurance value chain from policy administration to ecosystem integration.

---

## Highlights

The customer envisioned a world-first: a truly no-code platform for insurers to innovate, adapt to market demands swiftly, and dramatically reduce time-to-market. Their platform needed to offer seamless integration capabilities with various third-party systems and marketplaces while also reducing total cost of ownership (TCO), supporting rapid deployment of complex products, and ensuring scalability and reliability. Aspire stepped in to architect a robust middleware framework and optimize the use of Azure-native technologies to meet these goals.

---

## The Challenges

The customer had ambitious goals but lacked a structured, scalable integration framework. Their Azure-based middleware, primarily using Logic Apps and Function Apps suffered from:

- **No standardized design patterns:** Resulting in fragmented and inconsistent integration logic.
- **Tight coupling in workflows:** Negatively impacting performance and increasing processing time.



centralizing authentication through a common token service, the solution significantly improved scalability and traceability. Enhanced monitoring with alerts and dead-letter queue management, along with strong governance through naming standards and deployment best practices, ensured a robust, secure, and maintainable middleware architecture.

## Benefits

- Enabled rapid product launches with faster integration cycles.
  - Improved scalability and performance through loosely coupled components.
  - Reduced operational overhead via reusable components and templates.
  - Increased system reliability with real-time alerts and robust error handling.
  - Strengthened governance, security, and maintainability across all integration flows.
- **Poor error management:** Dead-letter queues lacked handling mechanisms, making retry and recovery difficult.
  - **Limited observability:** No alerting mechanisms or action groups for tracking integration failures.
  - **Multi-product deployment challenges:** Limited compatibility and adaptability for new product implementations.
- 

## The Solution

Aspire conducted a comprehensive assessment and executed a multi-layered strategy across the following dimensions:

- **Middleware Optimization & Code Standardization**
  - » Established design principles and naming conventions for Logic Apps and Function Apps.
  - » Shifted from synchronous to asynchronous workflows wherever possible to improve performance.
  - » Adopted correlation IDs for end-to-end traceability.
  - » Centralized the deployment environment and enabled autoscaling for consumption-based Logic Apps.
- **Integration Architecture**
  - » Reengineered message queues, selecting the appropriate queue types and patterns (FIFO, publish/subscribe) based on specific use cases.
  - » Developed custom Liquid templates for dynamic data rendering.



- » Built a common token service to streamline authentication processes.
- » Implemented policy fragments for enhanced modularity and consistency.

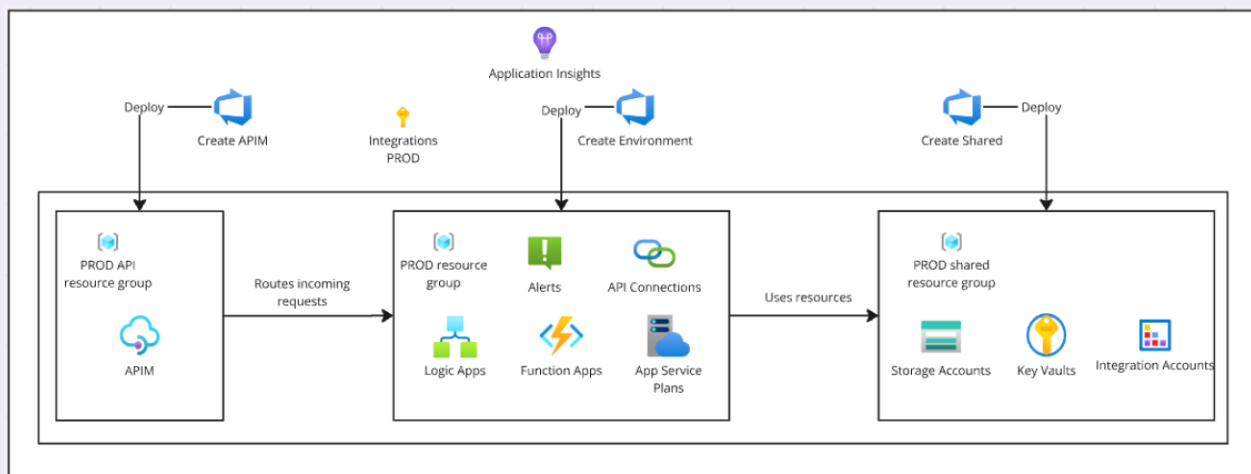
#### ■ Efficiency & Monitoring Enhancements

- » Created reusable NuGet packages to enforce code reusability and governance.
- » Managed dead-letter queues with session tracking and retry logic.
- » Deployed alerts and action groups for proactive monitoring and issue resolution.
- » Developed a centralized integration pipeline for all third-party systems.

#### ■ Security & Governance

- » Enhanced security practices with stronger authentication standards.
- » Standardized deployment procedures using checklists and ticket-based tracking for traceability.

## Architecture Diagram



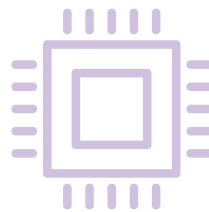


## The Results

Aspire's intervention helped the customer drastically enhance integration maturity across the board:

- Established reusable middleware standards applicable across the entire product portfolio.
- Enabled fast, repeatable integrations with leading digital and fleet data partners including Lexis Nexis, Salesforce, D&C, UAMC, Cytora, Radar-Fleet, ABS-Fleet, and more.
- Reduced onboarding time for new integrations from months to weeks.
- Improved product compatibility and reduced maintenance overhead across versions.
- Empowered insurers and MGAs to launch complex insurance products rapidly and stay ahead of market opportunities.

## Technology Snapshot



- » **Azure API Management (APIM):** Exposed and proxied endpoints for secure access.
- » **Azure Logic Apps & Function Apps:** Core middleware for event-driven integrations.
- » **Azure Service Bus:** Messaging backbone for queue-based communication.
- » **Azure Monitor & Alerts:** Enabled real-time monitoring.
- » **Elastic Cloud:** Centralized logging and observability.
- » **Azure Storage Accounts:** Persistent storage solutions for integration assets.





Aspire Systems is a global technology services firm serving as a trusted technology partner for our customers. We work with some of the world's most innovative enterprises and independent software vendors, helping them leverage technology and outsourcing in our specific areas of expertise. Our core philosophy of "Attention. Always." communicates our belief in lavishing care and attention on our customer and employees.

For more info contact: [info@aspresys.com](mailto:info@aspresys.com) or visit [www.aspiresys.com](http://www.aspiresys.com)

**USA**

+ 1 630 368 0970

**SINGAPORE**

+65 3163 3050

**INDIA**

+91 44 6740 4000

**BELGIUM**

+ 32 3 204 1942

**NETHERLANDS**

+ 31 (0)30 800 92 16

**POLAND**

+48 58 732 77 71

**MEXICO**

+52 222 980 0115