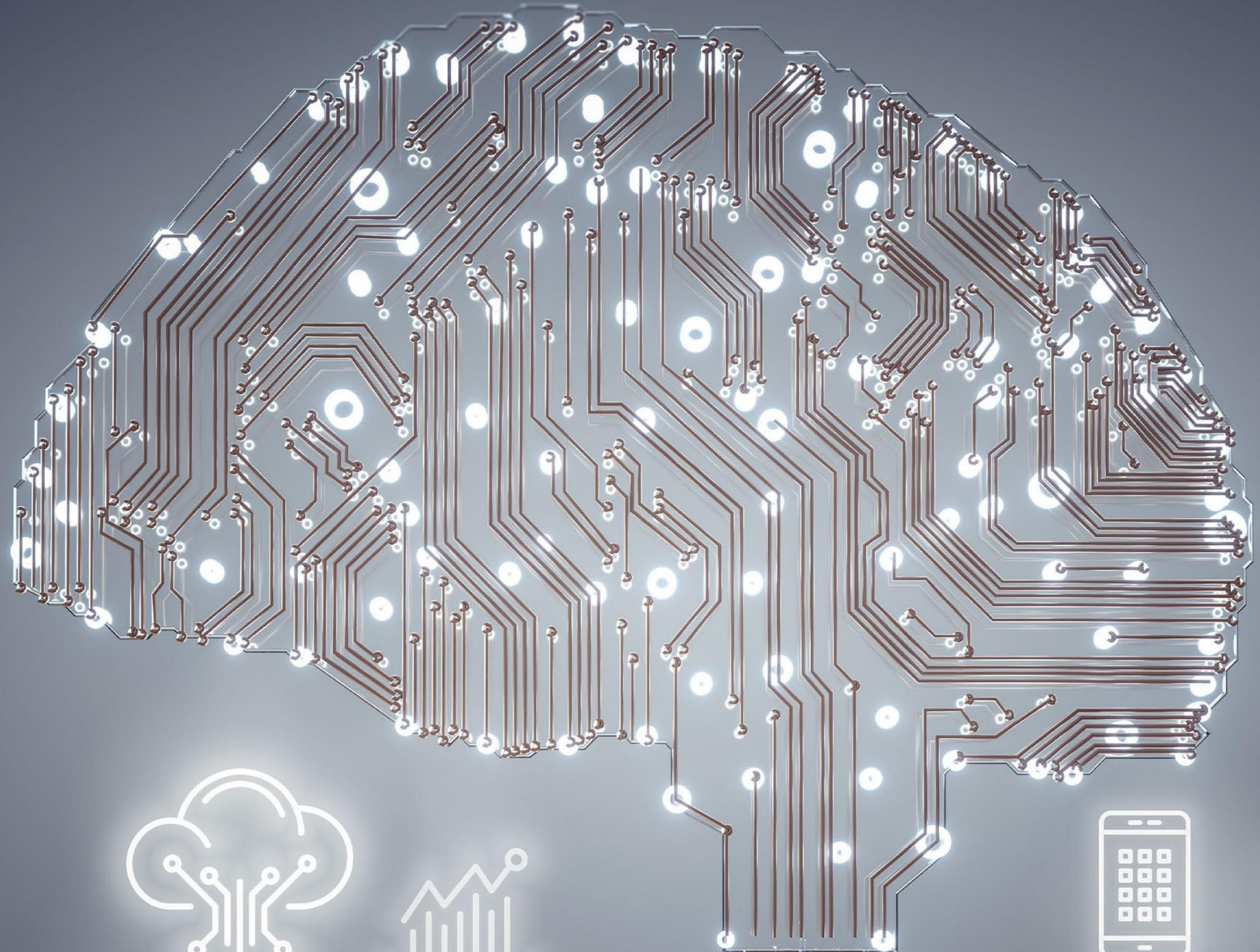
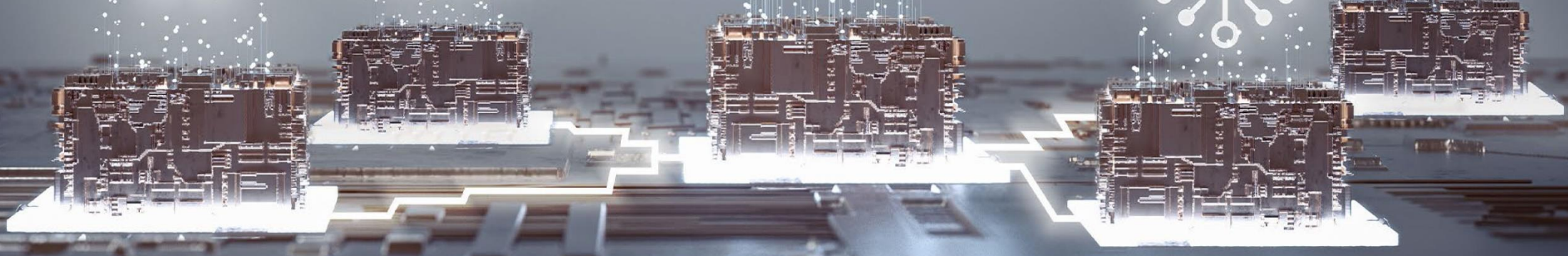
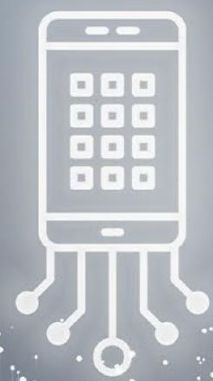




AZENTIO™



PRODUCT OVERVIEW





OVERVIEW /

Architectures of iMAL

Functionality of iMAL

iMAL Islamic Core Banking – Branch Automation

iMAL Customer Service Management · iMAL Islamic Profit Calculation

Investment

iMAL Financial Assets · iMAL Sukuk Management



ISLAMIC FINANCING /

Retail & Corporate Financing

iMAL Facility Management · iMAL Islamic Invest

iMAL Collection Management · iMAL Islamic Microfinance

Digital Banking Platform

Digital Channels · Digital Solutions

Treasury

iMAL Islamic Treasury

Cash Flow Monitoring

Trade Finance Operations

iMAL Trade Finance



RISK & COMPLIANCE /

Integrated Risk Management · Financial Crime Management · Anti-Fraud

Sharia Audit Solution · International Taxation

Operational Accounting

iMAL Accounting · iMAL Provisioning

iMAL Revaluation · iMAL Fixed Assets



ANALYTICS & REPORTING /

Analytics

Business Intelligence · Artificial Intelligence

Reporting

Regulatory Reporting · Financial Consolidation



SUPPORT APPLICATIONS /

iMAL System Administration & Security · iMAL Multi-Threading Scheduler

Notification Management · Business Process Management



SYSTEM INTERFACES & INTEGRATION SOLUTIONS /

Digital Hub · Administration · Open API · Dynamic Files · Platform Web Services · ATM · SWIFT/RTGS/ACH/SARIE

Electronic Cheque Clearing · Live Financial Markets · Credit Bureau



STRATEGIC PARTNERSHIPS /

DocuWare · Software Group · OneSpan · Arabot · Thomson Reuters · Refinitiv · Bloomberg

Signotec · IrisGuard · Apliman · Zafin · Hootsuite · Value Xd

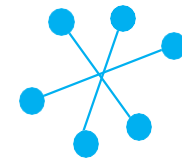
iMAL Islamic Core Banking Platform – Business Architecture



