



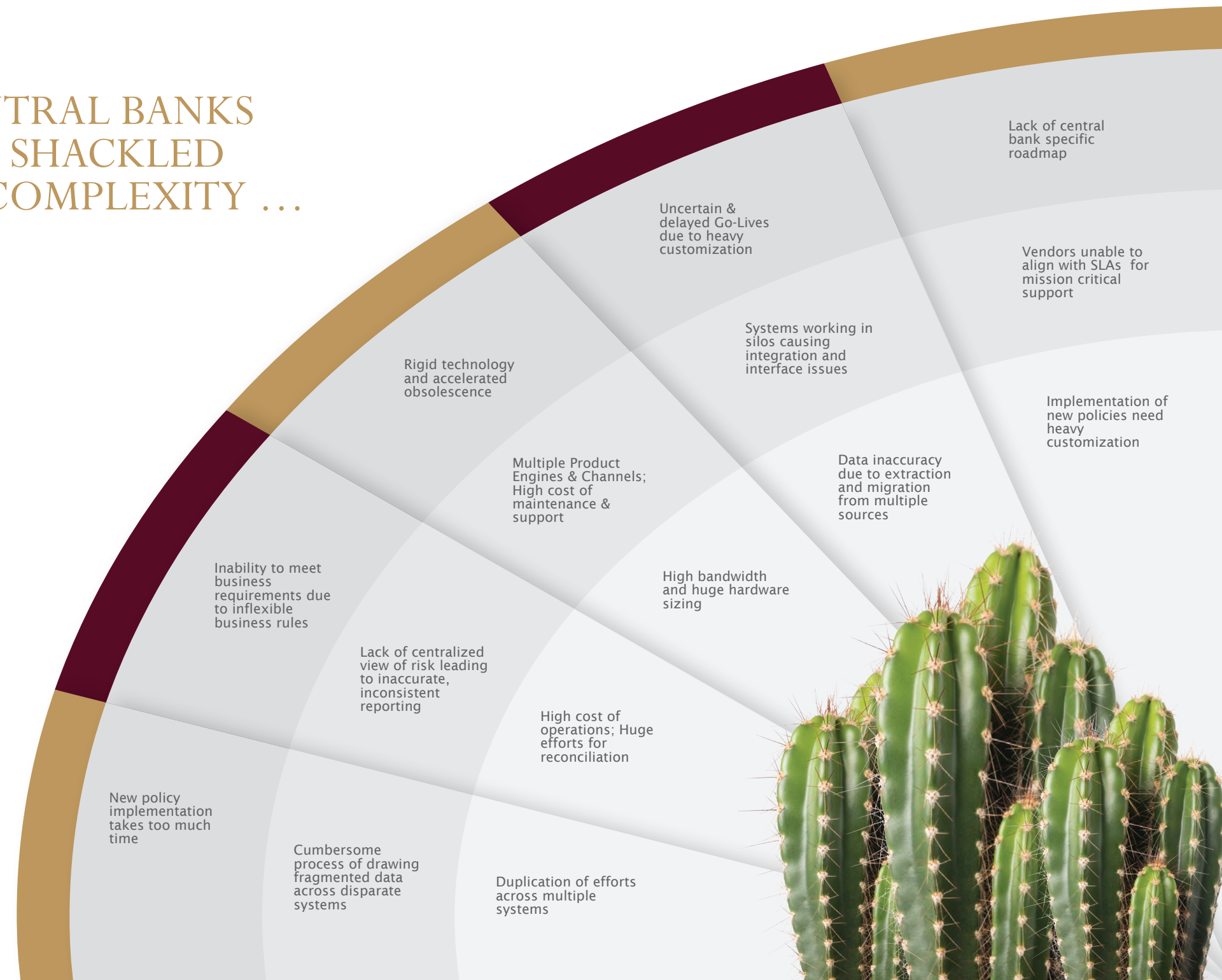
intellect®
■■■ Design for Digital



INTELLECTTM
QUANTUM
CENTRAL BANKING SOLUTION

Designed for Complexity Reduction
Digital. Real Time Risk Management. Role Aware

CENTRAL BANKS ARE SHACKLED BY COMPLEXITY ...



WHAT IS BOTHERING CENTRAL BANKS?

In a fast paced economy that is impacted by local and global events, Central Banks are facing increasing pressures as custodians of the financial health of their countries. We are seeing a few common challenges that technology needs to resolve, be it much faster implementation of economic and monetary policies, real time monitoring and mitigation of risks, an integrated view of operations or significantly lower processing costs.

Recent episodes of market stress, ongoing changes in the financial markets and the broader financial system have highlighted the need for prudent risk management. Central banks are periodically reviewing collateral policies that have a direct bearing on monetary policy implementation. This has prompted the need for integrated collateral management and liquidity settlement systems with high level of automation and advanced risk management features.

On the other hand, developing countries have started focusing heavily on financial inclusion as connecting the unbanked and under-served population into main stream banking is critical to the growth of any economy. This initiative is driven through various direct benefit schemes to the public, and is becoming an integral part of the Central Bank's agenda in these countries.

From a day-to-day functioning standpoint, any Central Bank's monetary function needs clear objectives, flexible choice of instruments, timely intervention, and liquid and stable markets to achieve its monetary management and macro-economic objectives.

All this calls for state-of-the-art IT infrastructure that provides smooth operations, zero downtimes and cover the following:

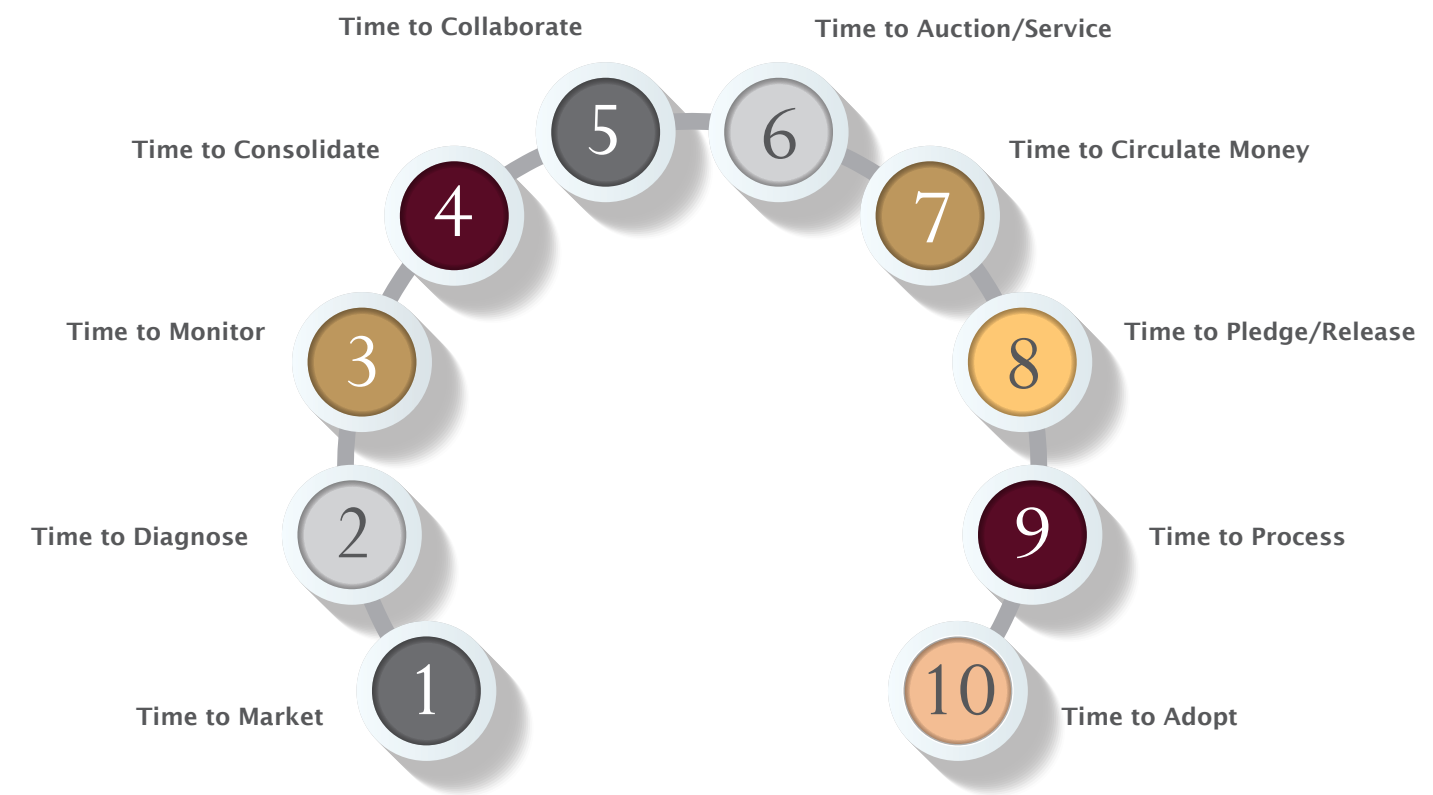
- Accurate and timely financial institution balances, collateral, credit, liquidity and performance tracking through a 360 dashboard view
- Flexibility to adapt to new policies and instruments
- Balance the risk through a well-diversified and controlled collateral portfolio spread across multiple countries
- Provide transparency and accountability for central bank operations, banking clients, financial infrastructure and governments
- Have an integrated view of position and settlement operations with payment systems, CSDs and ICSDs, and foreign central bank correspondents
- On demand and periodic financial statements and reports
- Automated and manual interventions to anticipate and resolve exceptions scenarios
- Integrated risk visualization and analytics

