

Airline Fuel Lifecycle Automation

Transforming fuel operations from manual processes to integrated digital workflows

The Challenge

Airlines face significant operational and financial challenges managing fuel procurement, delivery, and accounting across their network. Manual processes, disconnected systems, and paper-based documentation create inefficiencies that impact both costs and compliance.

Common Pain Points

- Manual fuel order creation requires station coordinators to process each flight individually
- Paper fuel tickets delay invoice verification by days, creating month-end backlogs
- Three-way matching between orders, deliveries, and invoices is error-prone and time-consuming
- Limited visibility into actual fuel burn versus planned consumption hinders cost control
- Disconnected systems require manual data re-entry between operations and finance

The Solution

FuelSphere connects flight operations, fuel suppliers, and SAP S/4HANA Finance into a single integrated platform. By automating the complete fuel lifecycle, airlines eliminate manual handoffs and gain real-time visibility from fuel order to journal posting.

Schedule-Driven Automation

Flight schedule integration triggers automatic fuel order creation with calculated uplift quantities. Orders flow directly to suppliers via SAP Integration Suite, eliminating manual dispatch.

Digital Proof of Delivery

Station coordinators capture fuel deliveries on mobile devices with electronic signatures. Digital fuel tickets replace paper documentation, enabling same-day invoice processing.

Automated Invoice Verification

Three-way matching compares purchase orders, electronic proof of delivery, and supplier invoices automatically. Exceptions route to approval workflows while clean invoices post directly to SAP S/4HANA.

Real-Time Fuel Burn Tracking

ACARS and Electronic Flight Bag integration captures actual fuel consumption per flight. Remaining-on-board ledgers track fuel inventory by aircraft tail for accurate cost allocation.

Before and After Comparison

Process	Before FuelSphere	After FuelSphere
Fuel Order Creation	Manual entry per flight, 15-20 min each	Automated from schedule, zero touch
Delivery Documentation	Paper tickets, faxed to headquarters	Digital capture with e-signature
Invoice Processing	7+ days, manual three-way match	Same day, automated matching
Burn Data Capture	Manual pilot reports, next-day entry	Real-time ACARS/EFB integration
Cost Visibility	Monthly reports, route-level only	Real-time dashboards, flight-level
Compliance & Audit	Manual documentation gathering	Complete digital audit trail

Business Value Delivered

Key Business Outcomes

- **Accelerated Invoice Processing** — Automated three-way matching eliminates manual verification bottlenecks, enabling same-day invoice processing
- **Complete Digital Documentation** — Electronic proof of delivery replaces paper fuel tickets across all stations, ensuring audit-ready records
- **Streamlined AP Operations** — Exception-based workflows allow finance teams to focus on discrepancies while clean invoices post automatically
- **Flight-Level Cost Visibility** — Real-time dashboards provide granular fuel cost insights for route optimization and budget management
- **Reduced Manual Effort** — Schedule-driven automation eliminates repetitive data entry across fuel ordering, delivery capture, and reconciliation
- **Enhanced Compliance Posture** — Built-in controls and complete audit trails support regulatory requirements without additional documentation effort

Implementation Approach

FuelSphere implementations follow SAP Activate methodology, ensuring a structured and proven approach to deployment. A typical implementation spans 24 weeks from project initiation to hypercare completion.

Phase	Duration	Activities
Prepare	2 weeks	Project planning, team onboarding, environment setup, governance model
Explore	6 weeks	Requirements validation, fit-gap analysis, solution design, integration mapping
Realise-Build	4 weeks	Configuration, customization, data migration, integration development
Integration Testing	3 weeks	End-to-end testing, S/4HANA integration validation, external system connectivity

User Acceptance Testing	3 weeks	User acceptance testing, business scenario validation, training delivery
Deploy	2 weeks	Production cutover, data migration, go-live readiness, production deployment
Hypercare	4 weeks	Post go-live support, issue resolution, performance optimization, knowledge transfer

Get Started

Contact Diligent Global to discuss how FuelSphere can transform your airline's fuel operations. We offer personalized demonstrations and can provide a tailored implementation roadmap based on your specific requirements.

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