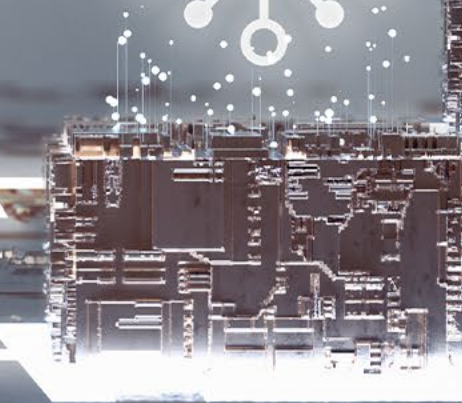
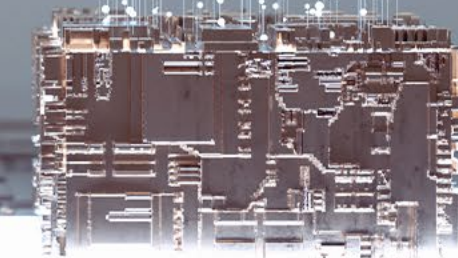


PRODUCT OVERVIEW





OVERVIEW /

Architectures of iMAL

Functionality of iMAL

Branch Automation

Customer Service Management · Omnichannel Solution · Digital Channels
· Internet Banking · Mobile Banking · Social Management · Agency Banking

Digital Banking Solutions

Retail Banking · Corporate Banking ·
Customer Relationship Management



CORE BANKING /

Retail & Corporate Financing

Facility Management · Islamic
Investment · Collection Management

Treasury

Islamic Treasury · Blotter
· Cash Flow Monitoring

Investment

Financial Assets · Sukuk
Management · Direct Invest

Trade Finance Operations

Trade Finance ·
Structured Trade Finance



AML & COMPLIANCE /

Risk Management

Basel Compliance · Market Risk & ALM · Operational Risk & Governance · Credit Risk & IFRS 9 ·
Anti-Money Laundering · International Taxation · FATCA · CRS

Operational Accounting

Accounting · Islamic Profit Calculation · Provisioning
· Revaluation · Fixed Assets Management



ANALYTICS & REPORTING /

Analytics

Business Intelligence · Executive Suite · Customer Profitability · Predictive Analytics

Reporting

Regulatory Reporting · Reporter · Credit Bureau · Financial Consolidation



SUPPORT APPLICATIONS /

System Administration & Security · Centralized & Decentralized Architecture · Personnel & Payroll · Human Resources Management ·
Multi-Threading Scheduler · Notification Management · Business Process Management



SYSTEM INTERFACES & INTEGRATION SOLUTIONS /

Digital Hub

Administration · Dynamic Files · ATM Broker · Open API · Service Control · SWIFT/RTGS/ACH/SARIE ·
SARIE Broker · Electronic Cheque Clearing · Platform Web Services · Live Financial Markets

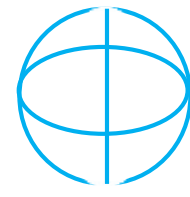


STRATEGIC PARTNERSHIPS /

Genesys · OneSpan · DocuWare · Software Group · Thomson Reuters · IMTF · Refinitiv · Bloomberg ·
Signotec · S2M · IrisGuard · Apliman · Zafin · GlobeX Data · Hootsuite · Value Xd



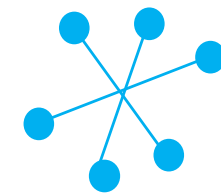
iMAL Islamic Core Banking Platform - Business Architecture



INTERNET BANKING



MOBILE BANKING



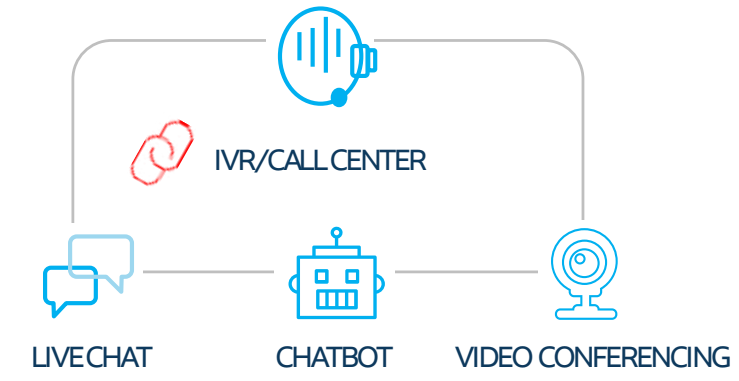
SOCIAL BANKING



BRANCH



AGENCY BANKING



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

TRANSFER PRICING

BLOTTER

LIVE FINANCIAL MARKETS

CASH FLOW MONITORING

HR & PAYROLL

INVESTMENT

FINANCIAL ASSETS

DIRECT INVEST

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

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iMAL Islamic Core Banking Platform - Functional Architecture



