Fiorano

BIAN
Banking Industry
Architecture Network

WHITEPAPER

Restructure Your Bank for the Digital Age Using APIs and Microservices

The Banking CXO Series

TABLE OF CONTENTS

FOREWORD

It's time for financial services providers to stop firefighting external challenges and technology developments and start taking control of their own destiny.

That doesn't mean taking on the full burden of core banking transformation as an individual enterprise, assuming it as a competition point – but instead working together with the wider industry to build a standardized model. From there, financial enterprises will be empowered to compete in the areas that matter – namely, the service and products they offer to customers.

BIAN provides a way for banks to achieve this in a standardized format, and Fiorano technology delivers powerful BIAN capabilities for both 'Above the Glass' (customer facing apps) and 'Below the Glass' (back-end processing) requirements, for banks willing to adapt and innovate.

Hans Tesselaar

Executive Director,
Banking Industry Architecture Network (BIAN)

THE CHALLENGE FOR BANKS

In today's fast paced market, new business requirements are constantly emerging from ever evolving customer demands. Banks lack the agility to respond to this state of flux; new business opportunities are lost because the current technology of banks cannot be adapted fast enough to implement new requirements in time and meet customer expectations.

Newly emerging Fintechs and neo-banks can respond to disruptions much faster in niche markets and therefore lure customers away from banks.

What is needed is a new banking architecture that makes systems more agile, enabling quick responses to rapidly changing customer preferences.

The Banking Industry Architecture Network (BIAN) Standard is a framework of standardized APIs and Microservices based on new technology insights that enables a Bank to instantly respond to new and changing business requirements – empowering banks and satisfying customers.

THE EMERGENCE OF OPEN BANKING

Modern, technologically equipped fintech companies and neo banks, currently have a lion's share among the banking customers, globally. With increased concentration, crowding and competition in the banking industry, traditional banks must now compromise their tech-savvy, young customers to the newly established neo banks or fintechs. In fact, every customer, young or old, expects to stay updated about their accounts on mobile applications rather than physically visiting a bank.

This increased dependence on mobile banking applications and other value-add services has shot up the pressure on legacy systems that can no longer meet the speedy and complex customer demands. Therefore, traditional banks have realized the significance of strong technology infrastructure and are in process to transition into advanced, future-proof technology that will help the institution sustain and grow over time.

MISREADING THREATS AND OPPORTUNITIES

Ambitious Fintechs took immediate, decisive steps to leverage Open Banking, winning market-share and customers over banks. Traditional banks ignored the opportunity to re-invent and engage in Open Banking markets, in many cases doing the bare minimum to comply. This has resulted in increasingly dissatisfied customers.

Recent data from Europe shows how active the Fintech ecosystem is, proving to be a very real threat for traditional banks:

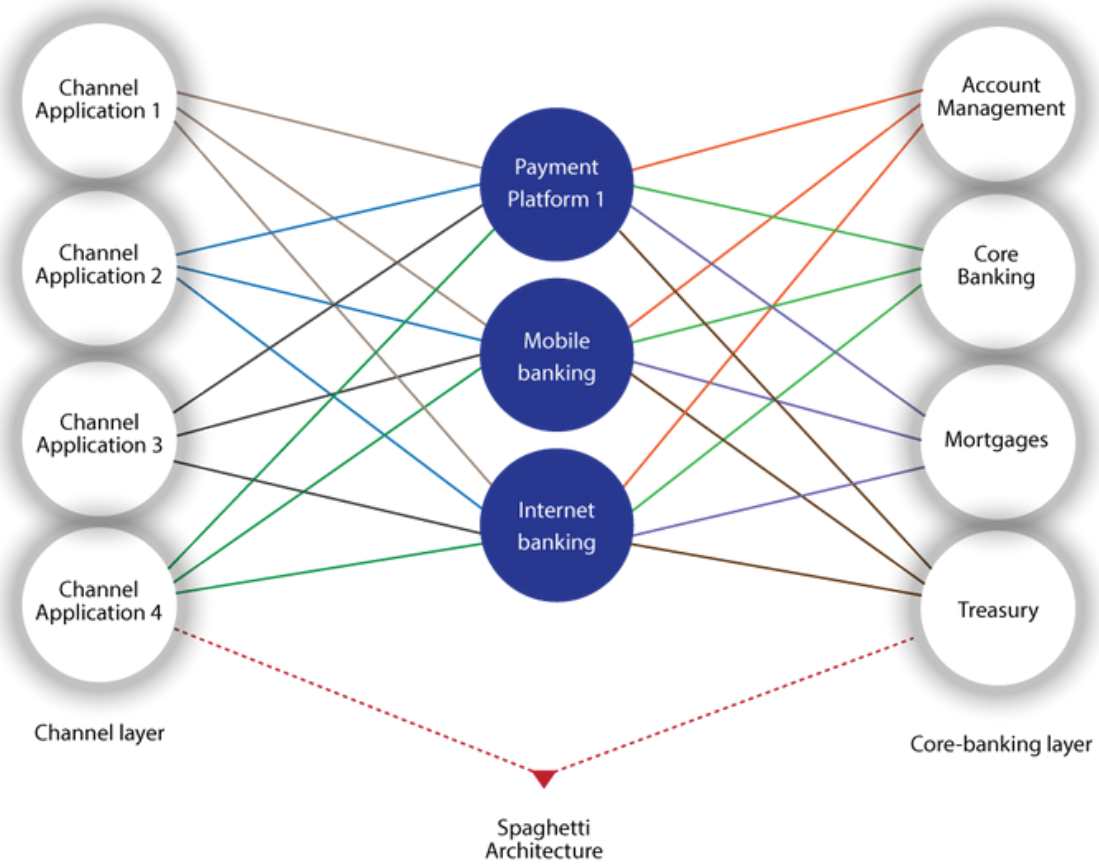
Konsentus research from Q4 2021 Konsentus Third Party Provider Open Banking Tracker 1

WHAT HOLDS BANKS BACK?

Most banks today operate with complex, unmanageable IT architectures, impeding speed-to-market for new products and services. Increasingly inflexible legacy systems have resulted in business silos and monolithic applications that hinder agility, adversely impacting the pace of key transformation initiatives.