INTERNET BANKING



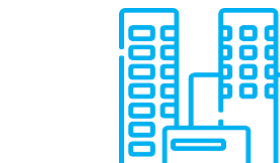
MOBILE BANKING



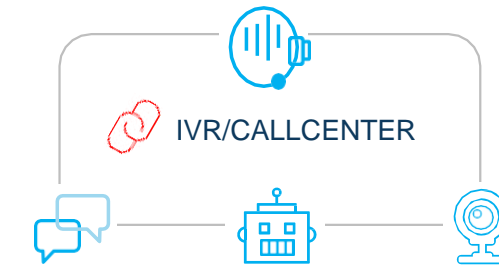
SOCIAL BANKING



BRANCH



AGENCY BANKING



LIVECHAT CHATBOT VIDEO CONFERENCING

OMNICHANNEL

SYSTEM INTERFACES & INTEGRATION SOLUTIONS

DIGITAL HUB

ADMINISTRATION & MONITORING

DFS

ATM

OPEN API

SWIFT/RTGS

CREDIT BUREAU

ECC

PLATFORM WEB SERVICES

CUSTOMER RELATIONSHIP MANAGEMENT & BRANCH AUTOMATION

FINANCING & COLLECTION/ RETAIL & CORPORATE

ISLAMIC INVEST

FACILITY MANAGEMENT

COLLECTION MANAGEMENT

FIXED ASSETS MANAGEMENT

TREASURY

ISLAMIC TREASURY

LIVE FINANCIAL MARKETS

CASH FLOW MONITORING

ISLAMIC PROFIT CALCULATION

INVESTMENT

FINANCIAL ASSETS

SUKUK MANAGEMENT

REVALUATION

TRADE FINANCE

TRADE FINANCE

STRUCTURED TRADE FINANCE

PROVISIONING

ACCOUNTING

SUPPORT & ADMINISTRATION

ELECTRONIC SIGNATURE

NOTIFICATION MANAGEMENT

MULTI-THREADING SCHEDULER

DIGITAL SECURITY & BIOMETRIC AUTHENTICATION

CENTRALIZED & DECENTRALIZED ARCHITECTURE

BUSINESS PROCESS MANAGEMENT

DOCUMENT MANAGEMENT

SYSTEM ADMINISTRATION & SECURITY

GOVERNANCE, RISK & COMPLIANCE

AML

RISK CAPITAL REPORTING

MARKET RISK & ALM

CREDIT RISK & IFRS 9

OPERATIONAL RISK & GOVERNANCE

FATCA/CRS

SHARIA AUDIT

INTELLIGENCE

FRAUD DETECTION

PREDICTIVE INSIGHTS

EXECUTIVE SUITE

BUSINESS INTELLIGENCE

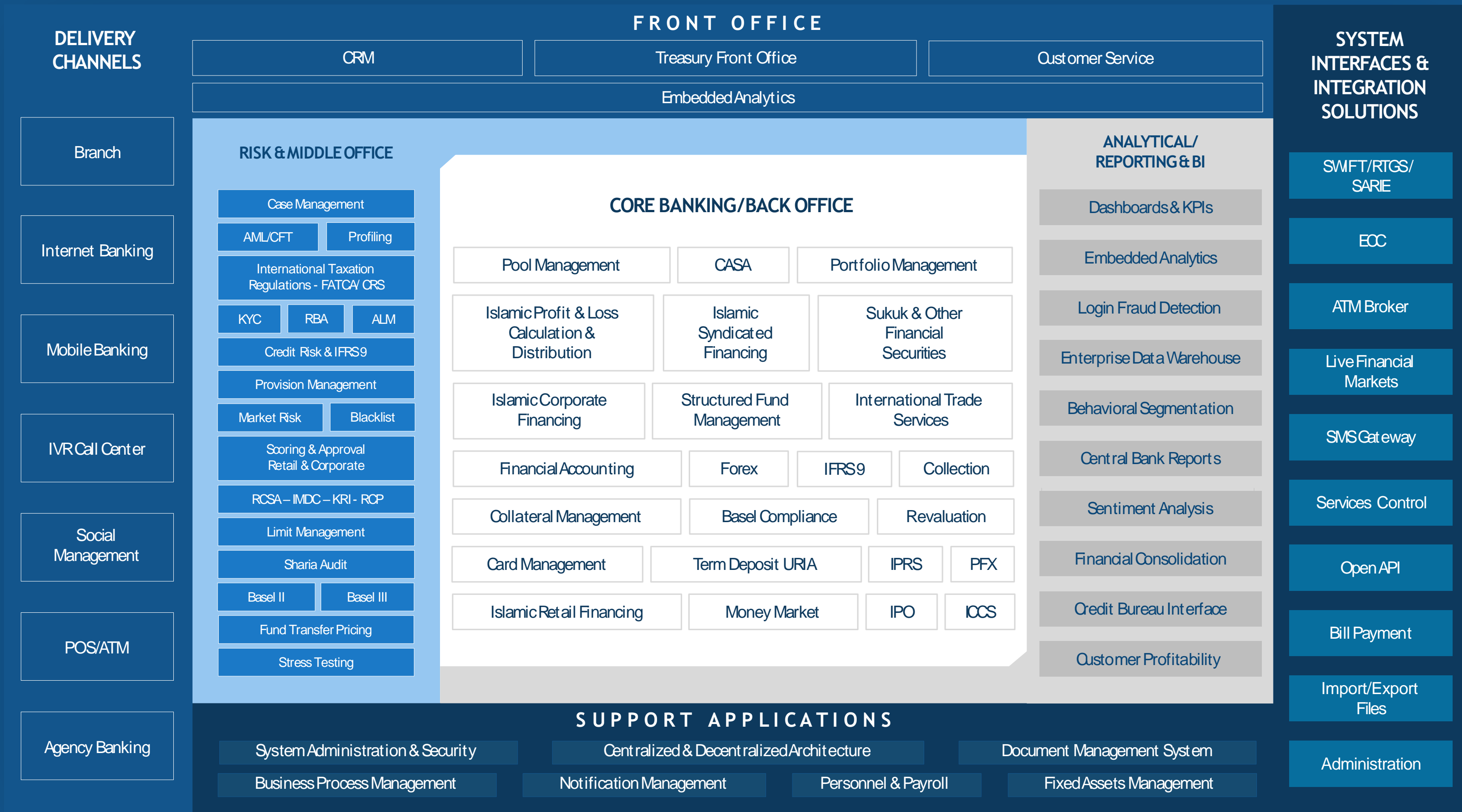
REGULATORY REPORTING

REPORTER

FINANCIAL CONSOLIDATION

Diverging colors are only used to create a visual representation of the drawing.

iMAL Islamic Core Banking Platform – Functional Architecture





Azentio **ONE**Banking



Azentio Islamic Banking

With growing population awareness and the booming demand for Sharia-compliant Islamic banking products, the focus on Islamic banking has increased manifold. The scope of Islamic banking has widened and is continuously evolving with the introduction of a range of sophisticated Islamic financial products targeting new customers. A core banking platform that supports innovative and rapid roll-out of Sharia-compliant products can help Islamic financial institutions gain a competitive edge. Furthermore, these financial institutions can no longer ignore the need for a scalable solution that enables them to grow and manage larger volumes of transactions while addressing the critical areas of risk and compliance, customer acquisition and retention.



We, at Azentio, offer the multi-award-winning **iMAL** Islamic Core Banking system that supports a variety of models, allows for quick time-to-market, while also addressing risk management and compliance under Sharia law across various geographies.



iMAL Islamic Core Banking system supports various Islamic instruments such as Murabaha, Musharaka, Mudaraba, Istisnaa, Ijara and others, and offers the following features:

- Compliance with Sharia, AAOIFI, IFSB and IAS
- 360-degree customer view
- Complete transaction lifecycle support
- Innovation and development of new Islamic products
- Full parameterization and flexible profit calculation to manage multiple pools and products
- Enterprise-wide information relating to regulatory reporting and risk management
- Multi-currency, multi-branch enabled accounting backbone
- Support for Islamic accounting and complete traceability for audit
- Single-layer integration for all data sources and service repositories
- Platform flexibility, unmatched scalability, and cost efficiency.





Azentio helps full-fledged Islamic banks, microfinance institutions and conventional banks setting up an Islamic window or subsidiary, with their Islamic core banking, branch management, fund management, risk management and treasury needs.

The fully integrated front, middle and back office Islamic Core Banking platform - running 24/7 in real-time - combines comprehensive business functionality with an advanced, secure, scalable and inter-related architecture proven to meet the market toughest challenges of today and in the future.

Consistently ranked as the 1st Islamic Core Banking platform worldwide, **iMAL** was architected from the ground up around the Sharia guidelines and is the only AAOIFI-certified software truly geared to address country and region-specific Islamic banking requirements.

iMAL Islamic Core Banking system can be implemented as a Model Bank version with built-in industry best practice processes, or as a highly configurable solution that can be tailored to Islamic financial institutions' specific requirements.

Built on an open banking-based approach, **iMAL** Islamic Core Banking system integrates seamlessly with conventional banking systems. It also enables efficient, cost-effective and profitable deployment and control of a flexible range of multi-channel, Sharia-compliant banking products and services.

iMAL offers Islamic financial institutions a comprehensive solution addressing all their business requirements to enable them to serve their customers with total transparency and professional confidence.