Timely exception and problem identification and actions for immediate intervention are the key to smooth financial operations. Anticipation, prevention, management and resolution of market and financial institution stress conditions helps promote macro-economic stability and out-performance.

Is your Central Banking ecosystem equipped to handle this stress?

HOW INTELLECT QUANTUM ACCELERATES YOUR CENTRAL BANK'S PROGRESSIVE TRANSFORMATION JOURNEY

THE 10T DIFFERENTIATORS



THE 10T DESIGN FOR CENTRAL BANKS

Designed for Speed and Ease of Change



Quantum Landscape

- Integrated operation management across all the departments with real-time dashboards for faster decisions
- On demand financial statements and reports including the balance sheets
- Integrated risk visualization and monitoring

KEY ROLES

KEY EXPECTATIONS

SOLUTION

BANKER TO BANKS

- Accurate and timely financial institution balances & performance tracking through a 360 view dashboard
- Flexibility to implement new monetary policies faster
- Online portal to enable banks to have complete on-line access within the bank

BANKER TO GOVERNMENT

- Treasury Single Account (TSA) implementation
- Govt. payments and receipts management including tax and public funds
- Govt. fund surplus and deficit management

GOVERNMENT DEBT MANAGER

- Seamless auction/underwriting management of bonds/bills
- Comprehensive servicing of bonds/bills
- Management of loans against the public funds

CURRENCY MANAGER

- Seamless life-cycle management of notes/coins
- Integrated management of currency chests/movement across the country

SUPERVISOR / REGULATOR

- Integrated analytics that can provide slice/dice of banking sector
- Mechanism to get pre-active alert on potential catastrophes
- Standardized regulatory reporting framework
- Sophisticated AML to prevent the illegal cross border funding



Customer Relationship Management 10

- Grouping & Baskets
- Controls & Validations
- Blacklist & AML
- Comprehensive data set
- Online Portal for govt./FIs



Accounts Management 20

- Products for Banks and Government
- Comprehensive limits and interest rate types



Currency and Vault Management 30

- Currency lifecycle Management
- Vault/Chest Management
- Monitoring & Tracking



Depository & Public Debt Management 40

- Auction Management
- Underwriting
- Simulation & Allotment
- DVP-1, 2 & 3 based Settlement
- Comprehensive Security Services



Collateral Management 50

- Advanced Collateral Pool
- Comprehensive Eligibility Factors, Haircuts, and Concentration limits
- Revaluation and Margin Call
- Intraday Liquidity



Government Services 60

- Treasury Single Account
- Surplus/Deficit Management
- Payments/Receipts
- Agency Transactions
- Tax Collection
- Settlement/Reporting



Credit/Market Operations 70

- Comprehensive Limits and Interest Rate Types
- Open Market Operations
- REPO/Reverse REPO
- Short Term, Long Term and Overnight Lending



Account Sweeps 80

- Notional pooling and interest calculation
- Flexible Rules
- Advanced Triggers
- Sweep and Reverse Sweeps



Pricing & Invoicing 90

- Flexible Rules
- Invoicing/Collection
- Flexible Fees Structures



Enterprise General Ledger 100

- Real-time Balance Sheet
- Integrated Budget/FA
- n-Tier Structure
- Financial reporting tool



Treasury/Risk Management 110

- MM, Equities, Fixed Income
- Derivatives
- Reserves Management
- Limits/Risk Management
- ACU, IMF SDR, Risk analytics



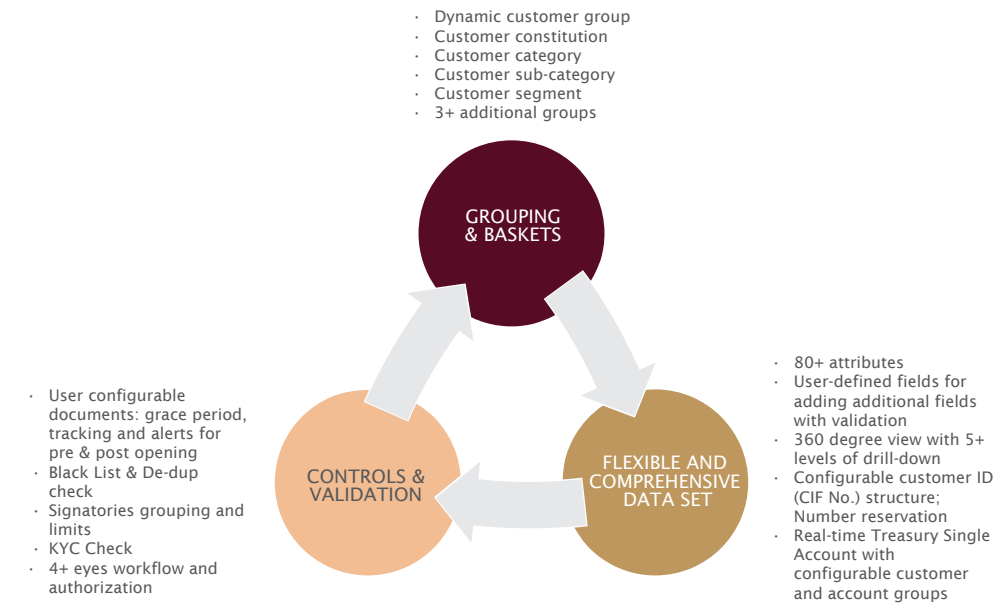
National Payment Systems 120

- Gross/Net Settlements
- Advanced Liquidity Management
- Dynamic Settlement
- Low/High Value Payments

BACK OFFICE

10. CUSTOMER INFORMATION AND RELATIONSHIP MANAGEMENT

Extensive coverage of attributes to support Government, Financial Institutions & Individual Customers



WOULDN'T IT BE GREAT IF YOU COULD...