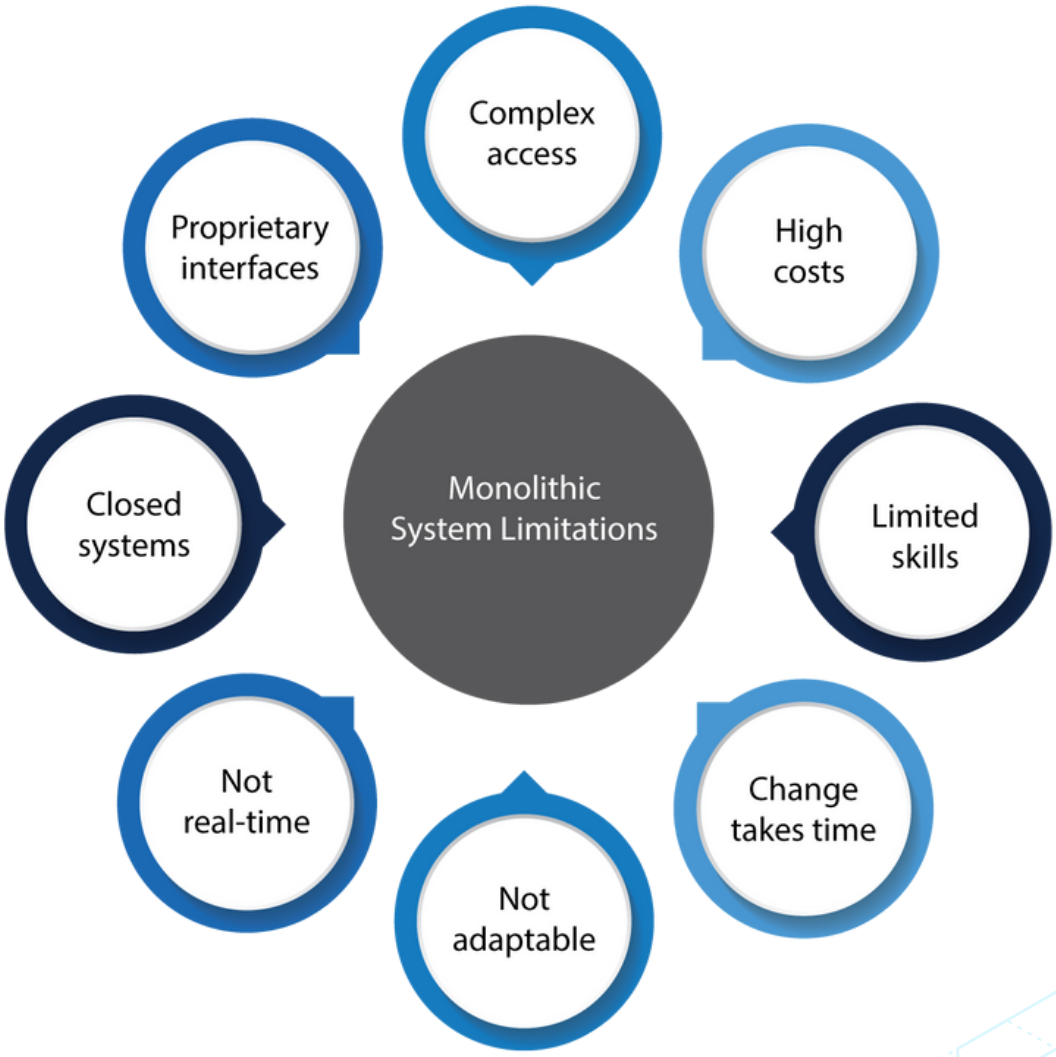
Core functions within a bank have traditionally been implemented as monolithic software applications. In the race to stay ahead and provide great customer service, banks embraced digital capabilities in a provisional manner, thus introducing further complexity into their underlying IT architectures.

While the IT-systems within a bank implement multiple distinct applications, the business processes that banks need to implement to address changing customer requirements typically span multiple such applications. Because of this, each time a bank wishes to implement a new business process, it must engage in an integration project across multiple applications. Over time, multiple such integrations create the classical “spaghetti architecture”, resulting in problems of scalability, manageability, and cost.