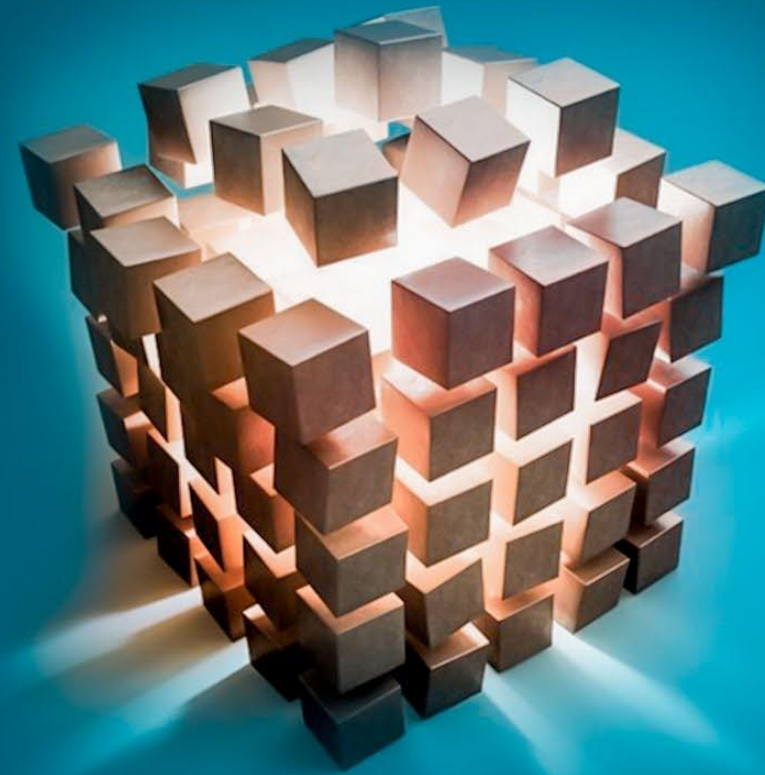




The platform offers full support to various functions within the organization including:

- Islamic Core Banking
- Islamic Profit Calculation
- Islamic Financing
- Digital Banking
- Islamic Treasury
- Investment
- Fund Management
- Portfolio Management
- Assets & Liabilities Management
- Trade Finance
- Operational Accounting
- Fixed Assets
- Risk and Compliance
- Analytics and Reporting
- International Taxation Regulation.





iMAL Islamic Core Banking - Branch Automation

iMAL Customer Service Management

iMAL Customer Service Management works as an electronic delivery channel for streamlining the bank's core business activities. iMAL provides a solid front-end to empower the bank to transform their branches into profitable, customer-centric Sales hubs.

The main target for iMAL CSM solution is to cover all products and servicing needs whilst maintaining a superior customer experience and a growing return on investment for clients including but not limited to:

- Parameter-driven: It supports multi-currency, multi-language, multi-timezone, as well as flexible parametrization to adapt to client's business preferences
- A complete suite of retail and corporate operations & products, offering an optimized end-to-end payment lifecycle, chequebook requests, card requests, safe deposits, bill payments
- A central hub for all products, through customer request management. The bank can offer its customers a bundle of products over the counter such as letters of guarantees, securities, investments
- A risk-mitigated solution, offering anti-money laundering control at the reporting and transaction levels, and transaction and account limits monitoring
- Support for ISO 20022 new financial messaging standard Cross-selling engine, by segmenting customers based on predefined criteria and selection.



iMAL Customer Service Management offers:

- Multilingual capabilities for worldwide deployments (English, Arabic, French, etc.)
- 360-degree customer view providing banks with a single view of all customers' products, allowing them to form a better understanding of their customers' journeys
- Time optimization and the ability of the user to respond to the customer effectively and efficiently
- Extensive filtering and control over what the user can see and transact, along with the related limits based on predefined criteria such as the type of customer, priority, economic sector, type of account, etc.
- Ability to process SWIFT transfers, cheque clearing, bills registration and payments, remittance issuance and collection, standing orders, salary domiciliation, card payment, blacklist check, etc.
- Transfer accounts and products management, offering customers the option to transfer their accounts from a branch to another, or from a product to another.



iMAL Islamic Profit Calculation

This is a standalone web-based solution that can be integrated with any core banking system to calculate and distribute profits in a Sharia-compliant way. The solution provides flexibility to manage multiple pools of different currencies with each pool having its specific assets, revenues and expenses funded by the various types of deposits. The system is capable to extract data from any core banking system and post entries after performing the profit calculations.

Some of its key features include:

- Management of multiple types of deposit products with each product having its own set of profit calculation criteria. The solution has the flexibility to define weightages based on the deposit amount and tenor
- Flexibility for the bank to inject its own equity. The system allows the user to either inject equity as a balancing figure or as a constant equity
- Accrual of profits based on previous declared rate, which at the time of profit distribution is reversed and posted with actual rate of return calculated by the system
- Management of restricted and unrestricted investment account
- Support for Mudaraba, Musharaka and Wakala contracts with their related controls

- Forecasting model with support to automatically calculate weightages
- Dashboard view to monitor pool performance
- Multiple criteria for balance calculations such as average, daily minimum, ending, opening balance, etc.
- Flexibility to distribute profit on a monthly, quarterly, semiannually, and yearly basis
- Risk provisions and profit equalization reserve management
- Capability to achieve desired rate of return by adjustment though multiple criteria of PER, IRR deductions, with the capability to provide Hiba
- Functionality to recalculate profit in case of break of deposit as per the related completed period
- Advance profit payment option
- Zakat calculation and deduction functionality
- Capability to deduct tax on profit. User can specify different tax percentages based on customer segments and residential status
- Functionality to transfer liabilities, expenses, and assets between pools along with their related income
- Built-in standard reports, which allow the user to get an overview of the pool along with the profit calculation details, average balance, break of deposit history, etc.





ISLAMIC FINANCING

RETAIL & CORPORATE FINANCING

This is an award winning, Sharia-compliant and AAOIFI-certified banking solution built and designed specifically to handle all types of Islamic financing instruments and products such as Murabaha, Mudaraba, Musharaka, Ijara, Salam, Istisnaa, Qard Hasan, project financing, real estate investments and financing of letters of credit.

It is a highly parameterized solution with customizable flows and controls to ensure easy configuration of new Islamic products and lifecycles.

iMAL Facility Management

The solution provides banks and financial institutions with the right arsenal of tools for effective management of facilities from origination till closure. It streamlines credit processes, improves accuracy and speed of decision-making, and secures effective implementation of credit policies.





Key features include:

- Highly parameterizable solution securing unprecedented flexibility in setting up categories, products and approval committee levels
- Predefined workflows for faster application processing
- Effective automation and customization of facility management processes for added flexibility
- Advanced product-based document checklists and validations
- Comprehensive customer grading evaluation models
- Robust collateral management suite for all collateral types, allocations, and revaluations
- Distinctive corporate and individual facility processes for all types of Islamic financing, trade financing and securities management
- Full support for grouping of facilities and respective utilization
- Maintenance and monitoring of financial positions and limits
- Simulation of payment schedules ahead of limit approval
- Parametrization of a dynamic workflow through business process management to facilitate the creation of specific business models
- Request creation from different channels such as customer service management, Internet and mobile banking with full tracking of the application status.
- Validation of pre and post approval conditions.





iMAL Islamic Invest

Through its Sharia-compliant and AAOIFI-certified framework, iMAL Islamic Invest bridges the gap between contemporary financial market demands and integral Islamic values while placing customer centricity at the core of its operations.

iMAL Islamic Invest offers a wide range of Islamic products including project financing and syndication with extensive functional coverage across both retail and corporate lines of business. It facilitates management of deals from inception till closure while offering complete audit trails and reporting capabilities.

Relying on its state-of-the-art technology, the solution supports multi-currency, multilingual, multi-entity, and multi-country operations.



Key features include:

- Creation of multiple Islamic product variants under pre-integrated Islamic product categories
- Capturing of the complete purchase and sale processes with the relevant standard and customized accounting entries at each level
- Creation of items with restrictions for each Islamic product type
- Comprehensive vendor management process
- Creation of multiple types of repayment plans using the straight-line method, diminishing returns, IAS 18 or Rule of 78
- Advanced automation of the accruals of profit and charges
- Effective management of risk free rate with lag, with or without observation period
- Execution of multiple disbursements for project finance deals
- Highly parameterizable setup of charges which can be specified at deal creation or can be event-based
- Powerful insurance management
- Full support for deal rescheduling and restructuring
- Robust advance payment functionality
- Merging of repayment plans for deals belonging to same customer
- Dynamic installment skipping with multiple deferment methods
- Execution of manual and automatic settlement processes with the option of blocking funds
- Advanced settlement functionality that includes advance principal settlement, advance repayment, and early settlement
- Optimized past due management with profit suspension
- Deal classification according to predefined provisioning categories
- Effective tracking of deals, asset positions and customer financials in a 360-degree view
- Advanced VAT management functionality
- Powerful deal switching capability
- Multi-currency, multilingual and dual calendar system (Hijri/Gregorian)
- Document management at different stages of the financing flow
- Effective management of Ijara asset by repossession, surrender, insurance claims and replacement functionalities.



iMAL Collection Management

This is an effective tool for managing the collection of debt and the related litigation activities. The solution is highly dynamic and offers a wide set of criteria for organizing, tracking, and collecting overdue payments.