DELIVERY CHANNELS

- Branch
- Internet Banking
- Mobile Banking
- IVR Call Center
- Social Management
- POS/ATM
- Agency Banking

FRONT OFFICE

- CRM
- Treasury Front Office
- Customer Service
- Embedded Analytics

RISK & MIDDLE OFFICE

- Case Management
- AML/CFT | Profiling
- International Taxation Regulations - FATCA/CRS
- KYC | RBA | ALM
- Credit Risk & IFRS 9
- Provision Management
- Market Risk | Blacklist
- Scoring & Approval Retail & Corporate
- RCSA - IMDC - KRI - RCP
- Limit Management
- Sharia Audit
- Basel II | Basel III
- Fund Transfer Pricing
- Stress Testing

CORE BANKING/BACK OFFICE

- Pool Management | CASA | Portfolio Management
- Islamic Profit & Loss Calculation & Distribution | Islamic Syndicated Financing | Sukuk & Other Financial Securities
- Islamic Corporate Financing | Structured Fund Management | International Trade Services
- Financial Accounting | Forex | IFRS 9 | Collection
- Collateral Management | Basel Compliance | Revaluation
- Card Management | Term Deposit URIA | IPRS | PFX
- Islamic Retail Financing | Money Market | IPO | ICCS

ANALYTICAL/REPORTING & BI

- Dashboards & KPIs
- Embedded Analytics
- Login Fraud Detection
- Enterprise Data Warehouse
- Behavioral Segmentation
- Central Bank Reports
- Sentiment Analysis
- Financial Consolidation
- Credit Bureau Interface
- Customer Profitability

SYSTEM INTERFACES & INTEGRATION SOLUTIONS

- SWIFT/RTGS/SARIE
- ECC
- ATM Broker
- Live Financial Markets
- SMS Gateway
- Services Control
- Open API
- Bill Payment
- Import/Export Files
- Administration

SUPPORT APPLICATIONS

- System Administration & Security
- Centralized & Decentralized Architecture
- Document Management System
- Business Process Management
- Notification Management
- Personnel & Payroll
- Fixed Assets Management



Functionality of **iMAL**

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 Path Solutions, offer the multi-award winning Islamic core banking platform **iMAL** 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 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.



Path Solutions 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 **iMAL** 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 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** 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.

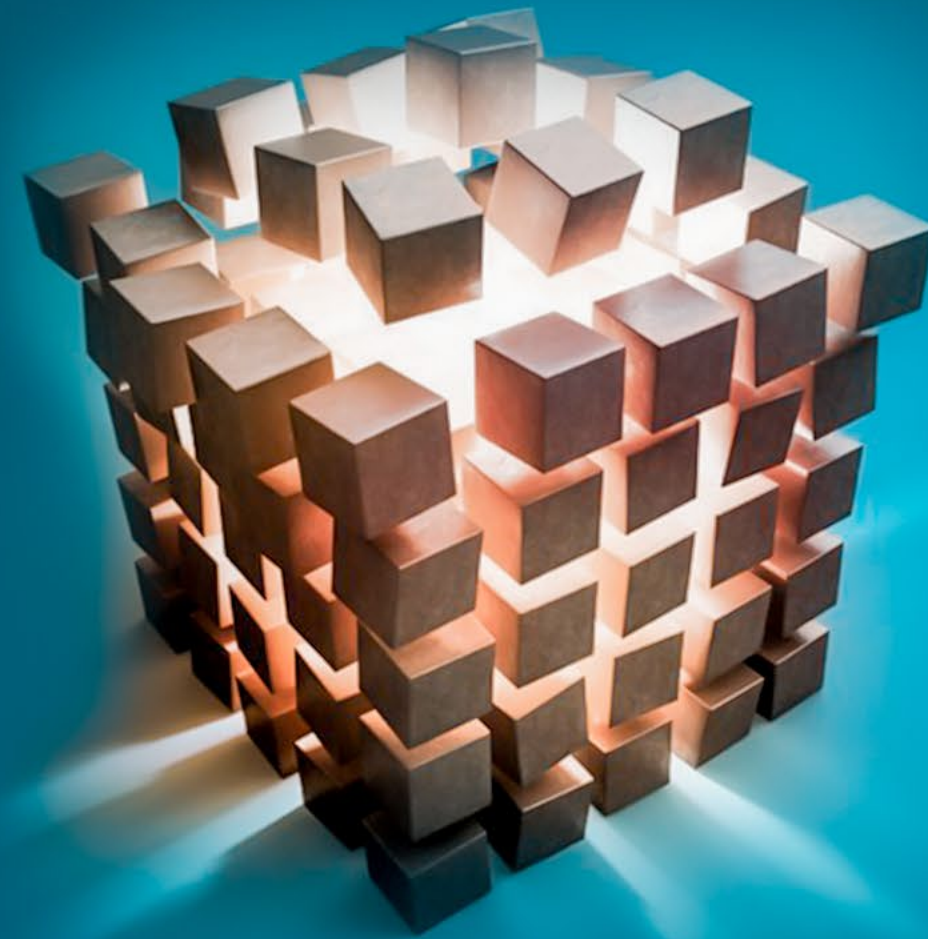
iMAL offers Islamic financial institutions a comprehensive solution addressing all their business requirements to enable them to serve their customers with total transparency and professional confidence.