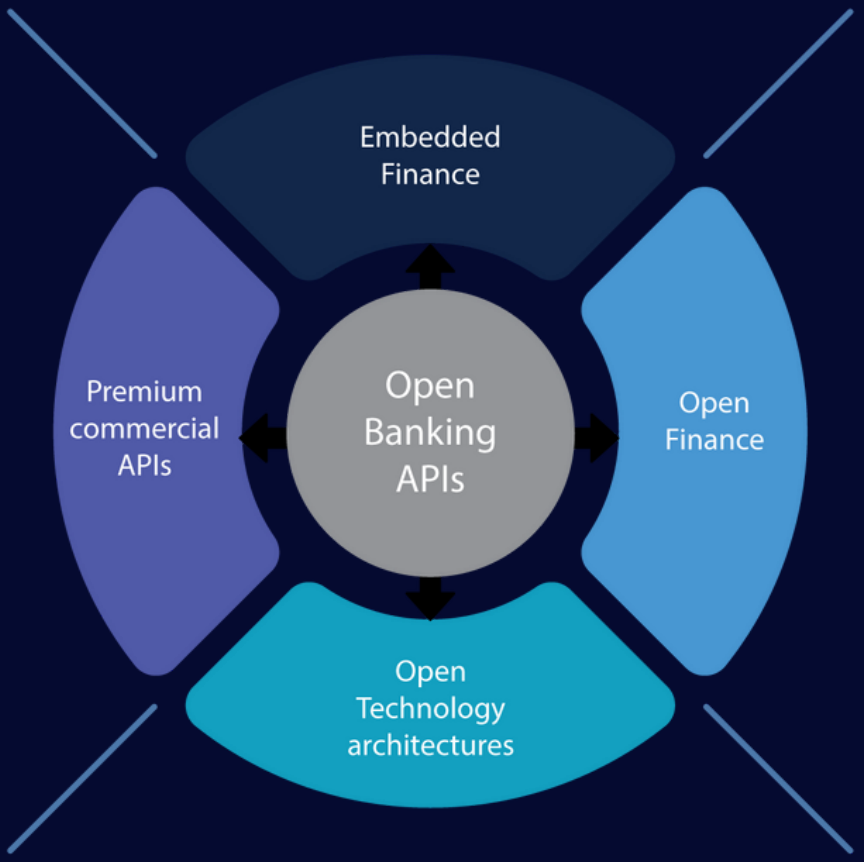
Large portions of IT budgets are spent on unnecessarily building complex integrations which become a major bottleneck when it comes to banking innovation. Gartner estimates that over 60% of the IT budgets in banks go toward integration.

Restrictions imposed by these monolithic platforms include:



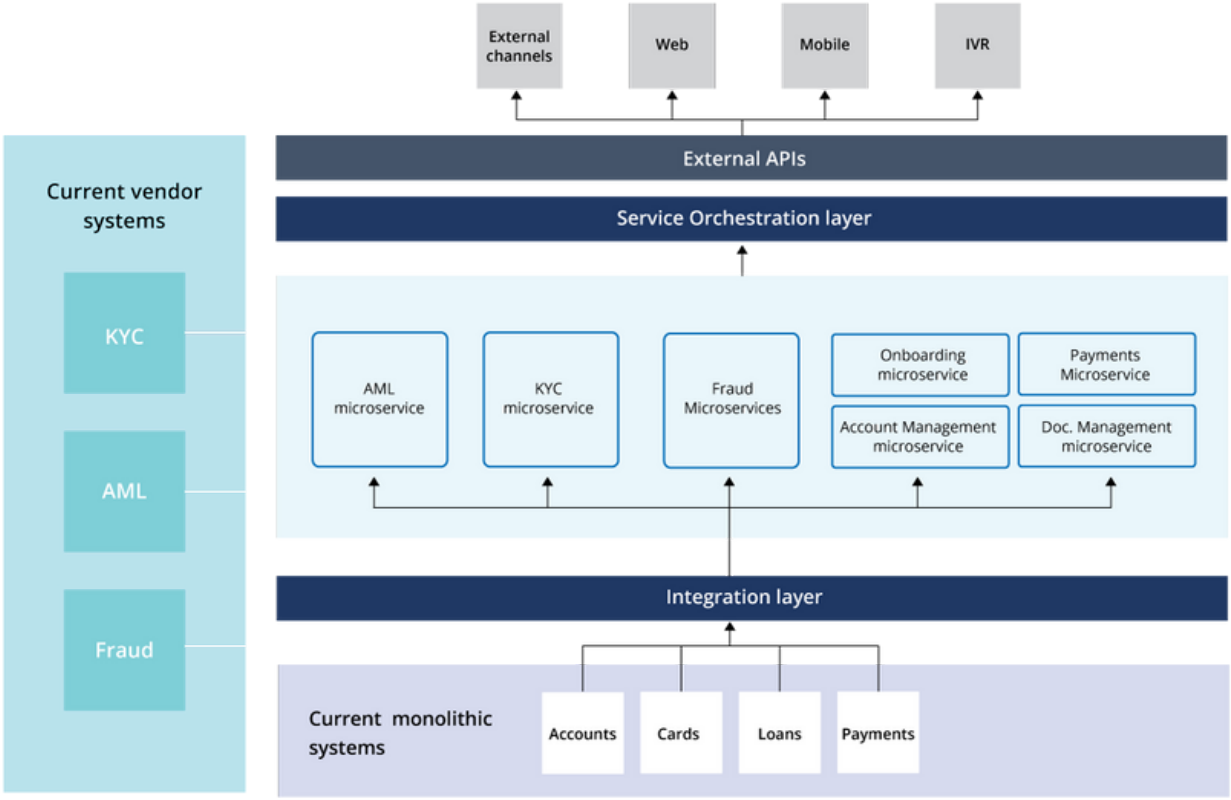
THE NEED FOR COMPONENTIZED BUILDING BLOCKS

