

NeoBank Digital – Partner & API Ecosystem Module

1. Document Control

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2. Executive Summary

The Partner & API Ecosystem Module enables NeoBank to securely expose services and integrate with external fintech partners, merchants, and third-party platforms. It supports Open Banking standards, accelerates ecosystem growth, and allows seamless partner-driven innovations. This module fosters new revenue streams, improves customer experiences, and ensures regulatory compliance in all API interactions.

3. Objectives

- Provide a secure, scalable API gateway for external partners.
- Comply with Open Banking and PSD2 standards.
- Enable monetization of APIs and partner services.
- Ensure secure access and monitoring of third-party integrations.
- Reduce partner onboarding time by 50%.

4. Scope

In-Scope

- API Gateway for partner integrations.
- Partner onboarding workflows.
- OAuth2.0 / OpenID Connect authentication.
- API rate limiting, throttling, and analytics.
- Partner dashboard for API usage monitoring.
- Support for developer sandbox and documentation portal.

Out-of-Scope

- Loan decisioning logic (covered in Loan Application Module).
- Fraud detection (covered in Fraud & Risk Module).
- Internal customer support workflows.

5. Key Features

1. **API Gateway** – centralized access point for partner APIs.
2. **Partner Onboarding** – registration, KYC validation, sandbox access.
3. **Secure Authentication** – OAuth2.0, OpenID Connect, API keys.
4. **API Management** – rate limiting, quotas, analytics.
5. **Developer Portal** – documentation, sample APIs, test sandbox.
6. **Usage Reporting** – monitor partner activity.
7. **Monetization Support** – billing and revenue sharing for premium APIs.

6. User Stories

- As a **partner fintech**, I want secure API access so I can integrate NeoBank services.
- As a **developer**, I want sandbox APIs and documentation so that I can test integrations.
- As a **compliance officer**, I want to ensure partner onboarding includes KYC so that only authorized entities access APIs.
- As a **business manager**, I want usage analytics so I can measure partner adoption.

7. Integrations

- **Partner KYC Services** – validate partner organizations.
- **API Gateway & Management Platform** – Kong, Apigee, or AWS API Gateway.
- **Billing Systems** – for monetization of premium APIs.
- **Internal Services** – Lending, Repayment, Fraud modules exposed via APIs.

8. Authentication & Security

- OAuth2.0 and OpenID Connect for partner authentication.
- TLS 1.3 encryption for API traffic.
- API keys with expiration and rotation policies.
- Rate limiting & throttling to prevent abuse.

- Continuous monitoring for suspicious API activity.

9. Non-Functional Requirements (NFRs)

- **Performance:** API response \leq 500 ms.
- **Availability:** 99.95% uptime for API services.
- **Scalability:** Handle 5M API calls per day.
- **Compliance:** PSD2, Open Banking standards, GDPR.
- **Security:** Regular penetration testing of API gateway.

10. Risks & Mitigations

Risk	Impact	Mitigation
Unauthorized API access	Data breaches	Strong authentication, API keys, OAuth2.0
Excessive API traffic	System downtime	Rate limiting and throttling
Poor partner onboarding	Low adoption	Automated workflows and sandbox environments
Non-compliance with PSD2	Legal penalties	Regular compliance audits and certification

11. Success Metrics

- API Adoption: \geq 50 partners onboarded in first year.
- Avg Partner Onboarding Time: \leq 2 weeks.
- API Response SLA: \leq 500 ms for 95% of calls.
- Revenue from Partner APIs: \geq 10% of digital revenue.

12. Dependencies

- API management platform.
- Partner KYC vendor services.
- Billing/monetization system.
- Regulatory approvals for Open Banking APIs.

13. Timeline & Milestones

- **Week 1–2:** Requirement finalization & architecture design.
- **Week 3–4:** API Gateway setup.
- **Week 5–6:** Partner onboarding workflows.
- **Week 7:** Developer portal launch.
- **Week 8:** Monetization & billing integration.
- **Week 9:** Security testing.
- **Week 10:** UAT & compliance review.
- **Week 11:** Production rollout.

14. Appendix

- Glossary: PSD2, API Gateway, OAuth2.0, Open Banking.
- Reference Standards: PSD2 Open Banking Directive, GDPR, RBI API Guidelines.