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

- Core Banking
- Investment
- Fund Management
- Portfolio Management
- Assets & Liabilities Management
- Treasury
- Profit Calculation
- Accounting & MIS
- Fixed Assets
- Personnel & Payroll
- Human Resources Management
- Trade Finance
- Structured Trade Finance
- CIF Management
- Credit Operations
- International Taxation Regulation.





BRANCH AUTOMATION

Customer Service Management

This is not just a standard CSM system. It is an electronic delivery channel for all the bank products and services. It empowers the bank to offer all services and products on the counter.

The system covers the following main areas:

- Standard Retail operations, such as deposits, withdrawals, chequebook requests, transfers, card requests, safe deposit box requests, bill payments, etc.
- Complete request management, empowering the bank to offer to its Corporate, Retail and Private Banking customers all its products on the counter, such as: Restricted Investments, Letters of Credit, Letters of Guarantee, Bills for Collection, Financial Facilities, Funds & Securities, Investment & Divestment Orders
- Anti-Money Laundering control at the reporting and transaction levels
- Dynamic Know-Your-Customer form to be filled upon customer's file opening
- Cross-selling engine, by segmenting customers based on predefined criteria and selection
- Ability to define the maximum and minimum transaction amounts during a specific period
- Option for customers to transfer their accounts from branch to another, or from a product to another.





iMAL*CSM offers:

- Multilingual capabilities for worldwide deployments (English, Arabic, French, etc.)
- 360-degree view feature providing financial institutions with a full view of all customer related products, accounts, transactions, balances, alerts, etc.
- Time optimization and the ability of the user to effectively and efficiently respond to the customer
- Update on progress of user/customer status and actions taken by the bank's relevant business units on the related customer request, e.g. the financial facility has been approved or is currently with the committee
- Extensive filtering and control over what the user can see and transact, along with the related limits, e.g. based on the type of customer, priority, economic sector, type of account, etc.
- The bank's ability to process SWIFT transfers, cheque clearing, bills registration & payments, remittance issuance & collection, standing orders, salary domiciliation, card payment, blacklist check, etc.





Omnichannel Solution

World-class Omnichannel Digital Banking solutions focus on creating personalized and seamless customer experiences, anytime, anywhere, across all digital touchpoints. Path Solutions' 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, Social Banking, 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 journey, helps 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 **iMAL** 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 type 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

The Digital Banking platform orchestrates all channels and devices defined in the banking architecture to ensure consistent and seamless customer experiences, allowing customers to easily start – stop – resume – finish interactions across all digital channels. It offers Retail, Corporate, Social and Agency clients with ready-to-use channel solutions including Mobile, Internet, and more.

Internet Banking

Our Internet Banking solution is an intuitive, modern, and fully responsive web based application with advanced services that meet Retail, Corporate and Agent Banking customers' needs. Being Omnichannel in nature, Path Solutions' Internet Banking solution works in conjunction with other self-service channels such as the ATM and mobile, offering the customer a consistent view of his finances with the ability to initiate a transaction on any device connected to the Internet and complete it on another channel. User experience is optimized



for banks' customers via a highly flexible solution that adopts screen resolution, navigation menus and content to the given screen size. The solution offers a straightforward and attractive Online Banking experience, knowing that Internet Banking is becoming an intrinsic part of their lifestyles.

Mobile Banking

Mobile is one of the most personal channels and it has the potential to become the most prominent channel in the Omnichannel world. Our Mobile Banking solution provides the financial institutions' customers with the ability to use different web browsers or to download native mobile apps on their smartphones.

The solution is cross-platform, supporting many devices and operating systems, and cross-browser supporting many web browsers. Although our Mobile Banking solution can be installed as a stand-alone software, the full power of the solution can be realized when adopted within an Omnichannel architecture.



Social Management

The solution is a standalone social channel offering to manage and control all social media interactions while ensuring compliance with SEC, FSA and FINRA regulations.

The solution provides a secure single sign-on interface that enables banks to manage both incoming and outgoing social media communications and immediately respond to customer needs, ensuring total control of real-time social media communication policies and compliance, protecting the reputation of banks and providing better customer service through automatic categorization of feedback and execution of corresponding configurable workflows.