Dynamically group the Government customers and accounts into different baskets and get real-time view of balances eg. at Country and Ministry levels

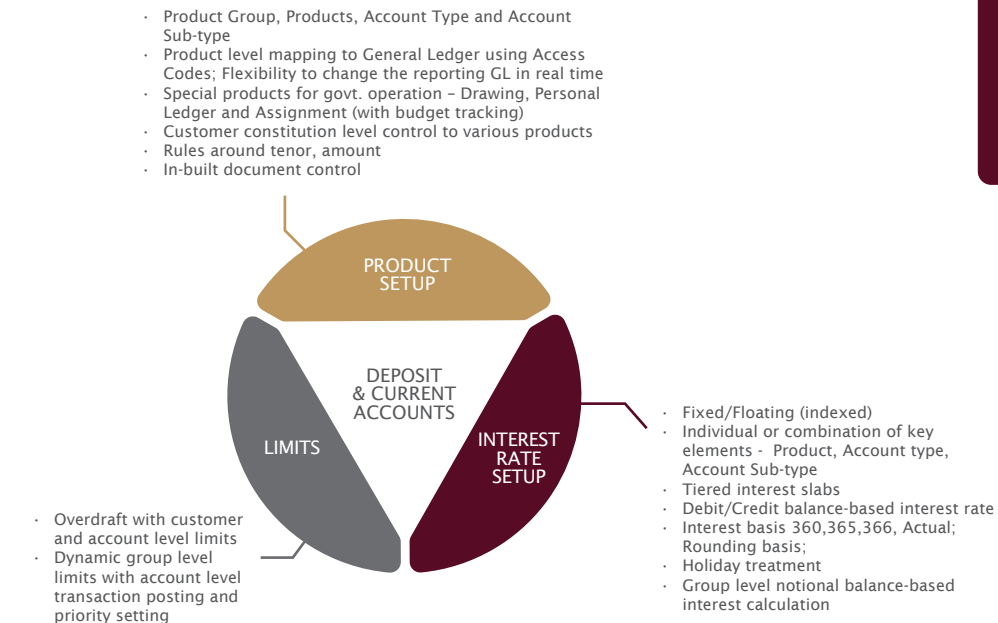
Set dynamic limits and account level priority for posting transactions

Use the legacy CIF number as well as the new number in the system

Have self administration capabilities to configure operational controls, access controls and workflow for commercial banks and Government entities in the online portal

20. ACCOUNTS MANAGEMENT

Product configurator with over 200+ user configurable attributes



WOULDN'T IT BE GREAT IF YOU COULD...

Launch a new product in 15 minutes

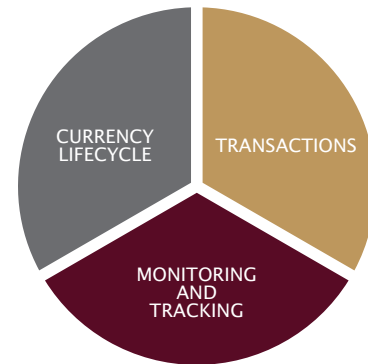
Access and post transactions using both legacy and new account numbers

Group the signatories and assign them authorization limits and let the system show appropriate signatures while posting the transaction

30. CURRENCY AND VAULT MANAGEMENT

Flexible and user configurable currency management, vault/teller functions

- Printer capacity maintenance
- Re-order level maintenance
- Order placement & tracking
- Receipt and inventory management
- GL level tracking for the complete lifecycle right from order placement
- Printer fee calculation
- Cash distribution route analysis
- Cash distribution to chests / branches
- Demonetization



- Configurable dashboards and trends
- Notification and alerts
- MIS
- Portal for Commercial Banks
- Integration with mints/press

- Priority-based Asset Balancing to match in Currency in Circulation
- Spoiled / Faded notes exchange and revaluation and destruction
- Cash deposit / withdrawal
- Inter vault / teller transfers
- Cash transactions at the counter
- Integration with automated counting and destruction machines

WOULDN'T IT BE GREAT IF YOU COULD...

Let the commercial banks request for currency deposit and withdrawal with the denomination schedule details ahead of time

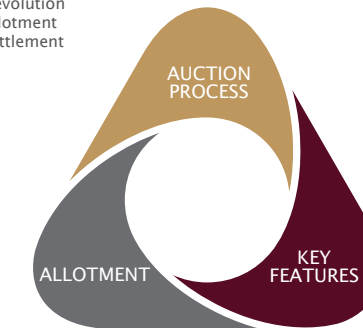
Track and guide the currency repatriation and exchange with end-to-end tracking



40. DEPOSITORY: ISSUANCE OF TREASURY BILLS & BONDS

Extensive coverage of attributes to support Government, Financial Institutions & Individual Customers

- Issue Creation
- Auction Window timings
- Settlement Accounts
- New Issuance Re-issuance
- Competitive and Non-competitive bids
- Auction price – Price and Yield based
- Bidding (Regular/Underwriting)
- Allotment Simulation
- Devolution
- Allotment
- Settlement



- Uniform/Discriminatory method
- Weighted average price/Yield calculation
- Non-competitive pricing based on weighted average/cut-off
- Underwriting allotment

- 60+ securities updates
- Provision to update regularly from Reuters/Bloomberg
- In-built depository with comprehensive services
- Commission payment for primary dealers
- Govt. Charging mechanism
- Debt managed loan account
- Clearing and Settlement – DVP-1, DVP-2 and DVP-3

WOULDN'T IT BE GREAT IF YOU COULD...

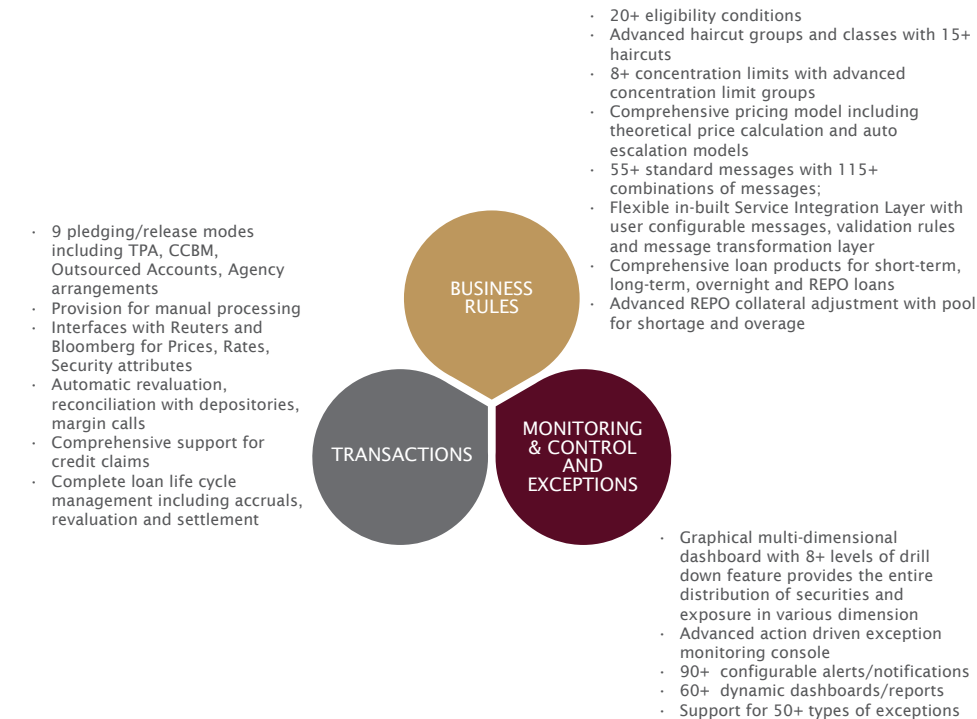
Convert physical bonds into de-materialized form or serve legacy physical bonds with structured workflow

Support both member and their constituent accounts seamlessly with comprehensive segregated accounts



50. ADVANCED COLLATERAL & LIQUIDITY MANAGEMENT

100% STP, active exception control, alerts and tracking mechanism



WOULDN'T IT BE GREAT IF YOU COULD...