As the threat from Open Banking powered competitors continues, considerations have now evolved from 'basic' Open Banking to Premium APIs, Embedded Finance and Open Finance; to support all these use-cases, core-technology architectures need to evolve.



BUILDING CORE SYSTEMS TO MEET ANY CHALLENGE

The solution to scaling systems is to use existing banking applications (including core banking, AML, KYC and other monolithic systems) as databases of information ('system of records') and **implementing banking business processes as APIs and Event-Driven Microservices** that access these systems of records, as illustrated in the figure below.



Notice that all business-logic is now moved out of the original monolithic applications. These applications are now used essentially as databases, while all the business logic and processes are transferred out to Microservices and API layers. New business logic is now composed using visual tools from pre-built, pre-tested Microservices.

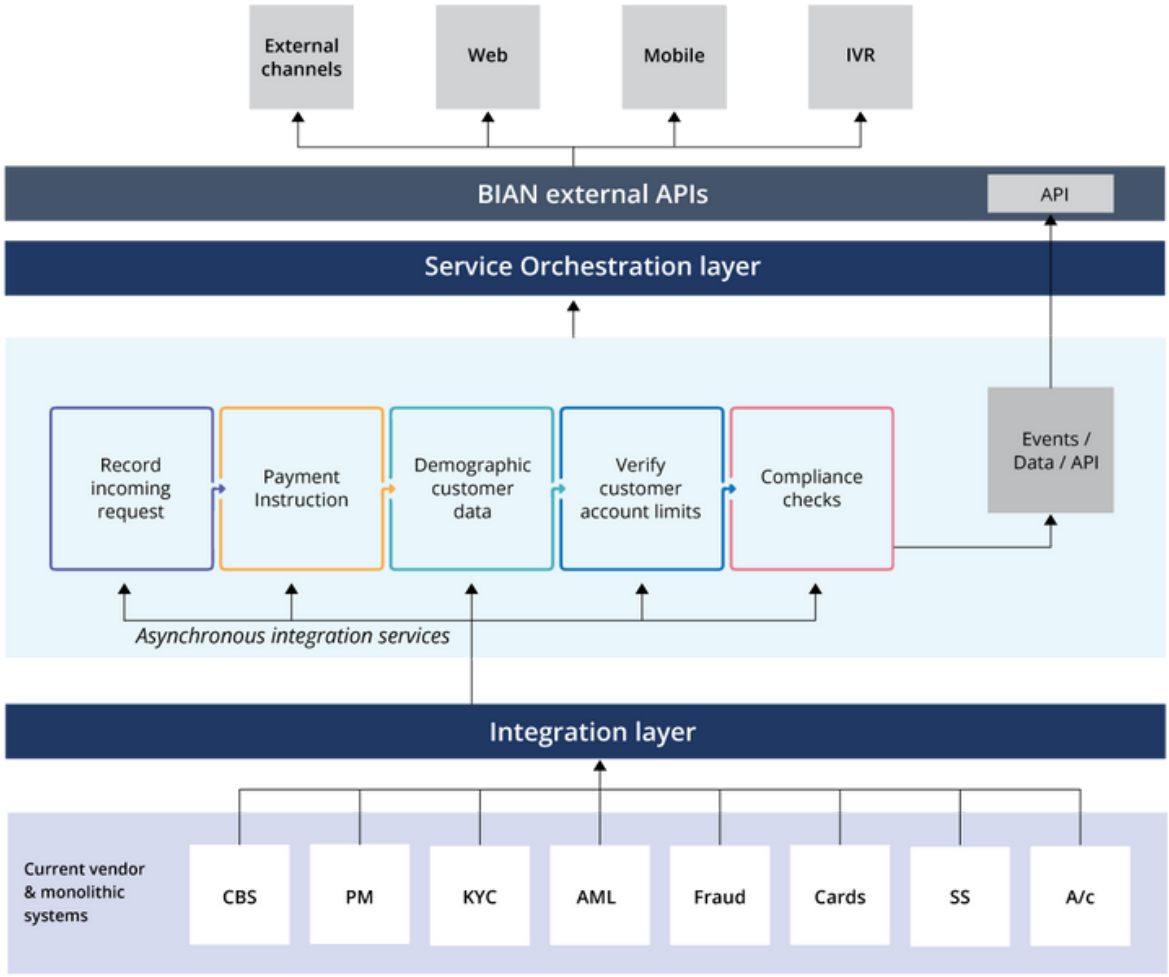
THE EMERGENCE OF BIAN