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.



DIGITAL BANKING 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.



Customer Relationship Management

Our solution is highly customizable to help banks meet the overall goals of Customer Relationship Management. It also offers them new opportunities of expansion and growth by widening their market share through attracting new customers, retaining existing ones, as well as reducing the cost of marketing services.

Moreover, it is a web based application for supporting processes implemented by financial institutions when handling customers' interactions. It also caters for storing information on current and potential customers.

The solution is based on Microsoft Dynamics CRM. Its ultimate purpose is to achieve greater profit by providing superior service to customers, while reducing costs and complaints by offering services like case management to customers.

Information here is related to three main areas of operations: Sales, Marketing, and Services. The solution provides lead tracking and salesforce management, campaign management, case and complaint management, customer 360-degree view, portfolio positions, customer feedback and satisfaction.





CORE BANKING



RETAIL & CORPORATE FINANCING



Facility Management

The solution provides financial institutions with the necessary information and tools for evaluating customer profiles and determining their creditworthiness while streamlining the full credit process. It will contribute to their capital growth through accurate implementation of their credit policies as well as meeting market needs through a highly dynamic and automated platform.





Key features include:

- Highly parametrized solution by category, products and approval committee levels
- Predefined steps for faster application processing
- Automation and customization of process steps for added flexibility
- Advanced product-based document checklists and validations
- Comprehensive customer grading evaluation models
- Complete collateral management suite for all collateral types, allocation and revaluation
- Separate corporate and individual facility processes for all types of Islamic Financing, Trade Financing and Securities Management
- Full support of facilities grouping and their utilization
- Maintaining and monitoring of financial positions and limits
- Ability to simulate payment schedule plans 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 **iMAL*CSM**, **iMAL*CRM**, Internet and Mobile Banking with full tracking of the application status.



Islamic Investment

This is a Sharia-compliant Islamic banking solution built and designed specifically to handle all types of Islamic financing instruments and products such as Murabaha, Mudaraba, Musharaka, Ijara, Salam, Istisnaa, Project Financing, Qard Hasan, 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.

Our comprehensive platform covers the full cycle of purchase, sale and financing. The system has a built-in functionality for Islamic contract generation, repayment schedule simulation, authorization workflow and capability to execute accounting entries as per the Sharia guidelines.

The solution is extended to cover all types of payment options such as grace period, balloon payments, fixed installments, repayment plan criteria and predefined agreements. It also handles past due management, deal classification and provisioning.

Our solution is an end-to-end Islamic financing one from inception to deal closure with complete audit trails, user access privileges and reporting capabilities. This flexible and highly efficient solution has been empowering Islamic banks for decades while ensuring adherence to Sharia, local and international regulations.



The solution can be summarized as follows:

- Flexible to create multiple Islamic product variants under pre-integrated Islamic product categories
- Able to capture the complete purchase and sale processes with the relevant accounting entries at each event
- Able to capture items with restrictions for each Islamic product type
- Incorporates comprehensive vendor management process
- Flexible to create multiple types of repayment plans using the straight-line method, diminishing returns, IAS 18 or Rule of 78
- Able to execute multiple disbursements for project finance deals
- Handles charges based on dynamic criteria which can be specified at deal creation or can be event-based
- Includes powerful insurance management
- Covers deal rescheduling and restructuring
- Able to merge deals belonging to the same customer
- Covers skipped installments
- Incorporates a manual and automatic settlement process with the option of blocking funds
- Covers advance principal settlement and early settlement
- Optimizes past due management with profit suspension
- Enables deal classification according to predefined provisioning categories
- Allows easy tracking of deals, asset positions and customer financials in a 360-degree view
- Allocates VAT functionality and related accounting entries
- Includes deal switching capability
- Provides Multicurrency, multilingual and dual calendar system (Hijri/Gregorian)
- Allows to attach and view documents at different stages of the financing flow.



Collection Management

This is an effective tool for managing the collection of debt and the litigation activities related to it. 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 bank can easily identify the delinquent customers and group them under specific pools as required. 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.





TREASURY

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, 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 – to money market deals such as placements, borrowings, commodity Murabaha, reverse Murabaha, 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 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 money market deal processing and settlement.



Blotter

It is the dashboard for treasurers showing and managing the bank's nostro accounts, limits, maturities, and positions affected by banking operations of all branches including the head office. The solution carefully documents the trades in order to be reviewed and confirmed by the trader. The system enhances the cash functionality, liquidity and profitability management and adds a limit structuring on a day-to-day basis. It collects data from all **iMAL** services, i.e. **iMAL*IslamicInvest**, **iMAL*IslamicTreasury**, **iMAL*Assets**, **iMAL*Trade-Finance**, **iMAL*DirectInvest**, **iMAL*CSM** and other banking transactions and can be used as a repository for all limits, positions and maturities.