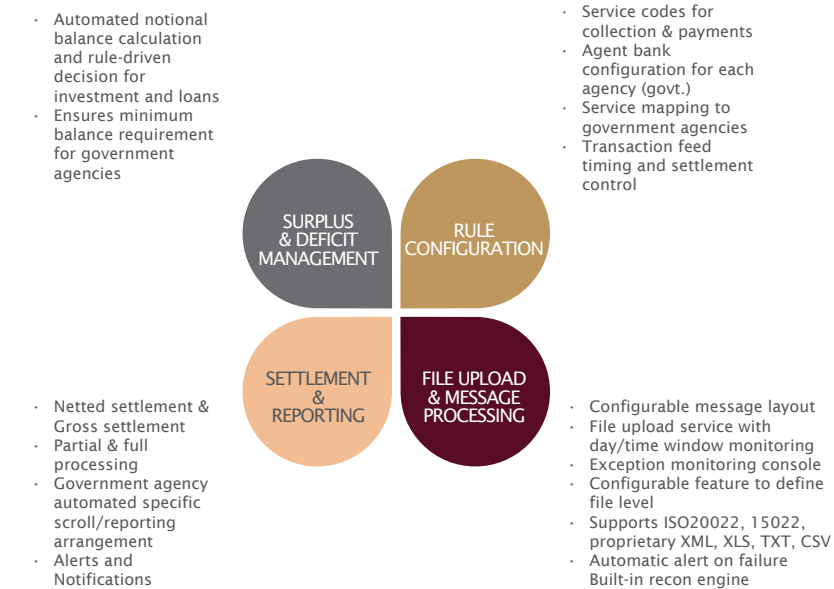
Provide support for 100% STP based pledging and release with advanced exception monitoring console

Have multiple collateral pools with segregated limits for multiple lending and liquidity facilities



60. GOVERNMENT SERVICES AND PAYMENT PROCESSING

Agency banking services with 100% STP, active exception control, alerts and tracking mechanism



WOULDN'T IT BE GREAT IF YOU COULD...

Set up a dynamic Treasury Single Account with real-time balance consolidation

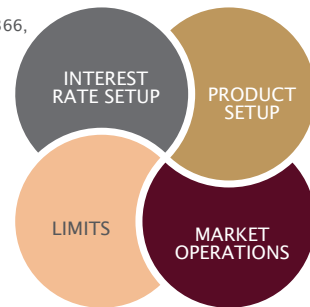
Automate the surplus and deficit management based on pre-configured business rules



70. CREDIT AND MARKET OPERATIONS MANAGEMENT

Flexible and user configurable loan products

- Fixed/Floating (indexed)
- Individual or combination of key elements - Product, Account type, Account sub-type
- Tiered interest slabs
- Debit/Credit balance-based interest rate
- Interest basis 360,365,366, Actual; Rounding basis;
- Holiday treatment
- Group level notional balance-based interest calculation
- Product Group, Products, Account Type and Account Sub-Type
- Product level mapping to General Ledger using Access Codes; Flexibility to change the reporting GL in real-time
- Special products. E.g., export credit re-finance
- Customer constitution level control to various products
- Rules around tenor, amount
- In-built document control
- Dynamic group level limits with account level transaction posting priority setting
- Liquidity Adjustment Facility and Margin Standing facility
- LAF/MSF allotments on fixed and variable rates
- Margin setting and collateral calculation
- LAF settlements
- Reversal of second LAF settlements



WOULDN'T IT BE GREAT IF YOU COULD...

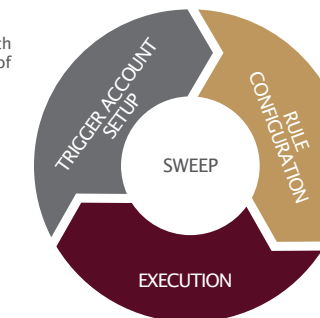
Track the total exposure and collaterals at the click of a button



80. ACCOUNT SWEEPS

Rule-driven account sweep and reverse sweep

- One-to-Many with apportionment of balances
- Many-to-One



- Arrangement type level rules with account level override
- Execution frequency & time
- Sweeping based on debit balance and credit balance
- Balance selection choice. E.g., fixed amount, percentage, actual, above minimum balance, threshold, whole balance
- Instant activation/de-activation

- Sweep & Reverse Sweep
- Manual
- Automatic at EOD
- Time bound execution

PROVISION TO SWEEP AND REVERSE SWEEP THE FUND FROM AGENT BANKS AND RAISE ALERTS ON FAILURE

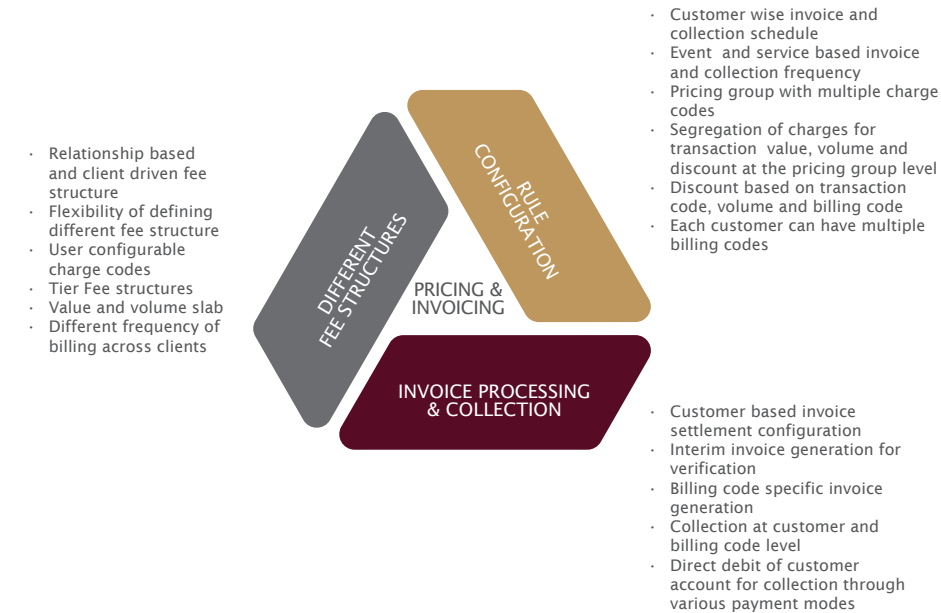
WOULDN'T IT BE GREAT IF YOU COULD...

Configure complex sweeping rules and offer detailed tracking of execution including nested sweeps



90. PRICING AND INVOICING

Simplified pricing and invoicing engine



WOULDN'T IT BE GREAT IF YOU COULD...

