

# API First Strategy

A Blueprint for Seamless Integration and Scalability

# Executive Summary

Building scalable, available, and resilient systems ready for the modern digital landscape require an **API-First Strategy** for success. APIs are not just technical blueprints—they lay the foundation for interconnected applications facilitating smooth integration across the entire infrastructure, enabling faster delivery of solutions.

This whitepaper examines TechnoXander's view on:

- The fundamentals of API-first design
- Importance of API-first design across the product development lifecycle
- How API-first design is an important consideration in delivering innovative, **future-ready solutions**

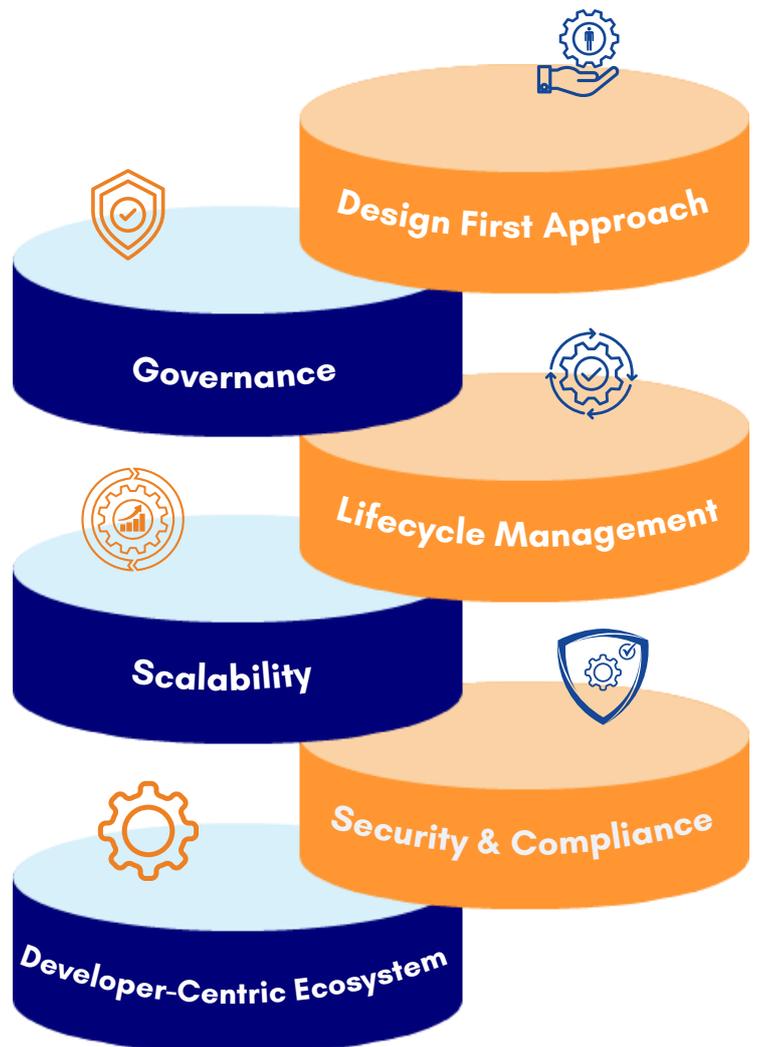
As we dive into the strategic elements, we also emphasise TechnoXander's approach to building APIs that adhere to industry standards, ensuring interoperability, scalability, and resilience.

# What is API First?

With an API-first approach, the design and development of APIs is treated as the **core** of the design phase and attributed as the foundation for all system functionalities. APIs are treated as strategic assets, ensuring they are **robust**, **reusable**, and **well-documented** during the product development lifecycle.

By prioritising APIs, organisations set the stage for applications which can adapt and integrate easily. This approach aligns business goals with technical plans, fostering collaboration between stakeholders, internal development teams and external developers looking to integrate with products.

At TechnoXander, we understand that simple, **easy-to-integrate** APIs are essential for delivering the Global Verification of Payee solution and we take strategic steps to ensure the right approach from inception.