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.

The solution 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

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 – both American and European – constitute part of the solution as well, catering to different types of underlying instruments, and handling early and on-time exercise, and automatic expiry.

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

It is fully integrated with **iMAL*CSM**, 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 **iMAL*SWIFT-STP**. The workflow is catered for through STP; front, middle, and back office.



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.

It integrates with Reuters and Bloomberg for deal processing, securities management, reference rates population and currency exchange rates. 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.



Direct Invest

It fully caters for direct investments, whereby each deal represents many companies of different types and roles, such as Syndication Companies (SynCo), Permanent Voting Companies (PV), Permanent Non-Voting Companies (PNV), Holding Companies (HolCo), and Operating Companies (OpCo), etc. Data entry is done at a macro level, thus minimizing time and effort. The solution handles all types of investments, such as placements, self-lending, REITS, etc. On the structured deal level, **iMAL*DirectInvest** covers all the deal operations from inception to termination, passing through securities trade, acceptance letters, certificate management, and more.



TRADE FINANCE OPERATIONS

Trade Finance

It is a cross-functional platform that caters for a wide range of trading facilities mainly 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.

Our 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).



Structured Trade Finance

This is a specialized solution designed to finance complex purchases and shipments of high-end products and commodities, while reducing the amount of non-performing loans and enhancing security mechanisms. It ensures the complete lifecycle management of structured finance in a flexible and vastly parameterized approach commencing with financing facilities and terminating with settlement.

The solution mitigates risks associated with Structured Trade Finance transactions by collateralizing purchased commodities using cash margin, cash deposit and marine insurance. In the event of default, financial institutions are capable of liquidating those commodities and consequently redeeming uncollected funds.

It also facilitates the global investment processes by providing legally pledged export contracts allowing borrowers to tap into foreign markets on favorable terms.



OPERATIONAL ACCOUNTING

Accounting

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

Our 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.

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





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
- 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
- System has the capability to achieve desired rate of return by adjustment though multiple criteria of PER, IRR deductions. The system also has 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
- System provides 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.





Provisioning

In order 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 loans) or their non-performing assets (substandard, doubtful, loss).

The 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 also allows financial institutions to classify and calculate provisions for various 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.



Revaluation

The solution enables the automatic processing of revaluation of financing deals which were 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.

Fixed Assets Management

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 of requisition, quotation, purchase order and payment, retirement, revaluation, maintenance and sale. In addition to this, the system also caters for location management, inventory 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.



AML & COMPLIANCE

RISK MANAGEMENT

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 standalone platform facilitates all this and more.

It allows financial institutions to 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.

The solution enables financial institutions to proactively manage their risks through various detailed management and analytical features, such as what-if analysis, sensitivity analysis, and stress testing. It also offers ready-to-deploy comprehensive dashboards, reports, and analytics tools for both the regulatory and the institution's own Risk Management needs. The platform is structured into four core components, targeting core risk types as shown below:



Basel Compliance

The risk capital reporting component handles the calculation of Risk Weighted Assets (RWA) and Capital Adequacy Ratio (CAR) and supports compliance with the Basel II/III Accords and IFSB Capital Adequacy Standard.

Market Risk & ALM

The AML component provides advanced risk analytics, including VaR computation at instrument and portfolio levels, hedge effectiveness testing, cash flow discounting, yield curve stress-testing, behavioral liquidity analysis, trend analysis, liquidity risk indicators, interest rate risk analysis, stress testing, liquidity test, and risk concentration reports.

Operational Risk and Governance

This component covers the risk register, risk and control self-assessment (CSA) with detailed KRI/KCI analysis, incident management and data collection, and the business continuity program.



Credit Risk & IFRS 9

The Credit Risk and IFRS 9 component provides financial institutions with the required tools to implement the multi-step impairment approach along with Risk Management tools beyond IFRS 9 compliance.

It offers different methods for the quantification of Expected Credit Losses (ECL) and is highly flexible in staging the bank's exposure. Moreover, it goes beyond compliance in maintaining internal credit ratings for financial institutions and improves business performance through guidance on minimizing the risk of counterparties and exposures.

This component offers dynamic scorecard setup for internal credit rating, as well as dynamic classification of financial assets into three stages, thus providing seamless recognition of the lifetime ECL right from the start.

The product is structured to be connected to any other third party core banking system with simplified data extraction methodologies through a data warehouse.



Anti-Money Laundering

The AML solution provides financial institutions with the required tools for transaction monitoring, watchlist screening and associated AML processes such as onboarding / CDD, case management, compliance dashboard, and reporting. This full program helps financial institutions to identify unusual or suspicious activities that must be reported to regulatory authorities, all while screening customer information against lists of sanctioned individuals and companies, politically exposed persons and other lists of high risk individuals and organizations. This blacklist system identifies individuals that present potential sources of risk and allows banks to undertake the necessary actions.