Calculate fees based on dynamic events

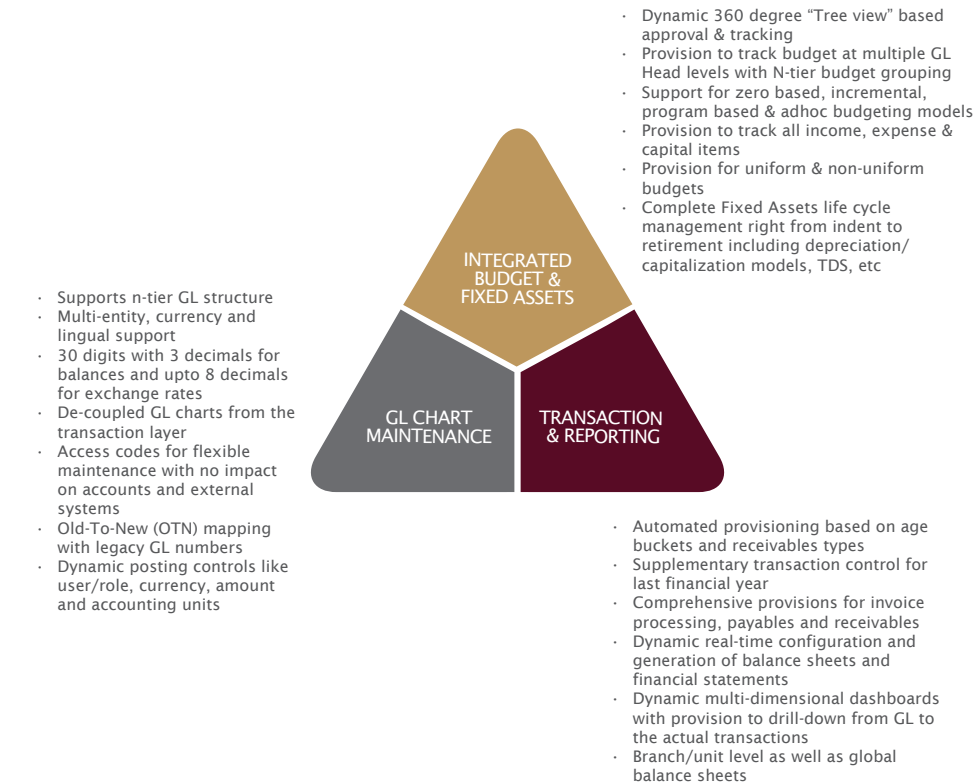
Generate the interim invoice for checking before the final invoice is generated

Club multiple invoices under a collection for customer



100. ENTERPRISE GENERAL LEDGER

Online real-time balance sheet with integrated budget and fixed assets



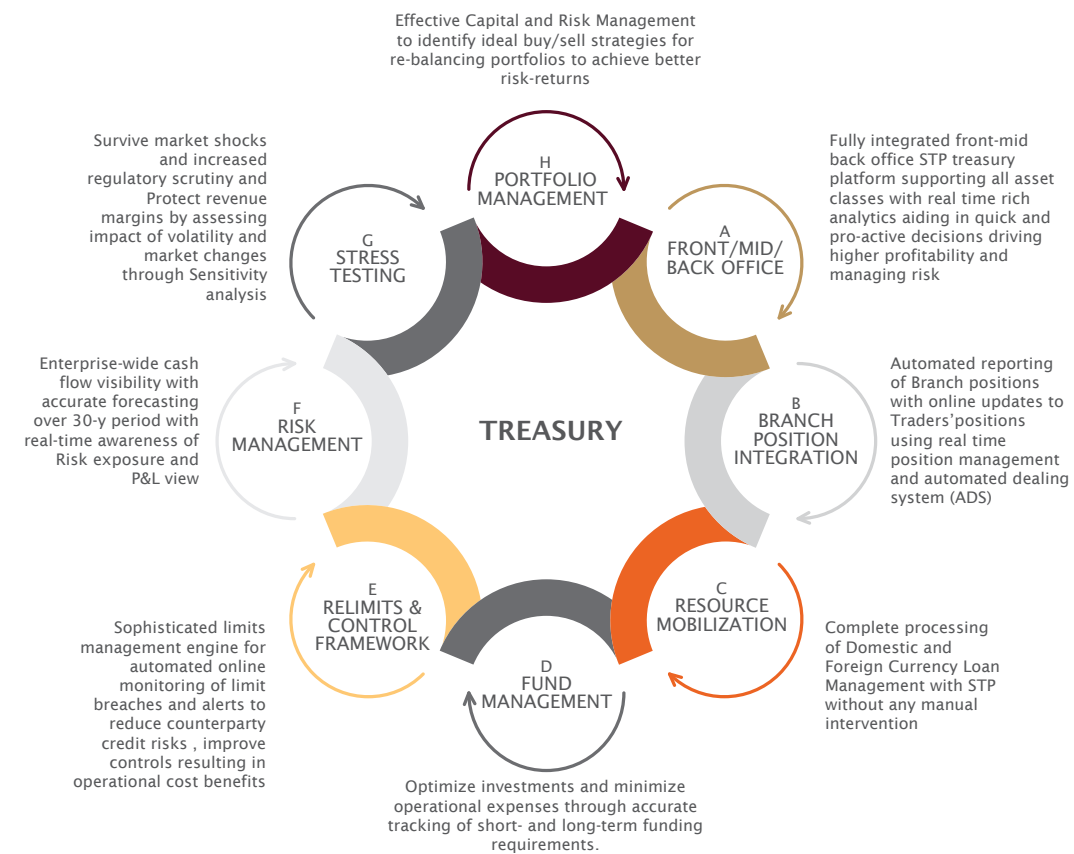
WOULDN'T IT BE GREAT IF YOU COULD...

Generate the balance sheet and financial statements in real-time without waiting for end of the day

Drill-down from the general ledger to the actual transaction in real-time



110. TREASURY



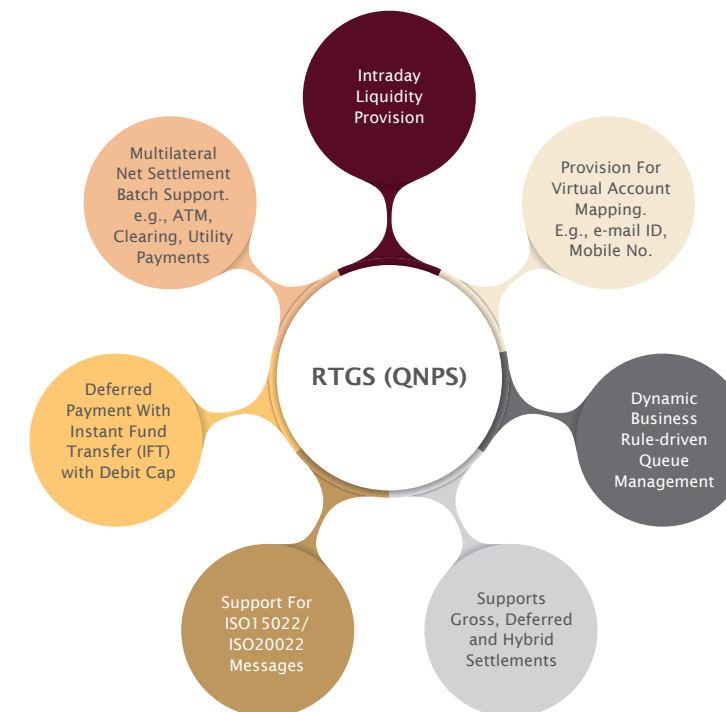
WOULDN'T IT BE GREAT IF YOU COULD...

Have a real-time risk visualization dashboard with 50+ dimensions



120. NATIONAL PAYMENT SYSTEM

Integrated new generation national payment system



WOULDN'T IT BE GREAT IF YOU COULD...