# Design First Approach

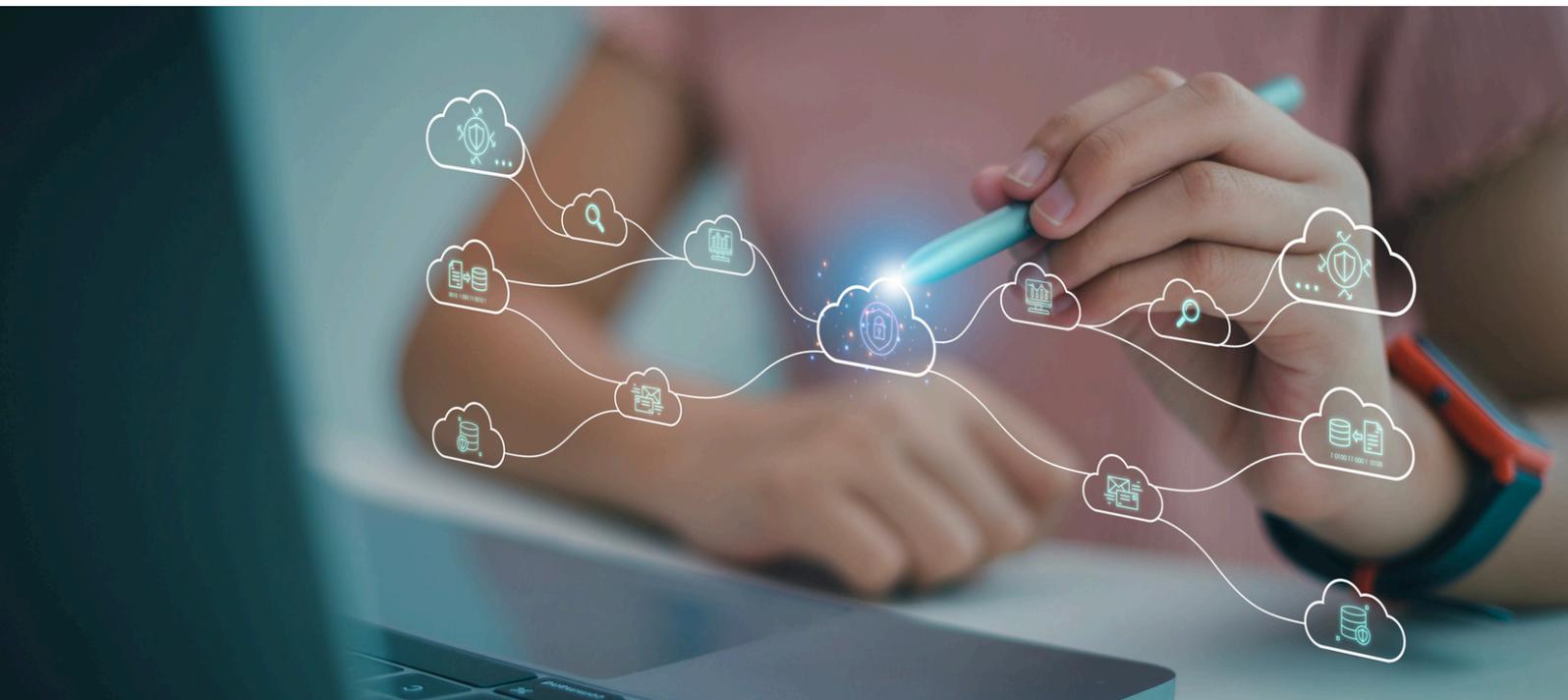
## Objective

Ensure APIs are customer-centric, reusable and align with business goals

A design-first approach starts with focusing on the customer's needs and the goal of delivering a single API that can perform payee verification on a global scale. To achieve desired objectives, we need to have clear and uniform documentation that is readable by both human and machine. The use of OpenAPI specifications and mock APIs helps stakeholders, developers and testers collaborate better, resulting in faster time to market.