The solution also allows banks to perform due diligence upon customer onboarding and apply scoring criteria to determine the level of risk of each individual.



For Compliance departments, the system boosts an end-to-end AML risk self-assessment process that helps banks identify, assess and control risks:

- KYC
- Blacklist
- Profiling
- Transaction monitoring.

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 is a new solution developed in response to CRS for the automatic exchange of financial account information to 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

Path Solutions 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 SQL Server 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

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.

Executive Suite

C-level executive analytics boosting a base set of KPIs, dashboards and advanced analytics which are essential to each executive.

Customer Profitability

Profitability for different dimensions such as branch, department, and product down to customer level, with trend analysis overlooking both monthly and yearly growth.

Predictive Analytics

Powered by Microsoft latest technologies and the most advanced algorithms, allows data mining and predictive analysis to uncover hidden patterns:

- Behavioral Segmentation: Using clustering algorithms to divide a single portfolio into multiple segments according to 'Demographical', 'Geographical' and 'Behavioral' criteria.
- Login Fraud Detection: Using anomaly detection algorithms to identify fraudulent login attempts based on mismatches, high-risk locations, velocities, and cross-checks.



REPORTING

Regulatory Reporting

This is an extremely flexible, powerful and easy to use reporting tool that allows users to build templates for their financial statements. The solution produces a variety of graphs and ratios along with some analysis, and has the ability to create Central Banks' reports.



Reporter

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.

In addition, a Report Designer is available, enabling users to add their own reports easily, in a secured environment with strong access control measures. The solution empowers users to design new reports and modify existing ones. 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 **iMAL** multi-banking program systems.



Credit Bureau

This enhanced time efficient interface is used to generate text files to be sent to credit agencies for uploading information into their databases. The information is provided by subscribers on a regular and timely basis in a single format that can be understood by all subscribers.

It acts as a reliable source of information to be shared with other financial institutions that need the credit history of potential customers.



Financial Consolidation

It is a web based solution with its standalone database that allows group entities to streamline the production of financial statements and meet reporting requirements such as local generally accepted accounting principles (GAAP) and International Financial Reporting Standards (IFRS). 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 also handles entities with different charts of accounts. As a result, the system adds significant value by enabling flexible, accurate and rapid reporting.



SUPPORT APPLICATIONS

System Administration & Security

The solution empowers financial institutions to implement security policies at the level of **iMAL**; 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.

Centralized & Decentralized Architecture

This engine integrates all branches with the head office in an online real-time mode whenever the connection is available, and in case the connection is not available, the system will pool all the required transactions and then automatically post them as soon as the connection is established.

The Store & Forward mechanism empowers the branch to work in a standalone mode and centralises the information simultaneously. Data synchronization can also be performed using EDI, via mail or media.

Personnel & Payroll

The solution was designed to organize all the tasks of employee payment such as, calculating basic wages, allowances, deductions, overtime, attendance, leave accruals, indemnity calculation, bonus, loans, school fee, social security, end of service benefits (EOSB), etc.

It is well equipped for today's demanding world of payroll; it generates payroll and payslips. Encrypted payslips are sent directly to employees via emails on the readiness of employee salaries. Bank diskette files are also generated with details of net payments to be credited to employees.



Human Resources Management

This is a comprehensive and integrated system that enables the efficient management of employee affairs from the time an employee joins the organization, providing full information at one's fingertips and facilitates all types of employee transactions. The system allows identifying resource requirements, recruiting and hiring competent employees, recommending competitive employee benefits and suggesting employee training and development strategies.

The system provides an attractive employee self-service portal enabling employees to view/update their profile, check their leave balance, payslips and attendance, submit requests and documents and generate various types of reports without approaching the HR department.

The management dashboard, an important feature of the system with multiple charts and reports, enables the HR and higher management to have a quick view which helps in decision making.

The dynamic workflow engine integrated with the system helps to set up the workflow according to the organization's requirements.



Multi-Threading Scheduler

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, who can 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 of the employees' time. It also offers the possibility to initiate manual batches through a highly secure mobile access. It also 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 at a later time.



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 outside **iMAL** predefined frameworks. 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 a SLA engine to highlight delays in order to take appropriate measures.



SYSTEM INTERFACES & INTEGRATION SOLUTIONS

DIGITAL HUB

Path Digital Hub is a secure and comprehensive open banking platform that connects all of the digital banking channels 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 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.

Dynamic Files

This is a file-based platform solution - one of the capabilities of the Digital Hub. It allows financial institutions to deal with any file, from file parsing to file mapping to the server digital layer, to file processing.