It allows the bank to define a collection policy, strategy, and process flow through a set of rules and parameters. The system automatically processes the delinquent data and groups delinquencies under specific pools based on dynamic rules. The allocated team members for collection will then record the different activities of follow-up, reminders and customer feedback for effective tracking and monitoring purposes.

Our solution also facilitates handling litigation as a last resort for debt collection. Litigation includes recording of legal case details, judgments, settlements through repossession of assets and auctions. Thus, it is an all-encompassing solution for all collection activities and litigation procedures aimed at maximizing returns and reducing delinquent financing.



iMAL Islamic Microfinance

iMAL Islamic Microfinance platform, part of Azentio Islamic Banking, is the leading edge in the realm of Islamic microfinance. Through its wide array of Islamic products, the platform meets diverse client needs in an ever-changing landscape.

iMAL Islamic Microfinance drives agility, optimizes processes and facilitates business relationships through various Islamic products namely Murabaha, Musharaka, Mudaraba, Leasing, Istisnaa, Tawarruq, Qard Hassan and Ar-Rahnu.

iMAL Islamic Microfinance enables the following:

- Legal entities management
- Financial products management
- Contact processing
- Item management
- Provision management
- Sub-financial products
- Expenses and profit declaration.



DIGITAL BANKING

Our world-class Omnichannel Digital Banking solutions focus on creating personalized and seamless customer experiences, anytime, anywhere, across all digital touchpoints. Our omnichannel Digital Banking platform is a highly secure, open, scalable, flexible, robust, future-proof, easy-to-deploy, and comprehensive omnichannel solution that unifies multiple channels providing a convenient, personalized, single, and seamless digital experience with services for Retail, Corporate, and Investment Banking. It provides comprehensive off-the-shelf functionalities and features to satisfy the digital banking needs of today's customer-centric financial institutions across all their supported digital channels.

The platform currently supports Internet, Mobile, and Agency Banking digital channels, and is designed to support other delivery channels like Conversational Banking (Chatbots, Voice Banking), Digital IVR (Visual IVR), kiosks, smart TVs and wearables through third party integrations and digital partnerships.

The solution is an integrated self-service digital banking platform that enables the delivery of a rich, simplified, timely, personalized, consistent, and unified seamless omnichannel user experience across channels, applications, and devices. It allows banks to be immersed into their customers' life journeys, to help them gain better customer insights, and achieve better customer interactions along with stronger customer engagement while ensuring value optimization of each customer relationship across all touchpoints.

The solution is fully integrated with all Core Banking services and has the flexibility to integrate with other core banking and 3rd party systems through the integration layer, which facilitates the communication with various systems.

Advanced and common security practices are supported on all digital channels including data encryption, multi-factor authentication, password management, limit management, user account management, user activity logging, database security, session management, and other basic protective features.





Digital Channels

Internet Banking

Our Internet Banking solution is an intuitive, interactive, modern, and fully responsive web-based application with customer-centric, simple, and easy to use digital banking services that meet retail, SME, and corporate banking needs. The solution enables financial institutions to build and maintain a strong digital presence by providing a relevant, simplified, and personalized user experience designed around real-life customer journeys, allowing banks to decrease operational costs, increase profitability, and drive revenue and business growth.

Being omnichannel in nature, our unified solution works in conjunction with other self-service channels such as mobile, ATM, and kiosk, offering customers a consistent view of their finances with the ability to initiate a transaction on any internet-connected device and complete it on another channel.

Mobile Banking

Our Mobile Banking solution offers an intuitive, simplified, versatile, and secure mobile banking experience allowing access to daily banking operations without the time-consuming process of going to a branch, thus bringing convenience to customers by enabling them to interact with their finances and engage with their bank online and in real-time.

Like our Internet Banking offering, our Mobile Banking solution provides a responsive UI design and is cross-platform and cross-browser compatible, which provides customers with the ability to either use different platforms and web browsers, or to download a hybrid mobile app on their smart phones and tablets. Although this solution can be installed as a standalone product, its full power can be realized when adopted within an omnichannel architecture.





Digital Solutions



Retail Banking

Our Retail Banking solution represents a convenient and user-friendly online banking service that can be offered by financial institutions to their retail customers. The solution provides customers with an easy, fast, and secured access to their banking accounts, portfolio positions, and related transactions. They will also be able to manage their beneficiaries, set standing instructions and request different products such as new bank accounts, chequebooks, payment cards, trade finance documents and financing as well.

The solution also offers a personalized banking platform by ensuring a seamless experience to several touchpoints across all operating systems and multiple browsers.



Corporate Banking

Our Corporate Banking solution enables financial institutions to offer their corporate customers highly secure and advanced online banking services. The system provides a unified view of corporate customers' accounts, collections, receivables, liquidity, investments, and payments with a multi-level authorization matrix. Through a highly flexible system, government agencies, SMEs, and large enterprises can manage their accounts, investments, and financings easily and in a secure way.

Corporate customers can benefit from various services covering their day-to-day activities including exchange rates list, bulk payment, salary file upload, internal user creation, and many other services.

In addition to the common security features supported on all digital channels, the Corporate Banking solution supports financial transaction approval matrix that can be facilitated anytime, anywhere and on any device to support all types of corporate business processes making it a safe zone for corporate customers to perform their business functions.



Digital Onboarding

Our Digital Onboarding solution allows the bank to become fully digital while enabling customers to open an account and initiate new services within minutes. The development of digital onboarding for new customers implies making the process of opening an account seamless and comfortable. Removing barriers like manual processes, visiting bank branches, awaiting approval, and passing information through a series of systems that seriously affect conversion rates and the cost of acquisition.

With the digital orchestration platform in place, banks can easily process applications that are started on one device and finished on another. For both bank and customer, the process is seamless and uncomplicated as the platform unifies all the bank's channels. A new customer might, for example, begin an application for a current account on a mobile device and finish it on his desktop computer, or in one of the bank's branches.

The automated digital identity verification services such as ID document capture and automatic validation, checking and verification, taking selfies, face comparison, liveness detection, e-signatures, and other services required to make this process fully digital, are supported and available through this fully digital onboarding process.

Digital Collection

The field collection application enables the last mile connectivity for the on-field collection agent. The application works in sync with the core collection system with real-time integration. The following are out-of-the-box features driving the efficiency of the collection process:

- Monthly case list - cases for the current month - new, WIP, within TAT & beyond TAT
- Book appointments - book appointments with customers. Reminders for follow-up
- Details & feedback trails - complete details of cases, on the go. History of the previous actions taken
- Pre-configured actions - pre-configured actions/dispositions integrated with collection strategy
- Promise to pay - out of the capability for capturing promise to pay and further follow-up.
- Capture payments - collect payment with different modes and capture details along with a receipt.



TREASURY

iMAL Islamic Treasury

Our Treasury platform is a powerful tool that enables financial institutions to streamline and implement their internal treasury operations as well as those of their customers. With newly introduced features, the solution provides a comprehensive dashboard providing an overview of the bank's nostro balances, daily money market operations, income/profit details of treasury transactions, breakdown of treasury deals grouped by transaction type, counterparty, currency, and geographic area, in addition to multiple other features deemed necessary for the modern treasury department of any financial institution.

The offering covers a myriad of operations, ranging from standard foreign exchange deals – covering SPOT, TOM, TOD, forward & swap – to money market deals such as placements, borrowings, commodity Murabaha, reverse Murabaha and others, to the more complex derivatives such as Islamic cross-currency swaps and Islamic profit rate swaps.

The solution provides an effective analysis of the institution's financial performance and gives it full control over managing its cash, asset-liability maturities and associated mismatches. It efficiently handles investments with related on & off balance sheet accounting with customized templates, integrates fully with iMAL Limit Management with online controls on limits during transaction processing, and includes a solid workflow transaction handling, automatic settlement of instructions, automatic daily accruals, early settlements, mark to market revaluations, swift messages generation and many other features indispensable for a seamless business flow across the organization.

It integrates with market data providers such as Bloomberg and Thomson Reuters for the integration of reference rates such as LIBOR, EURIBOR, etc. and FX/money market deal processing and settlement.



Cash Flow Monitoring

This is a standalone cash management solution offering the right components to cover the necessary reporting and analysis of a robust correspondent banking liquidity management framework.

The purpose of this solution is to ease funding plans whilst empowering users with advanced effective techniques to further enable the management of financial obligations at optimal costs. The solution, thus carefully monitors liquidity needs and ensures sufficient sources and level of capital available.