Creating swaggers early in the development cycle reduces risks and fosters alignment across teams. Additionally, clear and predictable versioning guidelines helps with good API designs. **Versioning** supports product companies with enhancing their APIs while maintaining backward compatibility and providing good developer experience.

We use **OpenAPI** specifications to ensure our APIs are well-documented, easy to understand and user-friendly, keeping everyone aligned. This not only benefits our internal teams, but also accelerates integration timelines for our partners.

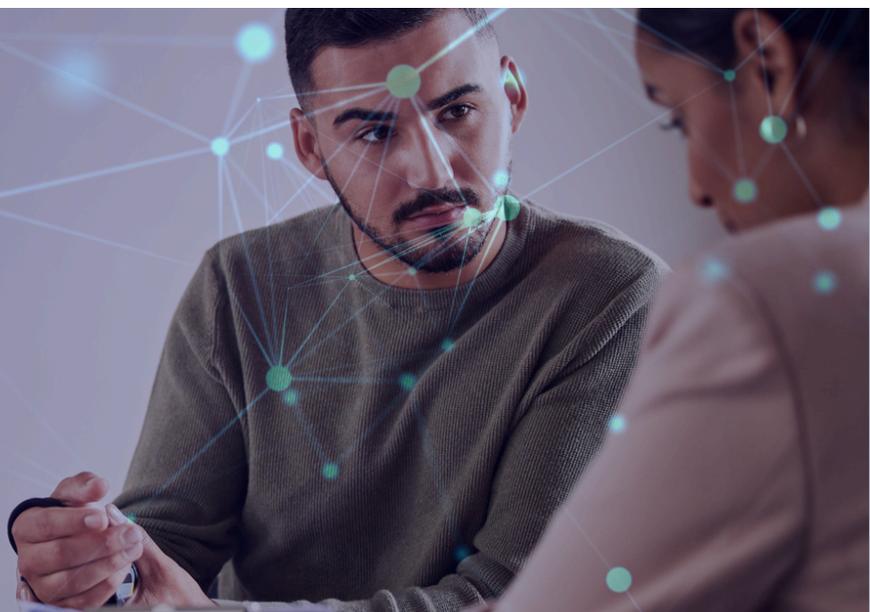


## Objective

Establishing governance for consistent, secure, and reliable APIs in TechnoXander's strategy.

Effective governance is the cornerstone of TechnoXander's API-First Strategy, ensuring consistency, security, and compliance across all our products and services. By establishing a robust governance framework, we guarantee that every API adheres to **standardised protocols**, enabling seamless integration and reducing potential risks. This framework includes clear documentation, versioning policies, and lifecycle management practices, ensuring APIs remain **reliable and future-proof**.

A key aspect of our **governance model** is the implementation of **centralised** oversight mechanisms while maintaining flexibility for innovation. By adopting tools and platforms that monitor API usage, performance, and security, we ensure adherence to policies without stifling the creative freedom of our development teams.



# Lifecycle Management

## Objective

APIs must be relevant and functional until deprecated

Planning for updates, deprecations, and continuous improvement are key for API management. **Continuous updates** to APIs are a must as the product evolves.

Deprecation policies are crucial, and the process of deprecating APIs must be meticulously planned. **Effective communication** with partners, giving developers sufficient time to transition to newer versions, and offering the option to delay deprecation's are key components of a well-planned strategy.

## API Lifecycle: From Design to Evolution



# Availability, Scalability and Performance



## Objective

APIs must be reliable

The increase in digital payments and adoption of wallets are driving traffic volumes. **Scalable, reliable, and fast** APIs are essential to meet the growing demand.

**A microservices-based backend architecture**, supported by scalable infrastructure, is essential for APIs capable of handling high loads. Also, caching and multithreading incorporated in design can lead to dramatic improvements in product capabilities.