BIAN is a consortium of the world's largest banks and system integrators. Since 2008, the top Banking application architects from these organizations have worked to define the entire business logic of a Modern bank in the form of Microservices and APIs. The result is the BIAN standard, composed of 28 higher-level Domains which define:

- 321 Service Domains (188 core and 133 support)
- 240+ APIs

These Service Domains and APIs collectively cover all the functions of a modern bank.

The diagram below shows part of a BIAN flow that handles an incoming Request for Payment at a debtor bank



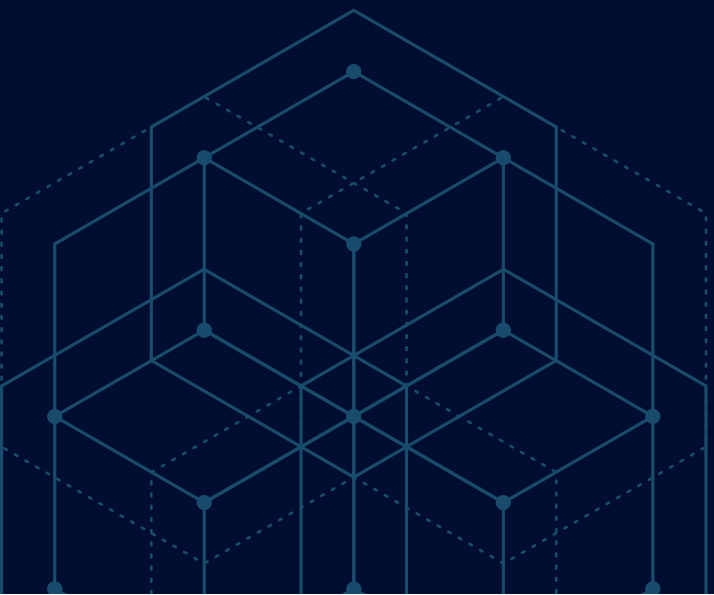
There is considerable competitive advantage in merging old and new systems. Structuring your Bank to be customer-centric and responsive requires your core technology architecture to be:

- Real-time
- Open, standards based
- Scalable and multi-cloud ready

For which crucial underlying capabilities required are:

- Being API centric: internal & external
- Microservice centric building blocks
- Scalable Infrastructure

Designed as an open standards, API and microservices-centric architecture by the world's leading Banking Architects, the BIAN service landscape provides a framework for exposing closed core-banking functions as open, standards based microservices.



