perplexity

do same kind of research or advanced research

Integration
EDI + low-code builder, event market, developer portal

Here is a comprehensive, advanced research synthesis for **Integration** in a modern compliance/RegTech platform, focusing on EDI, low-code integration builder, event marketplace, and developer portal—reflecting best-in-class design for SMEs and global businesses.

Integration – Full Research and Requirements

1. EDI and Core Integration Standards

- **EDI Support**: Fully support EDI X12, EDIFACT, and regional e-invoicing formats (e.g., Latin America, India) for orders, status, shipment, and license events. Enables auto-import/export with large trading partners.
    - Batch/real-time, scheduled, and event-driven flows.
- **API-First Design**: Every core function (screening, compliance, doc management) exposed via RESTful JSON, GraphQL, and secured with OAuth2, SAML, or API keys.
- **Data Mapping/Sanitization**: Built-in tools for ID/coding normalization (e.g., internal to supplier, ECCN-to-HS, free text to ontology, country codes to ISO).

2. Low-Code/No-Code Integration Builder

- **Visual Integration Designer**: Drag-and-drop UI for mapping, transformation, and event routing—enables business users to connect new ERP or e-commerce systems (SAP B1, NetSuite, Odoo, Shopify, Salesforce, etc.) to core compliance without custom code.
    - Prebuilt blocks: "On order create, trigger screening"; "On shipment release, sync to customs API."
- **Inline Testing/Sandbox**: Users simulate workflows with sample data before publishing.
- **Monitoring/Logs**: Track data flows, errors, retries, field-level transformations, and handoff reasons, all visible in real-time.

3. Event Marketplace and Automation

- **Event Bus/Webhook Registry**: Publish/subscribe model for all key events and actions, enabling clients, partners, or bots to hook in with real-time triggers.
  - Use cases: auto-notify on screening fail, trigger ERP update on license approval, automate bulk compliance reports.
- **Marketplace/Extension Gallery**: Central registry for event handlers and plugins (e.g., DocuSign contract sign-off, Slack/Teams alerts, additional sanctions sources).
  - Managed, reviewed, and auto-updating for security.
- **Workflow as a Service**: End users invoke serverless custom steps on events (Lambda, Google Cloud Functions)—flexibility for "last mile" automation.

4. Developer Portal & Ecosystem

- **API Docs and Examples**: Swagger/OpenAPI, test sandboxes, and live key generation.
- **QuickStart Kits**: Deployment scripts, integration recipes, and code samples for popular platforms (ERP, CRM, eComm, transportation/carriers).
- **Community and Support**: Forums, issue tracker, live API health/status, code certs for marketplace contributors.
- **Integration Governance**: Usage monitoring, SLAs for API performance, per-client rate limiting, and consent screens for data access ("Give your ERP access to these fields/scopes").

5. Advanced/Innovator Features

- **B2B Partner Onboarding Wizard**: Self-service onboarding for new suppliers/customers to connect their systems using EDI/API—with prebuilt mappings and success checks.
- **Change Impact Simulation**: "Test this mapping/rule against last 5,000 transactions" to eliminate sync/validation errors at go-live.
- **Cross-System Traceability**: Every integrated event/action is audit-logged (who, when, system, source, payload diff).

6. Security, Compliance, and Reliability

- **Role-Based Access and Consent**: Fine-grained permission management for every integration, with approval logs and change history.
- **Isolation/Resilience**: Tenants, clients, and even event handlers isolated to prevent "noisy neighbor" breakdown.
- **Regional/Legal Compliance**: Data sovereignty for integrations (e.g., Chinese ERP must store/process in China only); usage tracking and consent history for all third-party connections.

Acceptance Criteria

- 100% API coverage for documented business workflows, validated with e2e automated tests.

- New integration from a supported ERP/OMS to the compliance platform is possible, no-code, in <1 hour for common scenarios.

- EDI batch uploads and event handlers process 99% within 5-minute SLA under normal load, errors flagged in real-time.

- All user-built connectors and events are registered, permission-controlled, and logged for audit.

- Marketplace extensions/test suites validated by at least 2 live partner deployments and live community feedback.

Innovation/Market Gaps

- Legacy vendors typically deliver only APIs or template connectors—modern market demands visual, user-configurable integrations, event-driven extensibility, and real developer ecosystem (docs, forums, open source) for true TCO and global reach.

- SME-specific need: visual builders eliminate consultant cost and enable self-reliant growth. Marketplace/event store model enables continuous innovation and custom flows without core releases.

Would you like explicit user stories, subtasks, or documentation outline based on these new integration requirements?

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