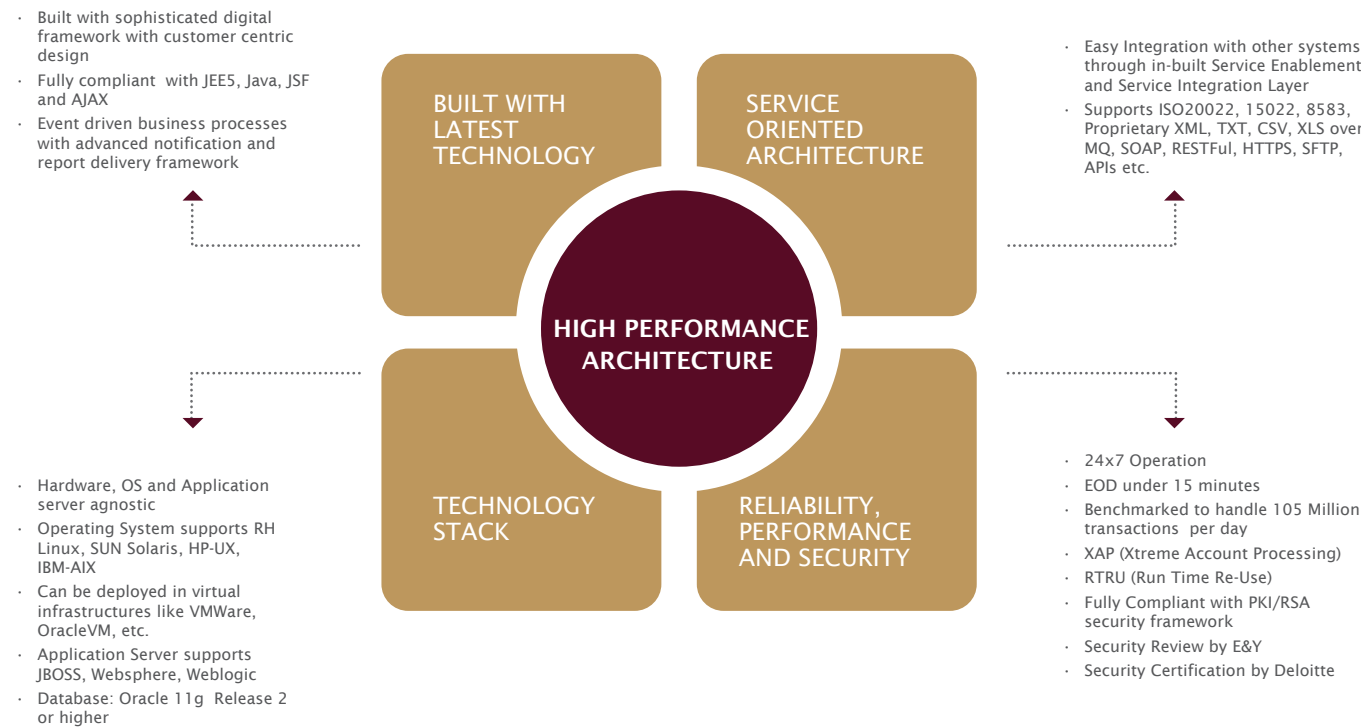
Have a system that supports multi-currency settlement with advanced rule driven queues for high value and low value payments

Have an advanced service integration layer with wide range of 3rd party system integration

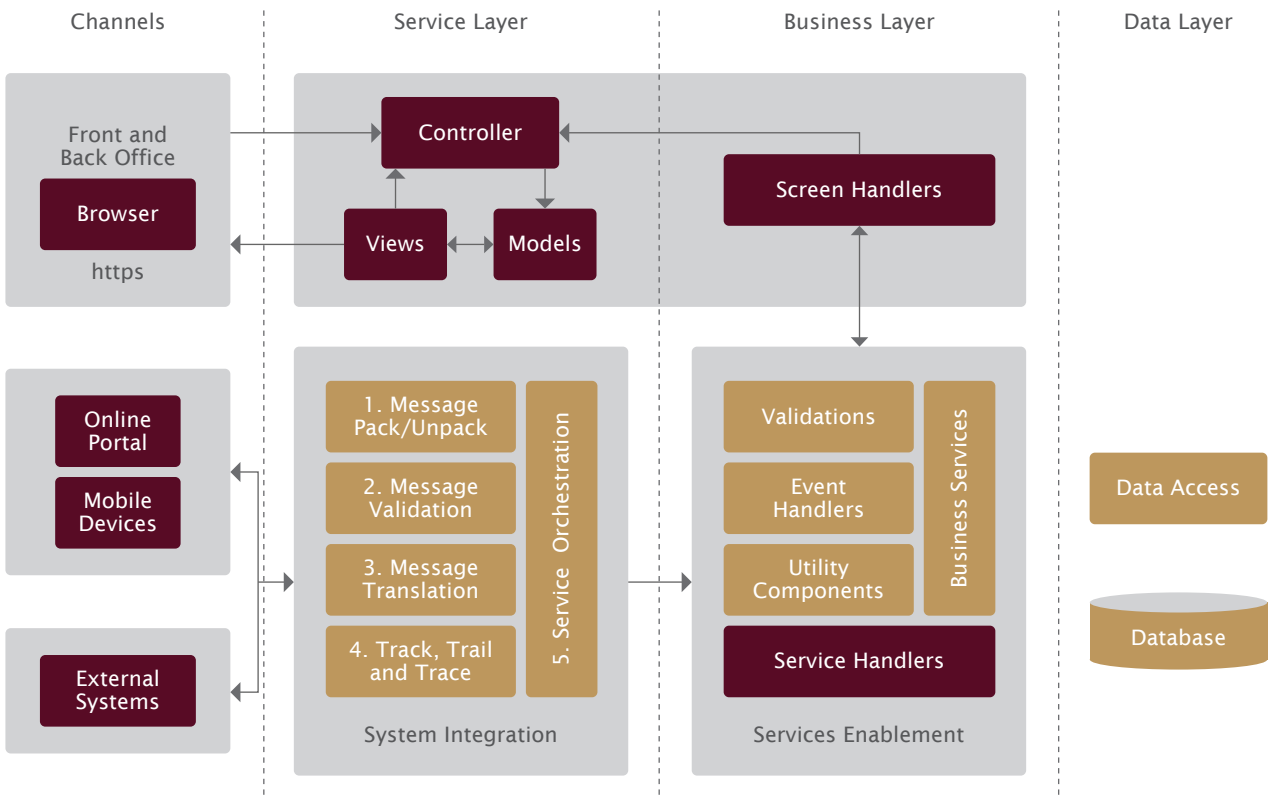


QUANTUM TECHNOLOGY OVERVIEW

Platform, Operating System and Application Server Agnostic. Superior Scalability and Security.



QUANTUM TECHNICAL ARCHITECTURE



INTELLECT QUANTUM SOLUTION AWARDED FOR EXCELLENCE



THE ASIAN BANKER®
TECHNOLOGY IMPLEMENTATION
AWARDS 2013
Best Central Bank Implementation

**CENTRAL
BANKING**
AWARDS 2015

Technology Provider of the Year

**CENTRAL
BANKING**
AWARDS 2016

Payments Provider of the Year

CASE STUDY:

PROGRESSIVE TRANSFORMATION AT THE CENTRAL BANK OF ONE OF THE LARGEST DEMOCRACIES

CLIENT OVERVIEW

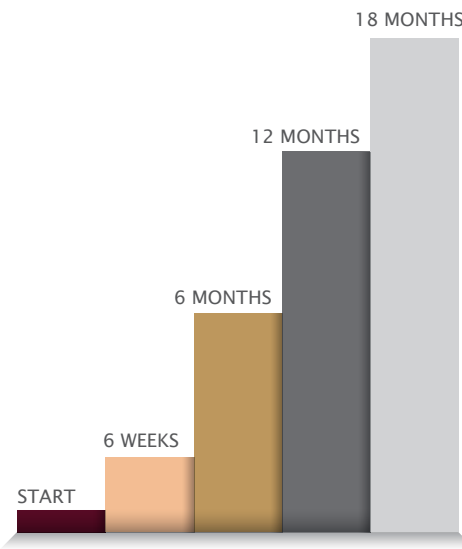
1,100
CLEARING HOUSES

4,400
CURRENCY CHESTS

14,000+
STAFF

INTELLECT SOLUTION OFFERED

- Enterprise General Ledger
- Integrated Core Banking Solution for Central Banks
- Complete Depository Services
- Comprehensive Government Services
- Public Debt Management Solution
- Currency in Circulation Management
- Wide Range of Market Operations
- National Payment System for Gross and Net Settlements
- Portal for Banks and Government Entities



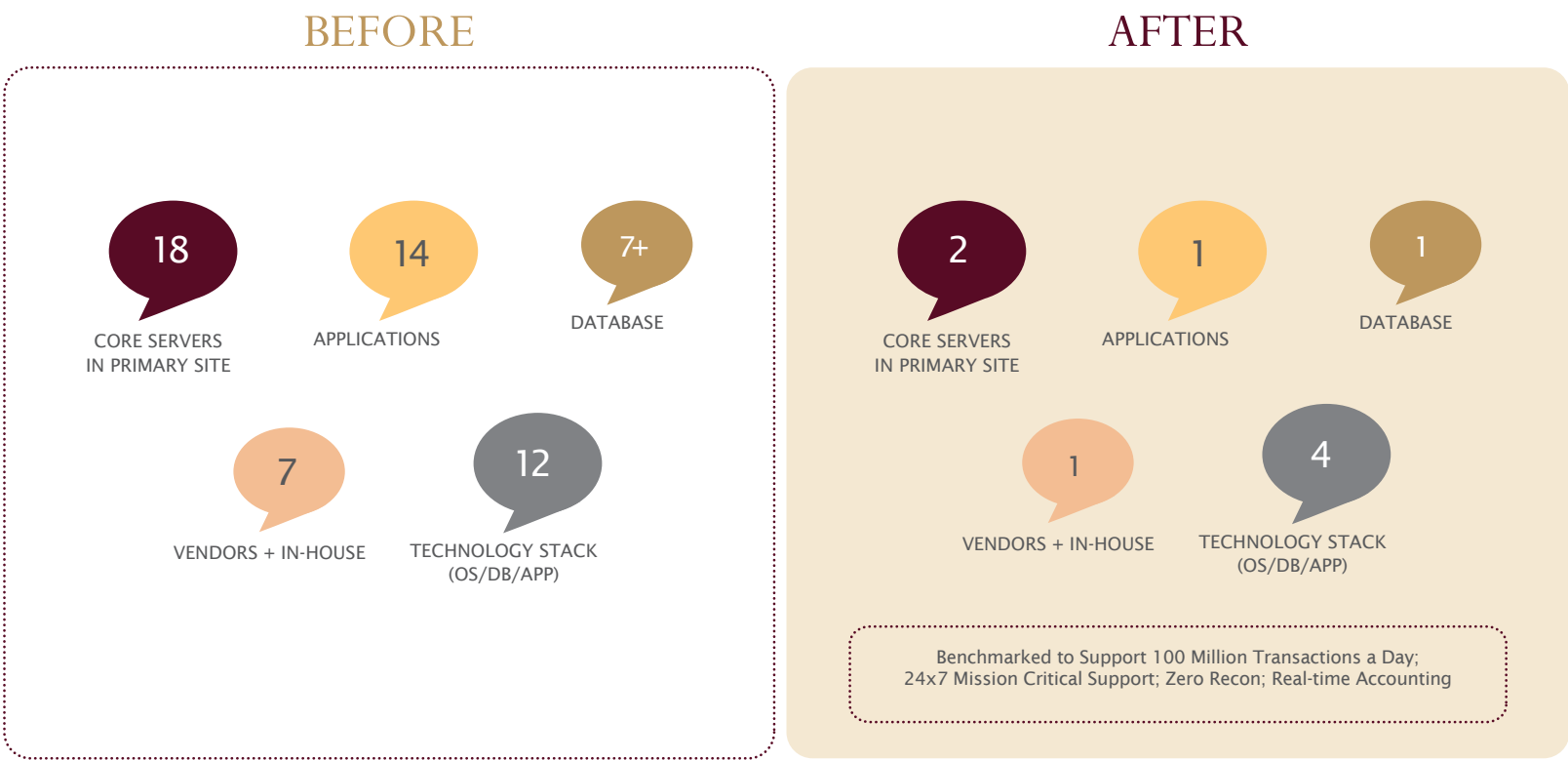
- Rollout of Public Debt Management, Market Operations, Depository and other Key Components
- National Rollout of Complete Banking & Government Services
- Pilot Launch – Complete Banking & Government Services
- “Last Mile Delivered first” – Re-engineered the Enterprise GL and implemented in 6 Weeks
- Contract Signed