BUILDING THE BANK WITHOUT BREAKING THE BANK

Standardized APIs and data-specifications resolve the issue of high costs. BIAN Service Domain specifications are:

- Standards & API based
- ISO 20022 aligned
- Optimized for interoperability
- Designed to leverage the intrinsic value held within legacy systems

BIAN adopts a microservices based approach to modernizing core systems by:

- Relegating (not retiring) monolithic systems' role to a database (System of Records) instead of increasingly restrictive Systems of Transactions

- Using open standards-based definitions for API-based service domains for functions that have only been available in monolithic and closed systems

BIAN ON FIORANO

Fiorano supports data extraction from core systems through an integration-first approach and a common model based on open, standards-based, real-time, scalable microservices and APIs.

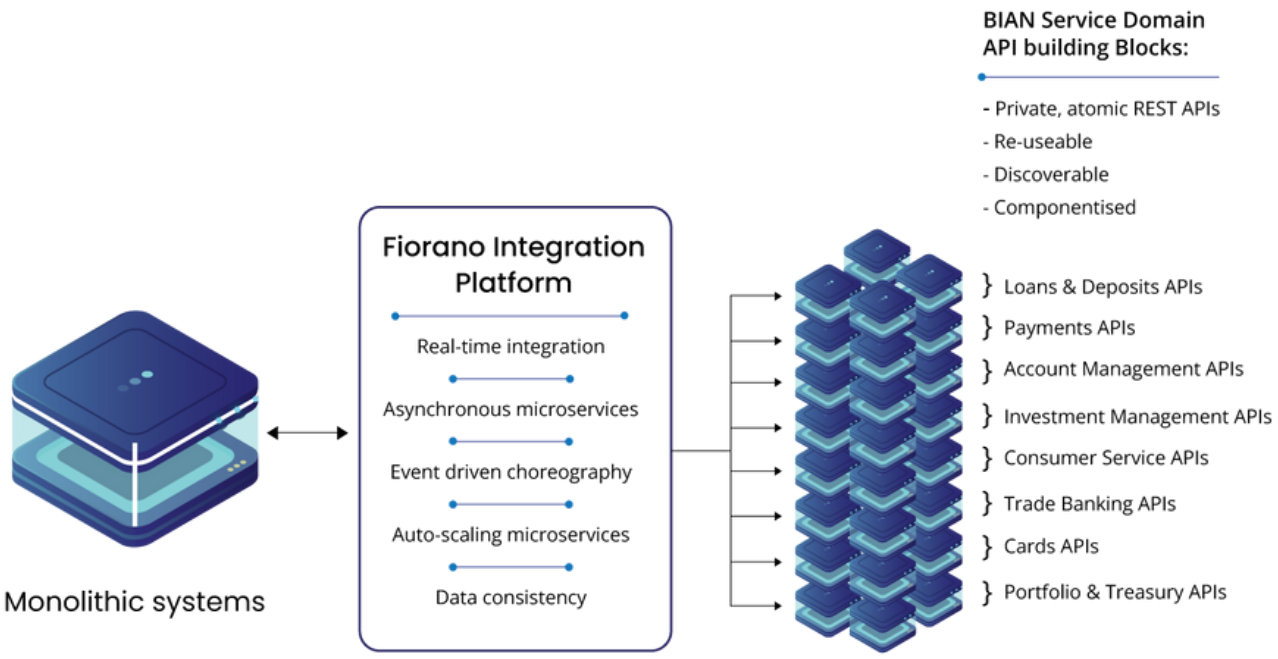
Fiorano delivers:

Real-time asynchronous integration

Event-driven choreography

Auto-scaling microservices

Fiorano's platform provides integration and API capabilities (matching BIAN models without extraneous coding) that support low-risk, progressive core-modernization approaches. Data is pulled in the form of BIAN service domain building blocks that are real-time and composable.