The solution is comprised of a flexible technical architecture which would procure data from multiple sources including third party data such as SWIFT messages in XML format, allowing users to analyze detailed information on cash inflows and outflows, with the ability to generate drill down to the individual transactions and commitments.

Cash Flow Monitoring offers self-service reporting capabilities, in addition to the standard forward-looking liquidity and limit monitoring tools, allowing users to gain a comprehensive view of the institution's liquidity position at any given point in time from their own perspectives.





INVESTMENT



iMAL Financial Assets

This is an all-inclusive platform for the management and operations of financial assets covering investment management, fund management, portfolio management, securities settlement, corporate actions, and a dynamic fees schema. The institution can act as either the issuer of the security, or the portfolio manager on behalf of both its own portfolio as well as client portfolios.

In line with best market practices, the solution encompasses a wide range of security types, such as equities, fixed income, commodities, indices, rights, mutual funds, etc. Each security type administers its distinct flow and trading operations, with subsequent settlement and specific corporate actions. From a transactional perspective, the solution covers purchase and sale, repurchase and reverse repurchase agreements, cash and share dividends declaration and settlement, coupon payments, revaluation of holdings and the calculation of unrealized gains/losses, portfolio transfers, stock splits, etc. In addition to the standard offering of equity and fixed income

securities, options constitute part of the solution as well, catering to different types of underlying instruments, and handling maturities.

The solution integrates with market data providers such as Bloomberg and Thomson Reuters to populate security market prices, trades and other related metrics that are vital for the day-to-day operations of the portfolio manager.

It is fully integrated with Internet and Mobile Banking which operate as front office systems, thus allowing a complete order and request management. The back-office processing settlement transactions are fully integrated with SWIFT. The workflow is catered for through STP, front, middle, and back office.





iMAL Sukuk Management

This is a multifunctional platform catering for Sukuk investment and issuance, enabling Islamic financial institutions to manage their Sukuk operations, from creation and issuance to expiry and maturity. It covers the creation of security instruments of different types, trading and settlement transactions, and profit accruals for the Sukuk holders. In addition, it enables the flow of corporate actions management, Initial Public Offering (IPO) management, and custodian and brokerage management.

Besides its off-the-shelf integration with Reuters and Bloomberg for deal processing, securities management, reference rates population and currency exchange rates, iMAL Sukuk Management can be integrated with any other third party. It provides Islamic financial institutions with the guaranteed potential to broaden their financing sources while being compliant with the Sharia rules, by catering for the following Islamic instruments: Fixed and floating rate Sukuk, fixed and floating rate amortized Sukuk, treasury bills, corporate and government bonds of different classifications including available for sale, held for trading, and held to maturity, etc.

In a nutshell, the solution provides powerful workflow and structure area, efficient reporting, and Sharia compliance.





TRADE FINANCE OPERATIONS

iMAL Trade Finance

iMAL Trade Finance application is a cross-functional platform that caters for a wide range of trading facilities, such as: import letters of credit, export letters of credit, letters of guarantee, import bills for collection and export bills for collection. The system handles all the document details, workflows and processes beginning with the customer's request and ending with the deal closure, along with the related on and off-balance sheet accounting entries and SWIFT messages. Also, the system offers a comprehensive set of reports to manage and follow-up on trade facilities.

The solution is dynamically parameterized whereby users can easily initiate and customize any needed product or parameter such as type of service, fee and charge. It also minimizes the costs incurred by financial institutions through process automation and offers greater user control and better customer management services by delivering a comprehensive flow for financing and non-financing products.

The solution thoroughly complies with the below:

- Uniform Customs and Practice for Documentary Credits (UCP600)
- Uniform Rules for Demand Guarantees (URDG 458/758)
- Uniform Rules for Collections (URC522)
- Uniform Rules for Bank-to-Bank Reimbursements under Documentary Credits (URR725).





OPERATIONAL ACCOUNTING

iMAL Accounting

It is the ground base of the platform. It handles on-balance sheet and off-balance sheet accounting. The system is fully parameterizable, caters for multiple companies/books, multiple branches, multiple currencies, and multiple cost and profit centers. The system enables the user to process all types of transactions at both levels, on and off-balance sheet, such as standard journal voucher processing, adjustments, allocations, reversals, bank reconciliation, budgeting and forecasting.

The system is also rich in reports, offers tremendous analysis and decision support tools, such as assets and liabilities management, bank risk exposure management, maturity analysis, financial reports, etc.

iMAL Accounting also supports a drill down functionality where the user can get to the original transaction that generated the accounting entry from the global financial reports.





iMAL Provisioning

To mitigate the risk arising from default of payment, financial institutions require an efficient solution to compute expected credit losses and create provisions for such losses be it for their standard assets (performing) or their non-performing assets (substandard, doubtful, loss).

This solution allows for loss estimation at an early stage, thus providing the bank with an umbrella to cover these losses with adequate provisions and safeguard its regulatory capital and financial stability.

It allows financial institutions to classify and calculate provisions for multiple financial products such as financing loans, credit cards and overdraft products. The solution supports the classification and provisioning of any other financial product through integration. Moreover, the solution offers extensive parametrization and is supported by dynamic classification and provision calculation processes to assist the organization in timely risk mitigation while implementing the bank's financial policies.

The module allows running several trials for provisions before effectively posting a unique final one; that will eventually apply the accounting entries based on the related classification.

iMAL Revaluation

The solution enables the automatic processing of revaluation of financing deals which are originally based on floating rates. It enables the user to set the time at which the process should run on daily basis. Based on the predefined setup, the process will run automatically making all the necessary computations while taking into consideration the rates prevailing at the time of running the process.

iMAL Fixed Assets

The solution empowers the bank to manage its widely dispersed fixed assets. The asset management activities available in the system include asset acquisition cycle which comprises requisition, quotation, purchase order and payment, retirement, revaluation, maintenance, and sale. In addition to this, the system also caters for location management, inventory management, asset request management, projects in progress management and depreciation management. Various depreciation methods prevailing in the market are catered in the system. Depreciation is processed on a daily or monthly basis either automatically or on demand, with speed and accuracy. The fiscal implication is automatically generated and processed in the system.



RISK & COMPLIANCE

The technology for risk management must entail rigorous guidelines and processes for developing and validating data and models, as well as accommodate constant monitoring and improvement. Many a time, the defined compliance regulations have failed to prevent major losses. Hence, financial institutions are increasingly moving to expand their definition of risk, by looking at the other potential sources of risk and create their own tools for mitigation. Our new integrated platform facilitates all this and more.

It allows financial institutions to meet their comprehensive AML requirements, set up their enterprise Risk Management framework which covers credit, market, liquidity and operational risks. It also provides a powerful, highly parameterized, and yet easy-to-use solution for several risk areas and compliance requirements.





Integrated Risk Management

The Integrated Risk Management (IRM) module is an effective Risk Management solution that enables robust risk control and mitigation initiatives. With the objective of incorporating the latest in financial risk and banking regulations, IRM is a comprehensive package of wide-ranging tools at the disposal of the risk manager. The ability to easily analyze and manage modern-day risks and arrive at well-informed and well-guided decisions is much simpler with IRM. Its extensive modules cover the risk spectrum relevant to banks and financial institutions.

The solution provides compliance with regulatory (Basel II/III, IFRS 9) and asset-liability committee (ALCO) requirements. It offers complete flexibility in creating and editing multiple financial templates and risk models with ease of deployment and maintenance by leveraging latest web-based technologies process automation, using scheduled uploads and computations. The IRM module is also compliant with Basel II norms.

The module covers:

- Risk capital reporting (Basel II/III)
- Stress testing
- Credit Risk Management
- Internal Credit Assessment and Rating Engine (ICARE)
- Market Risk Management
- Asset liability management
- Expected credit loss
- Operational risk & governance.



Financial Crime Management

The Financial Crime Management solution is a globally trusted integrated web-based anti-money laundering and financial crime detection and management suite that meets the comprehensive AML requirements of banks, insurance companies, security firms, NBFCs, payment aggregators, exchange houses and other members of the financial community.

It is a purpose-built, end-to-end solution designed to stem the flow of illicit funds and meet the compliance requirements of increasing regulatory oversight. The solution enables organizations to combat evolving financial crime threats and challenges in their business, meet regulatory standards and report the suspicious transactions to the Financial Intelligence Units (FIUs).

The comprehensive customer onboarding module, sanctions screening, transaction monitoring, multi-level case management, risk profiling allows for effective operation control, consistent surveillance, compliance with most efficient suite of detecting underlying suspicious transactions, and customer behavioral patterns.

