Synergyze API Structure & Index Overview

1. Entity & License Types (Company Types & Users):

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| --- | --- | --- |
| License Type | Company Types | Primary Users (Roles) |
| Manufacturer License | Manufacturers, Vendors | Super Admin, Procurement Manager, Production Head, Finance Controller, Vendor User |
| Brand License | Retail Brands | Super Admin, Procurement Manager, Sales Manager, Finance Controller |
| Retailer License | Distributors, Buying Groups, Retailers | Retail Store Manager, Sales Manager, Finance Controller |
| Vendor / Supplier License | Contractors, Material Vendors | Vendor Coordinator, Vendor/Supplier User |
| Public / Freelance License | Independent contributors | Freelance/Independent User |
| Internal Company User License | Synergyze Internal Ops | Compliance Officer, Platform Operator, Tech Support, Admin Users |
| Logistics & 3PL License | Logistics, Warehousing | Logistics Coordinator, Warehouse Supervisor |
| Financial Institution License | Banks, FinTech, Escrow Partners | Finance Controller, Financier Users |

2. Total API Categories:

|  |  |
| --- | --- |
| API Category | Modules/Functions Included |
| Authentication & Role Management API | AWS Cognito-based login, Role Assignment, Token Management, Multi-Tenant Access, License Validation |
| User & License Governance API | License Issuance, User Role Assignments, Compliance Logs, Subscription Tier Management |
| KYC & Onboarding API | KYC document upload, Verification, AML Check Integration, API Hooks for Banks, Brands, Manufacturers |
| Procurement & Vendor Management API | PO Creation, Vendor Onboarding, Vendor Scorecards, Material Issuance, Contract Execution |
| Production & MES API | Production Scheduling, WIP Tracking, QC Updates, Raw Material Traceability |
| Inventory & Warehouse Management API | Stock Movement, GRN Updates, Warehouse Transfers, Replenishment Alerts |
| Sales & Distribution API | Order Creation, Listings, Drop-shipping, Returns Handling, Last-Mile Tracking, Retailer Performance Analytics |
| Financial & Escrow API | Invoice Upload, 3-Way Matching (PO-Invoice-GRN), Escrow Setup, Payment Releases, Reconciliation Logs, GST Reporting |
| Supply Chain Finance (SCF) API | Financier Onboarding, Invoice Discounting, Credit Disbursal Status, Fund Allocation Tracking |
| Compliance & Audit Trail API | Smart Contract Logs, Regulatory Compliance Flags, System Logs (AWS CloudTrail, GuardDuty), Taxation & Regulatory Reports |
| Demand Forecasting & AI Insights API | AI-driven predictions, Stock Alerts, Vendor Risk Scores, Replenishment Planning |
| Logistics & Route Optimization API | SLA Tracking, Carrier Assignments, Route Optimization, Delivery Confirmation |
| Model Builder API | Template Access, Workflow Simulation, Preview Results API |
| Notifications & Alerts API | Compliance Alerts, Escrow Triggers, System Errors, Payment Holds, Stock Warnings |
| Reporting & Dashboard API | Entity-wise KPIs, Operational Performance, Compliance Scores, Role-specific Dashboard Feeds |
| Universal Tech Support & Ticket API | AI-Powered Issue Detection, Ticketing, Resolution Tracking, Compliance Confirmation Logs |
| Public Ecosystem API | Freelance Task Integration, Limited Public Service APIs, Service Catalog APIs |
| System Health & Monitoring API | Platform Uptime, Transaction Status Check, AWS System Monitoring |

3. Total API Count (Estimate):

Approx. 90-120 APIs, broken into 18 core categories, with sub-APIs for CRUD operations, workflow execution, compliance checks, financial triggers, audit trails, and AI predictions.

4. Key Roles & Actions Index (Integrated in APIs):

|  |  |
| --- | --- |
| Role | Key Actions Covered in APIs |
| Super Admin | Full ecosystem access, License management, Governance oversight |
| Procurement Manager | Vendor onboarding, PO management, Contract approvals |
| Sales & Distribution Manager | Order management, Retail allocation, Price control |
| Inventory Manager | Warehouse management, GRN approval, Replenishment handling |
| Production Head | WIP tracking, Production scheduling, QC updates |
| Finance Controller | Escrow fund control, Reconciliation approval, Invoice validation |
| Compliance Officer | Smart Contract enforcement, Audit trail validation, Regulatory reporting |
| Vendor/Supplier User | Order acceptance, Production updates |
| Logistics Coordinator | Delivery coordination, SLA tracking, Route optimization |
| Retail Store Manager | Order placement, Returns processing, Store stock tracking |
| Platform Operator/Admin | System health monitoring, Access control, Escalations |
| Financier Users | Credit disbursal, Fund tracking, Compliance approval |
| Freelance/Public Users | Limited access tasks, Public services interface |

5. Onboarding Mechanism Index:

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| --- | --- |
| Step | API & Process |
| Registration | Auth API + KYC API |
| License Selection | User Governance API + Subscription Tier Assignment |
| Role-Based Dashboard Activation | Role Management API |
| Vendor/Partner Onboarding | Procurement API, Financier API, Logistics API |
| Smart Contract Setup | Compliance API + Financial API |
| Financial Account Linking (Escrow/Bank) | Financial API + SCF API |
| Operational Workflow Configuration | Procurement, Production, Inventory APIs |
| AI Forecasting & Model Builder Activation | Model Builder API + Demand Forecasting API |
| Notifications & Alerts Setup | Notification API |
| Training & Compliance Check | Compliance API + Universal Tech Support API |

6. Governance, Finance & Traceability Integrations:

|  |  |
| --- | --- |
| Aspect | API Category |
| Financial Traceability | Financial & Escrow API + Compliance API + SCF API |
| Compliance & Audit Logging | Compliance API + System Monitoring API + CloudTrail Integration |
| Smart Contract Execution | Compliance API + Financial API + Production APIs |
| Supply Chain Visibility | Procurement API + MES API + Inventory API + Logistics API |
| Regulatory Reporting (GST, SLA) | Compliance API + Financial API |
| Escrow Fund Flow | Escrow API, integrated with PO, Invoice, Delivery, Compliance Confirmation |
| Role-Based Action Validation | User Governance API + Compliance API |

7. Additional Recommendations:

1. Immutable Blockchain Integration: Tie key compliance logs, transaction records, escrow releases to blockchain layers for trust & audit.

2. Multi-Language API Documentation: Deliver the API set with clear Swagger/Redoc templates, role-wise.

3. Dynamic API Key Management: For banks/fintechs, implement API key rotation & role-based access at License level.

4. Sandbox Testing Environment: Provide isolated API sandbox for entity-level simulation (Brands, Financiers, Manufacturers).

5. Compliance Hooks with RBI, Taxation APIs: Ready-made compliance connectors for Indian financial regulations.

6. Public API Catalogue for Freelancers & Open Contributors.

Next Steps Deliverable:

1. Complete API Documentation Index (Swagger-based)

2. Entity-Wise API Matrix (Mapping APIs to License Models & Roles)

3. Role-Wise API Access Matrix

4. Onboarding Workflow Charts (API + Task Flows)

5. Compliance Flow Diagrams Integrated with APIs

6. Governance Overview API Structure

Shall I proceed to format and deliver this full API Documentation Index + Role Mapping Matrix for you immediately?