ATM Broker

It is an ISO-8583 interface that enables the interfacing between the bank ATM switch or national switch and **iMAL** core banking platform.

It is developed to support all transactions processed through standard and advanced ATM/POS machines (withdrawals, deposits, balance inquiry, mini-statements, chequebook requests, statement requests, bill settlement, etc.).

All electron ATM/POS transactions processed through this system are directly posted to the system online, and will immediately affect customer accounts. All charges, calculations are also done in real-time.

Open API

Open Banking demonstrates a PSD2 Open API solutions. 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.



Service Control

Hosting the service adapters responsible for controlling the different PWSs of the various back-end systems and applications.

SWIFT/RTGS/ACH/SARIE

This middleware integrates **iMAL** with SWIFT Alliance system. SWIFT transactions that have been processed by the authorized users in the different **iMAL** related 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.



SARIE Broker

It can be interfaced to SARIE by means of the CDG solution. The SARIE-**iMAL** integration is composed of two entities:

SARIE Communication: A communication entity responsible for establishing a real-time connection with SARIE, sending and receiving the SARIE related messages.

SARIE Financial: A financial entity responsible for retrieving all SARIE related payments in **iMAL** and generating the SARIE related messages, as well as retrieving the SARIE received messages and creating the related **iMAL** payments.

Electronic Cheque Clearing

iMAL 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 **iMAL** business rules, and they are created or voided in **iMAL** accordingly.



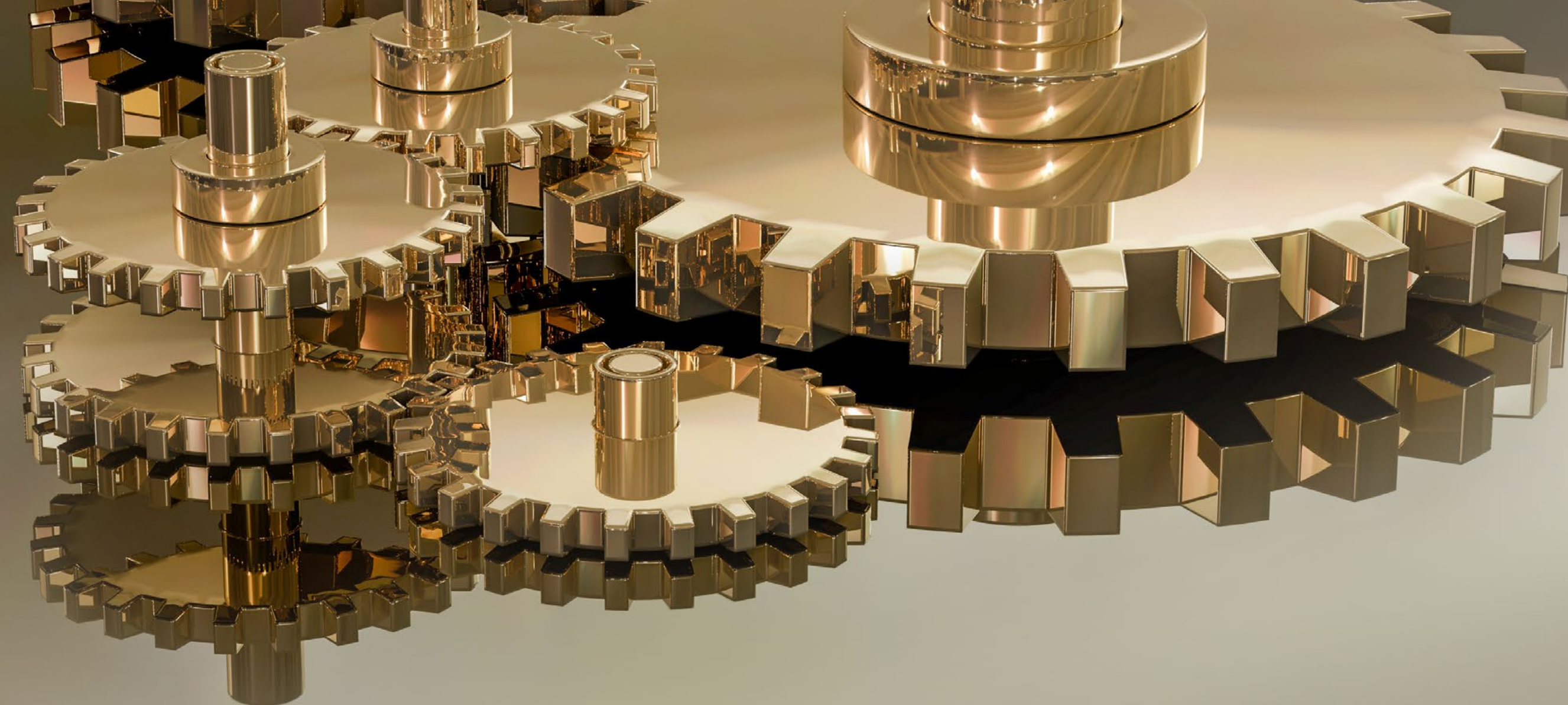
Platform Web Services

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.