Some of its key features include:

- Customer onboarding
- Know Your Customer (KYC)
- Risk Management
- Transaction monitoring
- Multi-level case management
- Regulatory reporting.



Anti-Fraud

The Anti-Fraud solution is an end-to-end financial crime management solution that integrates the best of anti-fraud measures to effectively identify, manage and report financial crime.

The solution addresses bankwide monitoring of all transactions across all channels - Core Banking, Internet Banking, Mobile Banking, Agency Banking or cards. It supports real-time, near real-time monitoring, and batch monitoring.

Anti-fraud detection is achieved through a fine blend between adaptive profiles, rules and scores. A behavioral profiling engine in FCDMS, regularly builds profiles and derives patterns of customers, accounts, transactions, and reference points (branches, ATMs, etc.).

These patterns, along with the out-of-the-box rules (covering internal, employee, card, POS, etc.) ensure comprehensive anti-fraud monitoring. Suspicious transactions can be automatically alerted to appropriate investigation teams at branches, operations, central office, etc. The multilevel workflow can be complimented with various analytical and graphical tools to ensure that the investigation process is streamlined and yields optimum analyst efficiency. External and internal reporting can be achieved through a host of template-based customizable reports.



Sharia Audit Solution

Sharia Audit is a comprehensive, state-of-the-art, internal Sharia audit software system that increases the effectiveness and efficiency of internal Sharia audit processes of Islamic financial institutions, by providing automated auditing tools built on the risk-based audit methodology. The rich knowledge base of risks, controls, work programs and checklists for most commonly available Islamic products in the market is inbuilt into the software which helps to standardize the risk assessment procedure and improves the audit quality.

International Taxation

The solution empowers financial institutions to abide by the international regulations set in different countries regarding customers' identification and reporting, enabling multi-regulation parameters setup such as FATCA and CRS at the same time.

FATCA

This is a highly parameterized solution, designed to allow financial institutions comply with the international regulations of FATCA (Foreign Account Tax Compliance Act). It consists of three major phases that fall under identifying U.S. account holders, reporting to IRS (Internal Revenue Service), and processing penalty of withholding tax for recalcitrant account holders.

CRS

This solution is developed in response to OECD (Organization for Economic Co-operation and Development) for the automatic exchange of financial account information and the disclosure of income earned by individuals and organizations, allowing tax authorities to obtain a clearer understanding of financial assets held abroad by their residents.



ANALYTICS & REPORTING

Analytics

Azentio provides a comprehensive end-to-end data warehousing solution including an automated ETL process and a progressive data model. Our data warehouse provides financial institutions with full accessibility to their valuable data. It is structured in a way that allows efficient and automatic connection with financial institutions' different systems through integration services, thus overcoming the obstacle of data silos.

Several analytical techniques are later employed to transform raw data from multiple sources to solid meaningful information in graphs and reports in a way that gives users the confidence and the insights needed to make the right business decisions.

Our solution has been structured into multiple components, targeting different aspects of decision making.



Business Intelligence

Our solution taps into the most powerful asset, data. It is a platform that enables banks to harness data and analyze it intelligently. It provides significant competitive advantages and helps transform the bank's business into becoming analytically focused and customer-centric. It provides timely and accurate decision-making which leads to lower risk, streamlined operations, increased profit, and better customer experience.

Our strategic Business Intelligence platform empowers bankers to make smarter, faster, and more effective decisions while improving efficiency throughout the business. It enables business agility while driving innovation, competitor differentiation, and profitable growth.

The solution comprises comprehensive data marts equipped with standard facts and dimensions as well as progressive measures, and rich in out-of-the box dashboards, covering general ledger, retail banking, corporate banking, investments, trade finance, limits, etc.

Other key features include:

- Data warehouse
- Data lake
- Visual discovery
- Self-service
- Embedded analytics
- Executive suite
- Customer profitability.



Artificial Intelligence

Powered by the latest technologies in Machine Learning (ML) and managed through a comprehensive modelling interface, our full-fledged predictive analytics suite enables banks to perform data mining on multiple use cases.

Using the most advanced algorithms, bank analysts and data scientists will now be able explore the data, uncover hidden patterns, and predict future trends enabling digital transformation across all business areas.

This offering is leveraged by the Enterprise Data Lake that will allow banks to explore both structured and unstructured data, as well as maintain competitive advantage, all while delivering advanced and innovative service to their customers:

- Behavioral segmentation
- Risk insights
- Fraud detection.





Reporting

This tool is designed to meet financial institutions' reporting requirements. Its centralized reporting platform provides financial institutions with a single window for their daily operational reporting.

The solution empowers financial institutions with web-based reporting by making reports accessible across the organization without further investment. A scheduler enables automated generation of routine and compliance reports.

It offers an extensive set of features, such as scheduling of reports, archiving of reports, automatic emailing and faxing of reports to both users and customers.

Each and all types of the created and designed reports can be directly generated across the complete multi-banking program systems.

Regulatory Reporting

This is an extremely flexible, powerful, and easy to use reporting tool that allows users to build templates for their financial statements and central banks' reports.

Financial Consolidation

It is a standalone solution that allows group entities to streamline the production of financial statements and meet reporting requirements with compliance to Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS) or any other local standard. It empowers the finance team with a robust system, permitting fewer resources to perform full consolidation.

The solution permits multi-entity reporting, aggregation, elimination, and minority interest scenarios and handles entities with different charts of accounts. As a result, the system adds significant value by enabling flexible, accurate and rapid reporting.



SUPPORT APPLICATIONS

iMAL System Administration & Security

The solution empowers financial institutions to implement and manage the overall security policies of the complete system suite; it enables powerful and flexible enterprise identity and compliance monitoring solutions and covers all activities related to the system's administration such as setting up companies, branches, divisions, departments, and centralized authentication applications, thus enhancing their security while providing efficient credential management practices in terms of access control, single sign-on, and user profile management.

iMAL Multi-Threading Scheduler

This is an efficient software delivering high volume processing capabilities through a multi-threading approach; thus, offering a concurrent management of processes amalgamated with a profound level of parallel processing of records. The system guarantees efficiency through conducting scheduled batches of processes that are related to a single or a combination of several criteria: Companies, branches, processes – covering all the business verticals of a financial institution – that can in return now schedule its operation processing post working hours; thus, shifting the time of these jobs to when the computing resources are less busy. Consequently, the system saves employees' time. It also offers the possibility to initiate manual batches through a highly secure mobile access. It provides a system health check on the overall system, stating the server resources consumption or any potential database blocking. Besides allowing operators to closely monitor the execution and progress of the whole process through advanced dashboards, the system provides the possibility to remotely interfere in the execution of any batch by putting it on hold for a while before resuming its execution later.



Notification Management

The solution helps financial institutions to develop and maintain an efficient relationship with their customers by staying updated with their products and services.

This messaging technology is designed to deliver critical business information in a timely and efficient manner. The system can automatically alert the concerned personnel through multiple methods when a significant event takes place.

It also allows building any type of message notification, sourced by the available data, communicated online, or defined to be shared at a certain frequency, delivered through email, SMS or dropped at the end user inbox.

Business Process Management

The system allows financial institutions to design a dynamic product flow using sophisticated and customized business rules. It offers the automation of a business process, in whole or in part, during which documents, information and tasks are passed from one participant to another for action. It provides the possibility to follow up on the process completion as well as an SLA engine to highlight delays to take appropriate measures.





SYSTEM INTERFACES & INTEGRATION SOLUTIONS

Digital Hub

Azentio's Digital Hub is a secure and comprehensive open banking platform that connects all the digital banking channels and third-party products to the bank's services and applications such as core banking, CRM, and payment systems, empowering customers to achieve a unified seamless omnichannel user experience across channels, applications, and devices. Beside the administration layer, the platform hosts many solutions and interfaces as such Dynamic Files, ATM Broker, Open API and SWIFT/RTGS/ACH.

Administration

It represents the administration layer of the Digital Hub, where many features take place, including the setup and administration of the hosted solutions.

Open API

The system offers a secure opportunity that enables banks to deliver unique customer experiences by allowing access to customer banking data via authenticated fintech applications, following explicit consent from the customer and the bank. An open API catalogue is available to discover the different API categories being provided by the bank.

Dynamic Files

This is a file-based solution allowing banks and financial institutions to import and export data to and from the system, also supporting offline integration with any third-party system. It allows financial institutions to deal with any file, from file parsing to file mapping to the server digital layer, to file processing.



Platform Web Services

The web services platform is the heart of the Digital Banking layer of our Digital Hub, where resides the service control. It contains the service adapters, along with their WSDLs and the contract details and features. It supports SOAP and REST protocols.