Visit: www.fiorano.com/solutions/bian

ABOUT FIORANO

Connecting People Through Technology

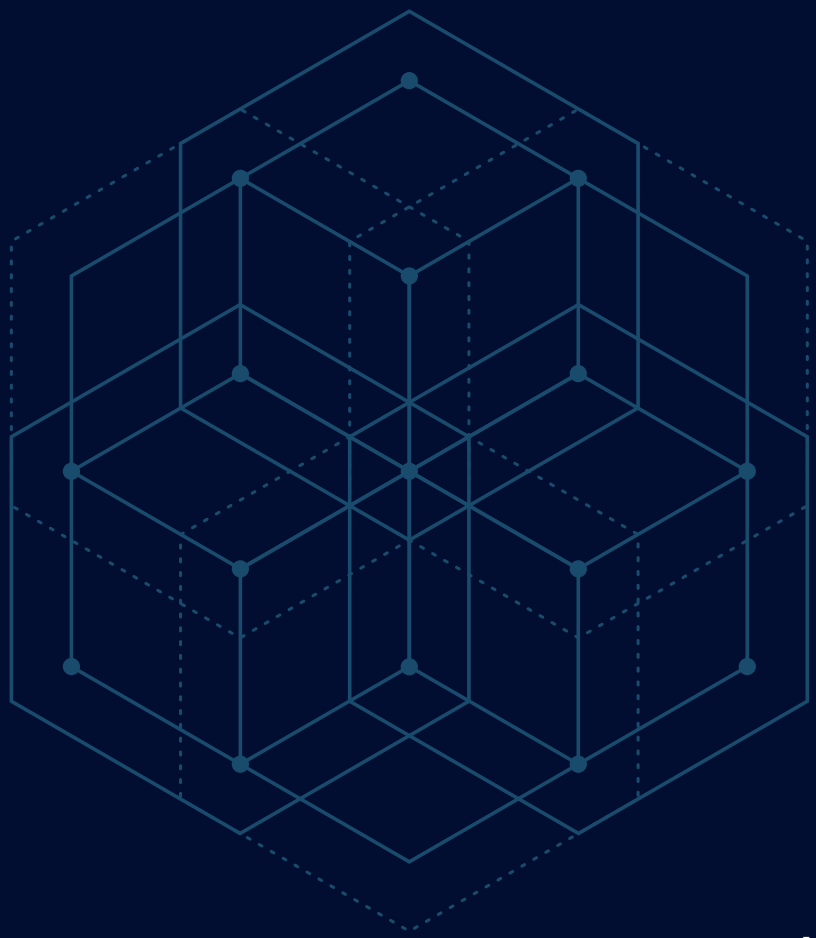
Fiorano is a leading enterprise integration, microservices and API management software provider.

Our products and solutions connect applications, devices, and data to streamline business processes, helping companies scale, adopt emerging technologies, and improve customer experiences.

Fiorano operates worldwide through its offices in 9 countries and network of partners across the globe.

Drop us a line:

www.fiorano.com
info@fiorano.com



ABOUT BIAN

The Banking Industry Architecture Network (BIAN) is a collaborative not-for-profit ecosystem formed of leading banks, technology providers, consultants and academics from all over the globe.

Together this network of professionals is dedicated to lowering the cost of banking and boosting speed to innovation in the industry.

Members combine their industry expertise to define a revolutionary banking technology framework that standardises and simplifies core banking architecture, which has typically been convoluted and outdated. Based on service-oriented architecture principles, the comprehensive model provides a future-proofed solution for banks that fosters industry collaboration.

https://www.bian.org

1: https://www.konsentus.com/resources/tpp-trackers/q4-2021-konsentus-third-party-provider-open-banking-tracker/

2: https://www.bian.org/participate/blog/open-banking-will-blow-core-systems-water/