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** 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 **iMAL** while users are conducting their day-to-day businesses.

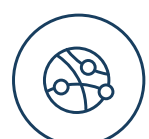


STRATEGIC PARTNERSHIPS

Path Solutions is committed to providing its clients with state-of-the-art software solutions. As part of that 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 Path Solutions' suite of solutions and deliver greater depth of value to our clients. Our worldwide partners provide Path Solutions 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 Path Solutions' core banking platform.





Genesys: Omnichannel Customer Engagement

Genesys provides all in one Omnichannel contact center and communication platform which combines real-time contextual journeys, world-class intelligent routing and digital transformation.

Bank customers can engage in the channel that best suits their preferences through personalized interactions across IVR, video conferencing, live chat, email, web, voice, social media (Facebook, Twitter), SMS and Chatbot.



OneSpan: Digital Security Authentication

Vasco which is now OneSpan will be complementing **iMAL** 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 are able to 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.



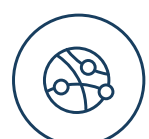
DocuWare: Document Management System

DocuWare offers state-of-the-art Document Management Systems (IDMS) solutions for professional enterprise content management that will enable Path Solutions' 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 records management features ensure that access to documents and their contents is secure, controlled, and logged at all times.

Software Group: Digital Banking Platform

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.



Thomson Reuters: VAT Solution

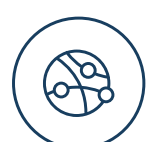
Thomson Reuters combines industry expertise with innovative software technology to deliver critical information to leading decision makers in the Tax, Accounting, Legal, Global Trade and Compliance segments, powered by the world's leading international news organization.

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.

IMTF: Regulatory Technology Solutions

IMTF offers a comprehensive end-to-end solution which includes real-time transaction monitoring, watch list filtering, customer due diligence/KYC and risk rating capabilities. The system provides centralized watch list management, case management and investigation along with reporting tools. It is supplied with proven detection scenarios for all banking types and for all jurisdictions along with an intuitive GUI to react quickly and efficiently to regulation changes.



Refinitiv: Market Data Platform

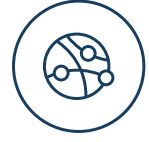
Refinitiv gives financial institutions an opportunity to monitor and update their understanding of the foreign exchange market, currency rates, and security prices in real-time. Path Solutions' **iMAL*LiveFinancialMarkets** middleware application will connect **iMAL** applications to the Refinitiv Market Data System in a bank or investment company.

The **iMAL*LiveFinancialMarkets** is an integrated back-office system that manages the data transfer of currency exchange rates, security prices, and foreign exchange deals from Refinitiv Market Data System to the **iMAL** applications.

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 Path Solutions' **iMAL*LiveFinancialMarkets** middleware to connect **iMAL** 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.

S2M: Switch and Card Management System

S2M will complement Path Solutions' **iMAL** suite of products with SELECT System® which combines both a Switch (front office) and a Card Management System (back office). The system will enable processing a variety of financial transactions and authorizations originated from POSs, ATMs, Internet, and branches.

The UNIX™ and Oracle™ based SELECT System® is designed to maximize the flexibility and efficiency of financial institutions involved in the card industry. S2M's SELECT System® is compliant with the most adopted payment standards such as ISO 8583 & EMV and certified by prestigious card giants such as VISA, MasterCard and American Express.



IrisGuard: Iris Recognition

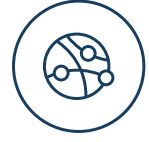
iBank Suite is the most advanced and secure technology for the individual's authentication. iBank Suite provides fast, accurate, and secure services for reducing fraud and increasing efficiency in serving customers at teller, customer service, ATM, and Internet banking by eliminating the need for ID 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. Path Solutions' clients will benefit from Apliman's phone banking services including Call Center and IVR which enhance customer relationship management.

The partner solution offers literally 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.

GlobeX Data: Cloud Storage Technology

The partnership with GlobeX Data will enable Path Solutions' clients to benefit from cloud storage technology and solutions for their data and/or backups (such as: database backups, file server content, etc.) using the SecurusVault storage offering as well as propose to their customers and employees the storing of personal information (such as: PIN numbers, passwords, financial accounts, and confidential files and documents) using the DigitalSafe offering.



Hootsuite: Social Media Management Platform

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: An 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.



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28
 YEARS
 Leadership In Software
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 for the Islamic Finance Industry**

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