ATM

Introducing our Digital Hub's powerful web services platform, the driving force behind our innovative Digital Banking solution. With seamless integration of both SOAP and REST protocols, it supports a wide range of transactions, from withdrawals and deposits to balance inquiries, mini-statements, bill settlements, chequebook and statement requests, and more, in addition to providing real-time updates of customer accounts, immediate impact on balances, and accurate, efficient calculations.

SWIFT/RTGS/ACH/SARIE

This middleware integrates iMAL Core Banking system with SWIFT Alliance system. SWIFT transactions that have been processed by the authorized users in the different Azentio service areas are automatically processed here. It is responsible of the FIN message generation and management of both the outward and inward flow. It integrates the ACH/RTGS messages with any third-party system adopted by the bank.





Electronic Cheque Clearing

iMAL Core Banking system is fully integrated with ECC (Electronic Cheque Clearing), whereby this integration solution covers all clearing transactions, whether inward or outward cheques. The clearing transactions resulting from ECC requests are subject to validation according to the iMAL core system business rules, and they are created or voided in iMAL Core Banking system accordingly.

Live Financial Markets

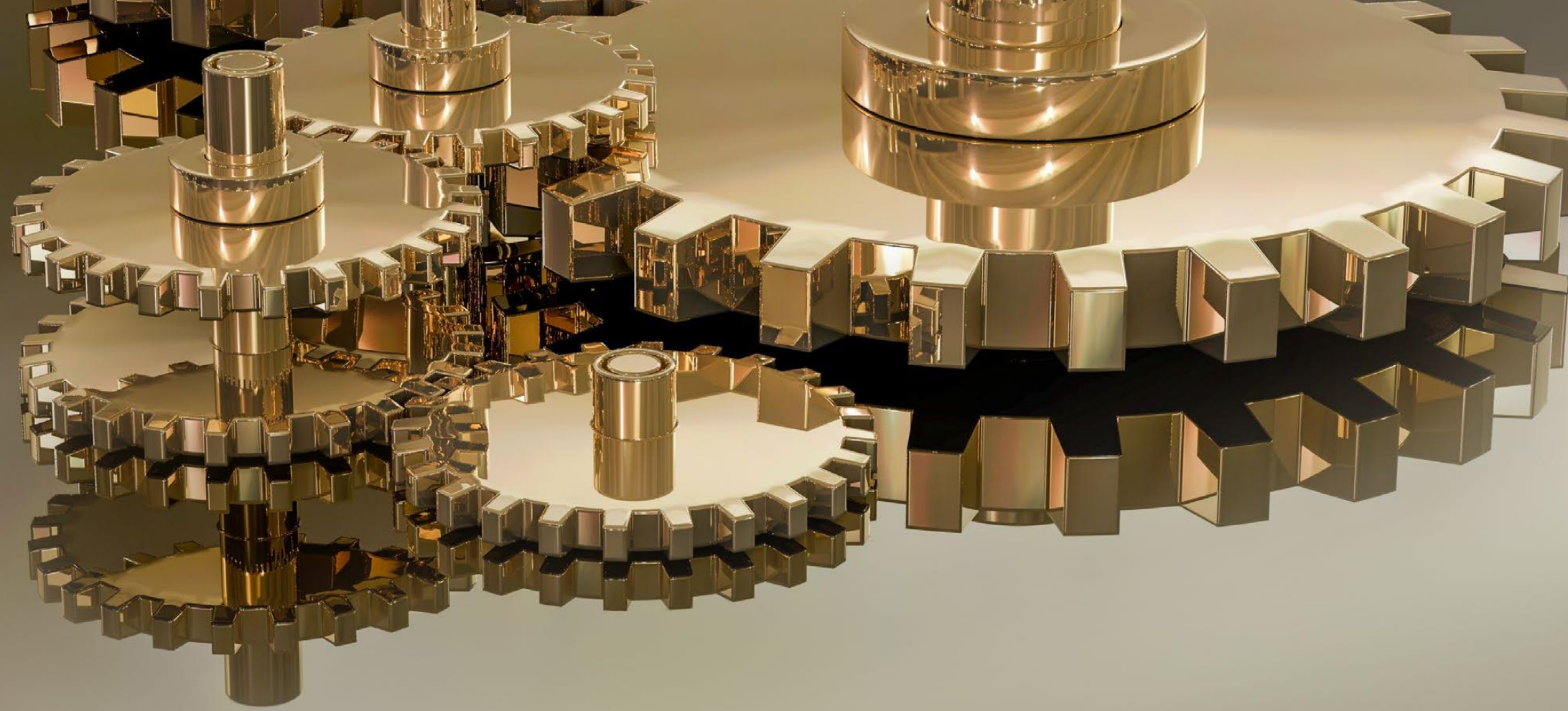
It is a middleware application that provides financial institutions with the latest security details, security prices, foreign currency rates, FX deals, money market deals and various reference rates instantly.

It connects iMAL Core Banking system applications to Reuters and Bloomberg terminals and fetches the required data and automatically populates as needed. It constitutes a major advantage for Treasury and Investment operations, as it allows for real-time market data to be available in the Core Banking system while users are conducting their day-to-day businesses.

Credit Bureau

This enhanced time efficient interface is used to generate and exchange files with credit agencies, supporting different file formats and automated data exchange based on credit agency requirements.





STRATEGIC PARTNERSHIPS: COMPLEMENTARY PRODUCTS

Azentio is committed to providing its clients with state-of-the-art software solutions. As part of this strategy, we constantly strive to develop partnerships with the main technology and solution partners in the key areas of our business.

Our business partners offer innovative solutions that can complement and broaden Azentio's suite of solutions and deliver greater depth of value to our clients. Our worldwide partners provide Azentio with greater reach into the marketplace, greater scale to execute on client requirements with their complementary skills and best-of-breed solutions that can be integrated with iMAL Core Banking system.



DocuWare: Document Management System

DocuWare offers state-of-the-art Document Management Systems (DMS) solutions for professional enterprise content management that will enable Azentio's clients to manage, monitor and search their documents electronically in an optimized and efficient way. Regardless of the document source or format, it can be processed automatically. This means that both paper and electronic documents such as correspondences, records, e-mails, MS Office, spool files and many others can be stored, shared, and managed from a centralized document pool. Additional record management features ensure that access to documents and their contents is secure, controlled, and always logged.

Software Group: Digital Banking Partner

Mobile Wallet

Software Group is a global technology company specialized in digitalization. We are offering their Mobile Wallet to enable financial institutions implement a complete, scalable, and future-proof digital wallet and mobile payment solution, catering for all stakeholders, customers, merchants, and ecosystem partners. Using the Mobile Wallet, end customers can store and move money P2P, C2B or G2C using any mobile

device, and financial institutions can provide valuable converged financial services, including bill payments, airtime purchase, merchant services, special offers and promotions, and many more.

We are also offering their end-to-end Agency Banking solution where banks can efficiently equip remote agents with innovative Mobile Banking technology and enable them to deliver basic financial services to end customers.

Agency Banking

Agency Banking is bringing financial inclusion to the underserved. Our solution allows increasing and deepening financial inclusion, unlocking remote markets through a profitable and cost-efficient network of third-party agents serving customers on the bank's behalf. Banks can adopt this solution as an extension of services traditionally offered in bank branches whereby third parties (agents) offer these services on behalf of banks willing to expand their presence, particularly in rural areas where brick-and-mortar branches are often expensive, acting as a low-cost/effective vehicle to include a largely unbanked rural population into the banking ecosystem. With this solution, banks can easily take their branch directly to customers and provide services at their doorsteps.

OneSpan: Digital Security Authentication

OneSpan will be complementing Azentio's Internet and Mobile Banking offering with advanced digital authentication technologies allowing financial institutions to provide their customers with strong authentication and secure online accessibility to personal accounts and other financial transactions performed throughout the internet. With the DIGIPASS technology, banks can authenticate their customers and mitigate risks stemming from phishing scams, hacking, trojans and man-in-the-middle (MITM) attacks. Secure online services will boost customer trust and will enable financial institutions to build an enduring competitive advantage.



Arabot: Intelligent Chatbot Platform

Arabot offers an open platform, comprehensive, reliable, secure, scalable intelligent chatbot solutions that allows financial institutions to automate customers live chat conversations and financial transactions. For users, this is an advantage because they can get instant answers to their queries at any time, without needing to wait for any human intervention. The intelligent chatbot will support its customers in different use-cases. It will also integrate with the back-end systems for better user experience enabling financial institutions to improve their customer satisfaction. The solution can be seamlessly integrated and deployed through multiple channels to optimize customer reach and increase customer engagements via the different supported delivery channels such as website, Mobile Banking, Internet Banking, and world-class social platforms like WhatsApp, Facebook Messenger, Twitter, and Slack.