Our products are built on microservices-based APIs structure which is modular in nature. The product APIs are designed to scale automatically and multiple servers in different regions ensure **24/7/365** availability. Zero touch deployments ensure no downtime which means our partners can deliver services 24/7/365 with confidence. We take pride in being reliable and this is an ethos we embody in everything we do.

# Security and Compliance



## Objective

Prioritising security and adherence to compliance standards

Security is paramount in API-first strategy and product development lifecycle. Robust **authentication** and **authorisation** protocols, such as OAuth 2.0 and JWT, ensure secure access to the entire API estate. Compliance with data protection standards and protection of sensitive data should be a key discussion point during the design phase.

At TechnoXander, we believe in Security by design. Our APIs are **Financial Grade API (FAPI)** compliant with fine-grained authentication and authorisation at the heart of our products.

Our **ISO 27001:2022** certification and ISMS place high importance on data protection which is further supported by organisation policies. Top down approach to security and compliance reflects in the high standards for API build giving partner organisations comfort to proceed without worry.

# Developer-Centric Ecosystem



## Objective

Creating the Eureka moment for the developer

APIs are primarily consumed by developers and their understanding has direct impact on implementation timelines. **Clear documentation** with context, step-by-step guides and swaggers make integration easy for external developers. Additionally, hosted developer portals which provide a 'Try it' experience and act as a one-stop shop for accessing all resources related to APIs complete the Eureka experience for developers.

Our developer portal with clear documentation, try it now feature, and support for interactive API testing helps developers from partner organisations to build with confidence. We also provide full-fledged sandbox environment with integrated **OAuth 2.0** flows which enable partner developers to test all scenarios and mirror production conditions leaving no room for confusion at the time of production deployments.

# API Success Metrics

## What are ideal Key Performance Indicators (KPIs)



### Availability

APIs must be available 24/7/365 to ensure that critical business services such as payments initiation or **digital banking** or core banking remain available at all times.



### Response Time

Fast Response time is a must for user satisfaction. Anything less than 1.5 sec of response time for complex APIs with **multiple functionalities** can be considered good.



### Scalability

Ability to scale with load, handle **multiple** API calls, **concurrent** users are KPIs which must be considered when assessing quality of APIs.



### Security

Alignment with global standards for API build such as **OAuth2.0**, signing encryption, use of **TLS**, **JWTs** and **FAPI** are non-negotiable.

## Benefits of API First Strategy

### Faster Time to Market



### Enhanced Security



### Compliance



### Enhanced Partnerships



# Best Practices for API First Development

## Adopt a Design-First Approach

Use of tools like Swagger or **OpenAPI** specification to define API specifications before coding is important for alignment between technical and non-technical stakeholders. This reduces rework at later stages and can improve delivery times massively.

## Alignment between stakeholders

Business, Technical teams, developers and end-users must come together to give feedback in early stages of product development. This ensures that **APIs are fit for purpose** and achieve objectives set out for product feature releases.



## Security by Design

Robust security measures, such as authentication, authorisation, encryption and role-based access controls into the **API architecture**. Security risks must be assessed and addressed as the product build progresses. There should be no compromise in alignment with industry standards.

## Monitor and Iterate

**Continuous monitoring** of API KPIs set out should be carried out and used as input for further improvements. Iterative updates ensure APIs remain relevant, reliable, and aligned with business objectives.

## Plan for Versioning

Maintain backward compatibility by versioning APIs. This ensures **seamless transitions** for existing integrations when new features or updates are introduced.

# One API, Many Geographies

TechnoXander VoP solution provides international compatibility to meet regulatory standards worldwide connecting with financial institutions globally.

## Europe



## Americas



## Middle East & Africa



## Asia Pacific





## About TechnoXander

At TechnoXander, we drive payments innovation with agility and adaptability. Headquartered in London, we empower banks and financial institutions to leverage PSD2, PSD3, Open Banking, and advanced fraud prevention solutions like CoP and VoP. Committed to staying ahead of trends, we invest in cutting-edge financial technology while maintaining robust security, as reflected in our ISO 27001:2022 certification.

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