COMPREHENSIVE FUNCTIONALITY

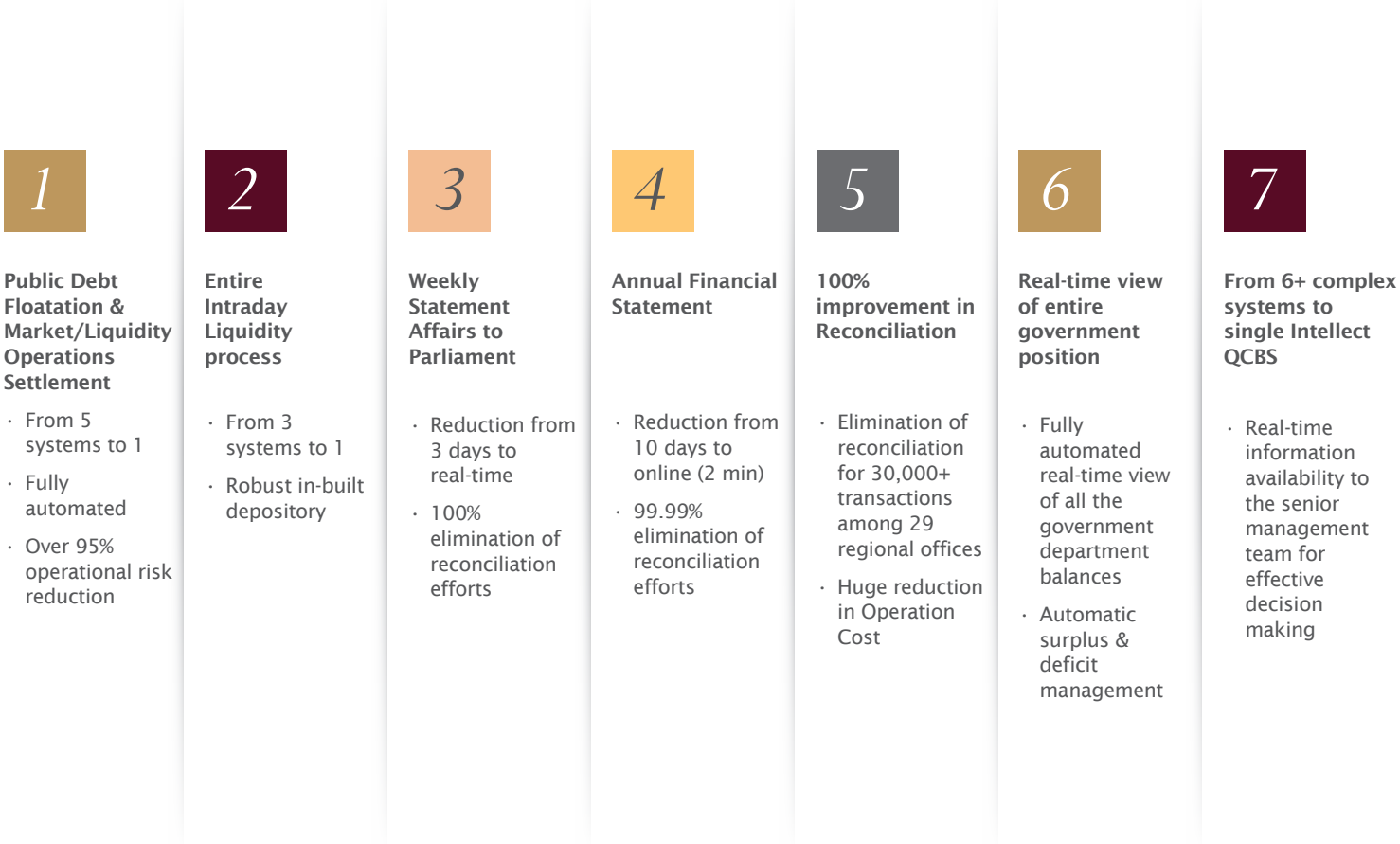
QUANTUM CENTRAL BANKING SOLUTIONS (QCBS)																				
BANKING SERVICES						CENTRAL BANKING OPERATIONS						GOVERNMENT BUSINESS								
A	A1 INTERNAL ACCOUNTING UNITS/BRANCHES					A2 INTERNET & MOBILE					A3 CALL CENTRE									
B	B1 BANKING SERVICES PORTAL					B2 SUPERVISORY AND REGULATORY REPORTING PORTAL					B3 GOVERNMENT SERVICES PORTAL									
C	WORKFLOW AND PROCESS ORCHESTRATION CONCURRENT TRANSACTION BUS																			
D	D1 MULTI-LATERAL GL ANALYTICS								D2 MULTI-DIMENSIONAL DASHBOARDS											
G	G1 CASH AND REMITTANCES		G2 LOANS AND LIMITS		G3 OPERATIONAL SERVICES		G4 CASH ISSUANCE		G5 SECURITIES AND DEBT		G6 MONITORING/FOLLOWUP		G7 PAYMENT SYSTEMS		G8 GOVERNMENT SERVICES		G9 TREASURY			
	CASH OPERATIONS		DEMAND LOANS		BANK AND FI ACCOUNT SERVICES		1	BULLION MANAGEMENT		DEPOSITORY		IFRS/LOCAL STANDARD REPORTS		NATIONAL PAYMENTS (RTGS)		1	GOVT ACCOUNTS SERVICES		FRONT/MID/BACK OFFICE	
	TELLER AND FRONT OFFICE		RISK/LIMIT EXPOSURE MGMNT.		SIGNATURE SERVICES		2	VAULT & CURRENCY CHEST		AUCTION MANAGEMENT		IBS/BIS REPORTS		STAND BY RTGS SERVICES		2	PAYMENTS AND COLLECTIONS		FOREX / LIMITS	
	ISSUE OF INSTRUMENTS		INTRA DAY LIQUIDITY		EXCEPTION MGMNT /AUTH CHAIN		3	CURRENCY IN CIRCULATION		SECURITY SETTLEMENT ENGINE		COMMON/FX/ BULLION RESERVE		CLEARING OPERATIONS		3	ONLINE TAX COLLECTIONS		MONEY MARKET	
	CHEQUE PURCHASE FACILITY		WAYS AND MEANS ADVANCES (WMA)		NOSTRO AND VOSTRO ACCOUNTS		4	CURRENCY LIFECYCLE MGMNT.		ONLINE AND COLLATERAL		RETURNS FOLLOW-UP CONSOLIDATION		CLEARING HOUSE AND MNSB SETTLEMENTS		4	AGENCY ARRANGEMENTS		FIXED INCOME SECURITIES	
	REMITTANCES		OVER DRAFT /LOANS		LETTER OF CREDIT/ BANK GUARANTEE		5	SUPPLIER MGMNT & DISTRIBUTION		REPO & REVERSE REPO, MSS OMO OPERATIONS		ANTI-MONEY LAUNDERING		RTGS, NEFT, ACS, CTS INTERFACE & ECS		5	TREASURY SINGLE ACCOUNT		DERIVATIVES/ COMMODITIES	
	NUMISMATICS		OVERNIGHT STANDING FACILITY		DOCUMENTARY BILLS		6			SECONDARY MARKET TRADES				SWIFT MESSAGES		6	GOVT LIQUIDITY DEFICIT & SURPLUS		RISK ANALYTICS/ VISUALIZATION	
	FX TRANSACTIONS				CASA / DEPOSITS											7	PUBLIC DEBT MANAGEMENT		RESERVES MANAGEMENT/ DF	
	I	COLLATERAL MANAGEMENT		I1 REFERENCE DATA			I2 COLLATERAL ENGINE/ LIMIT MANAGEMENT			I3 LIQUIDITY PROVIDING TXNS. AND SETTLEMENT			I4 SPECIAL COLLATERAL ARRANGEMENT			I5 AGENT/TRIPARTY ARRANGEMENT			I6 COLLATERAL POOL MANAGEMENT/REVALUATION	
EXTERNAL SYSTEM INTERACTIONS		J1 RATES/RATING?PRICE/ SECURITY DETAILS			J2 CLEARING SERVICES / RTGS/ DEPOSITORY			J3 SWIFT - ISO 14022 /ISO 20022			J4 GENERIC INTEGRATION MIDDLEWARE			J5 CLEARING AND SETTLEMENT			J6 FINANCIAL INSTITUTIONS/ GOVT AGENCY			
K	BACK OFFICE		K1 CUSTOMER INFORMATION FILE			K2 BUDGETING			K3 ANALYTICS/MIS			K4 HOVERING ENGINE			K5 NOTIFICATION/ALERT SERVICES					
			K6 ENTERPRISE RECON			K7 INVENTORY/FIXED ASSET/ PROCUREMENT MGMNT./AP/AR			K8 ENTERPRISE GENERAL LEDGER			K9 FEES AND CHARGES/ INVOICING AND COLLECTION			K10 CUSTOMER COMMUNICATION					

Boxes indicate the components implemented

REALISING QUANTUM BENEFITS FOR 12 DEPARTMENTS AND 30 GOVT. ENTITIES



DESIGNED FOR COMPLEXITY REDUCTION



DESIGNED FOR CUSTOMER SUCCESS

Suchitra Sukumaran, Deputy General Manager in RBI, says Intellect had installed the system “in record timing”, as well as a number of other system. “The entire government accounts in the country, through the Bank’s own offices and the agency mechanism, are consolidated through this platform”.



Mr. Pierre Laporte, Governor and Chairman, Central Bank of Seychelles - “Polaris’ Intellect Core Banking System (CBS) for Central Banking will usher a new chapter in the transformation journey of our banking, monetary and financial system in the country. Polaris’ distinctive edge in the financial technology domain and long standing performance benchmarks led to its selection vis-a-vis other competitors”



Mats Wallinder, Dy. Head Cash & Payments Systems Dept., Central Bank of Sweden - “I truly believe, and have noticed, that one major important factor for the success is the way how your team interact together with Central Banks during the design and at the same time spent efforts to reduce the complexity of the product”.



QUANTUM CENTRAL BANKING SOLUTION
DESIGNED AT 8012 FINTECH DESIGN CENTER

INTELLECT QUANTUM

CENTRAL BANKING SOLUTION



Designed for Complexity Reduction

Digital. Real Time Risk Management. Role Aware