Arabot's chatbot technology & AI solution stands out as the pioneer powerful platform of its kind. Besides the English and French bot, we provide an intelligent Arabic bot built upon a state-of-the-art Arabic NLP engine, which deals with understanding and analyzing Arabic content & conversation - with different Arabic dialects - in an accurate and efficient way.



Thomson Reuters: VAT Solution

Thomson Reuters combines industry expertise with innovative software technology to deliver critical information to leading decision makers in the tax, accounting, legal, global trade and compliance segments, powered by the world's leading international news organization.

The company's ONESOURCE VAT technology provides the following benefits to banking and corporate clients:

- 100% accurate VAT returns and an effective tax rate
- Complete visibility and control across their entire tax process
- Automation of tax and accounting to reduce risk and avoid manual intervention
- Compliance with regulatory rules and financial reporting
- Robust audit defense for VAT audits.

Refinitiv: Market Data Platform

Refinitiv provides financial institutions with the opportunity to monitor and update their understanding of the foreign exchange market, currency rates, and security prices in real-time. **IMAL** Live Financial Markets middleware application will connect **IMAL** banking applications to the Refinitiv Market Data Platform in a bank or investment company.





Bloomberg: Data License and Trading Solutions

Bloomberg, the global business and financial information and news leader, gives influential decision makers a critical edge by connecting them to a dynamic network of information, people, and ideas. The company's strength – delivering data, news, and analytics through innovative technology – is at the core of the Bloomberg Terminal. Bloomberg's enterprise solutions build on the company's core strength: Leveraging technology to allow customers to access, integrate, distribute and manage information across organizations more efficiently and effectively.

Bloomberg Data License and Trading solutions can be integrated with **iMAL** Live Financial Markets middleware to connect **iMAL** banking applications to help clients access, organize, distribute and use reliable data across the enterprise more efficiently and effectively.

Signotec: Electronic Signature Capture

As a specialist in the field of digital recording of handwritten electronic signatures, Signotec allows bank customers using signature pads to sign electronically their digital vouchers and any PDF document at the branch in a secure and efficient way.

With the signature innovations as well as the proven cross-industry software solutions for mobile and stationary signing, users can digitally sign, authenticate people, create evidence-proof documents and thus optimize business processes. The company offers its own hardware for signature capture that is perfectly aligned with the software, guaranteeing a unique, data-protected interaction.



irisGuard: Iris Recognition

iBank Suite is the most advanced and secure technology for the individual's authentication. iBank Suite provides fast, accurate, and secure services for reducing fraud and increasing efficiency in serving customers at teller, customer service, ATM, and Internet Banking by eliminating the need for ID and A/C No. at the branch. The ATM card and related pin number at the ATM machine, username and password authentication at online and off-line banking channels, are all no more needed, with the implementation of iBank Suite. This technology enhances financial institutions' safety, efficiency, and accuracy.

Apliman: Call Center, IVR, USSD and SMS Gateway

The new Mobile Banking offering will utilize Apliman's SMS and USSD gateways for providing Mobile Banking channels through SMS and USSD. Azentio's clients will benefit from Apliman's phone banking services including call center and IVR which enhance customer relationship management.

The partner solution offers all the features of an automated teller machine: Account balance information and list of latest transactions, electronic bill payment, fund transfer, withdrawal report, etc.



Zafin: Centralized Pricing Control

Zafin is a global leader in the product and pricing control solutions for financial institutions. It offers a centralized pricing tool to increase the sophistication of pricing strategies by externalizing pricing calculations from core systems. A consistent pricing system of record substantiates rates and fees, supports internal and regulatory reviews, and automates monitoring, tracking and governance.

Hootsuite: Social Media Management

Hootsuite is the most widely used platform for managing social media. Hootsuite's tailoring digital expertise in the financial sector can equip our clients with a solution designed specifically for them. Hootsuite empowers digital teams to build brand awareness, delight customers, engage with communities, and drive real business value whilst remaining compliant.

Value Xd: Analytical Platform

With advanced sharing, mathematical modelling, simulation, and presentation tools, Value Xd is an ideal platform for the new digital age, for remote analytics creation and presentation. It is a data aggregator interfaced with Bloomberg and International Monetary Fund, and an innovative analytics tool with live simulation capabilities for in-depth presentations, allowing the creation of models in actual mathematical language and contains a library of ready models and dashboards for immediate application.





Asia Pacific

Singapore
Hong Kong
Malaysia
Thailand

Middle East

Saudi Arabia
United Arab Emirates
Kuwait
Bahrain
Lebanon

Africa

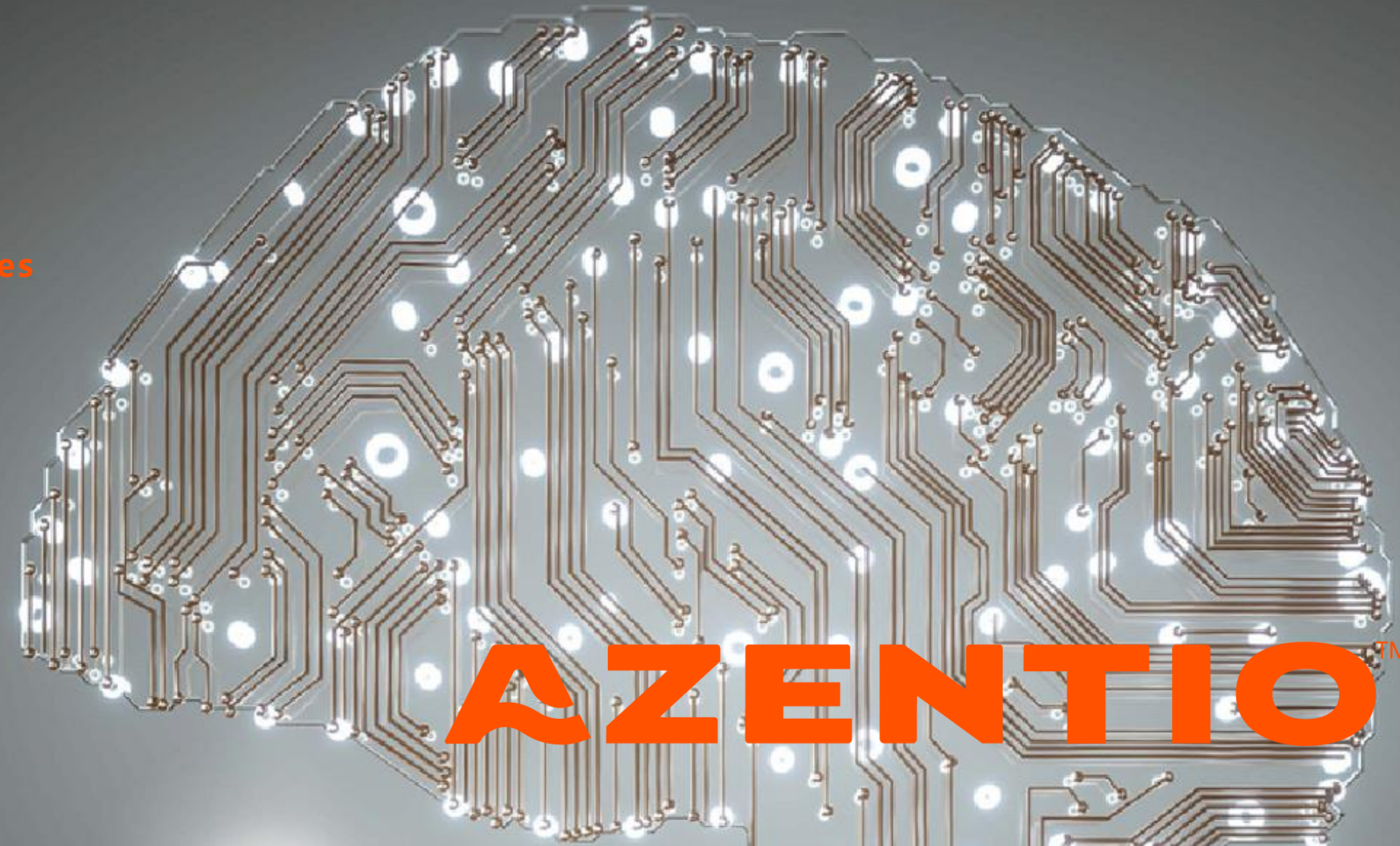
Kenya
Egypt

South Asia

India

United States

New Jersey
Dallas



AZENTIO™



contactus@azentio.com | www.azentio.com