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Service Orientation in Banking

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Agenda

- Why Service Orientation is needed in Banking
- How does a Service Oriented Bank look like
- Approach for Service Orientation in Banking
- Critical Success Factors for Service Orientation
- Case Study: Service Orientation of Finacle, a Banking Solution Suite

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Why Service Orientation is needed in Banking?

Key Challenges & Technology Strategies in Banking

Banks are increasingly looking at service orientation to address the business challenges they are facing

Challenges

Non-traditional competition :
Need to create value-added
Services faster

Demanding Customers

Increasing Industry
Consolidation

Aggressive Regulatory
Framework

Strategies

Composition
of shared business
services to create
business solutions

Customer Centric,
Personalized Services,
Integrated channels

Standardized and Agile
Business Processes

Processes with integrated
compliance checks.
Rationalized and
Managed infrastructure.

Execution

**Service Oriented
Bank**

Composite
Integrated
Applications

Agile
Processes

Reusable
Services

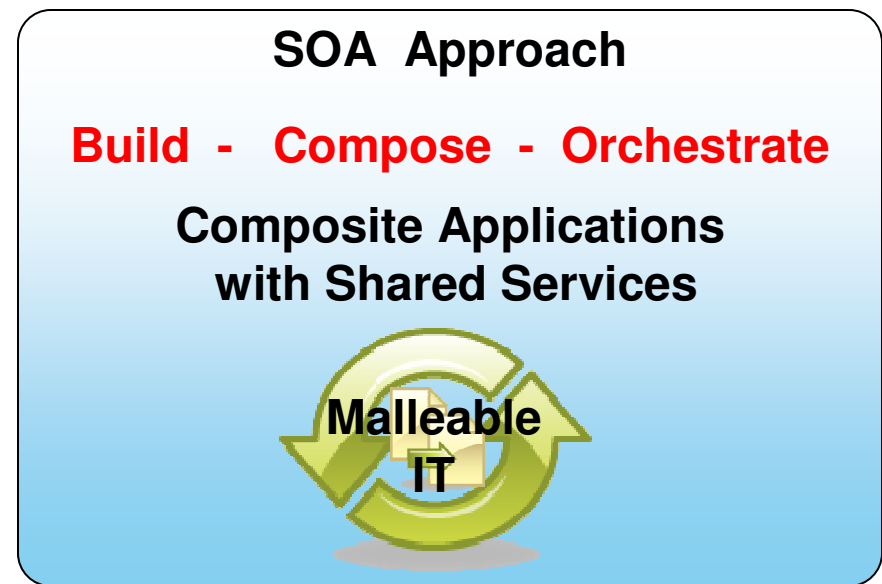
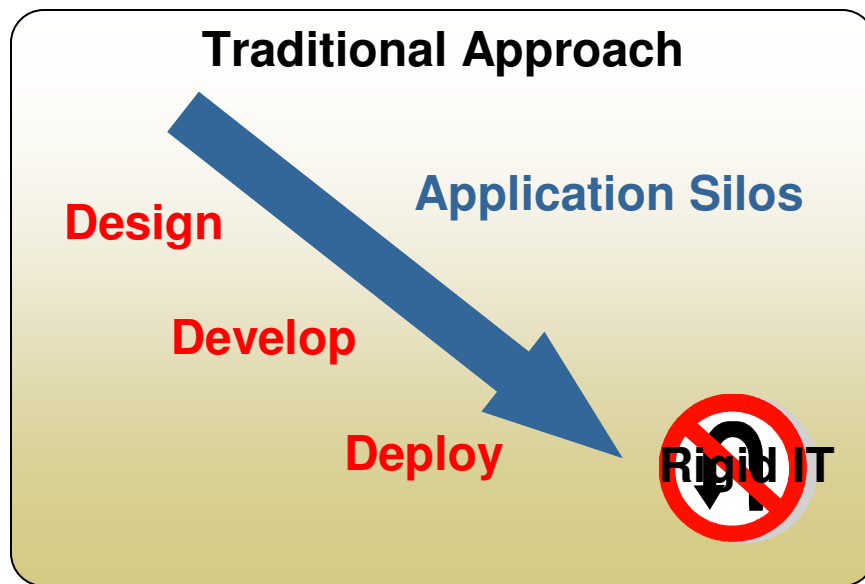
Integrated
Data

Secure &
Managed
Infrastructure

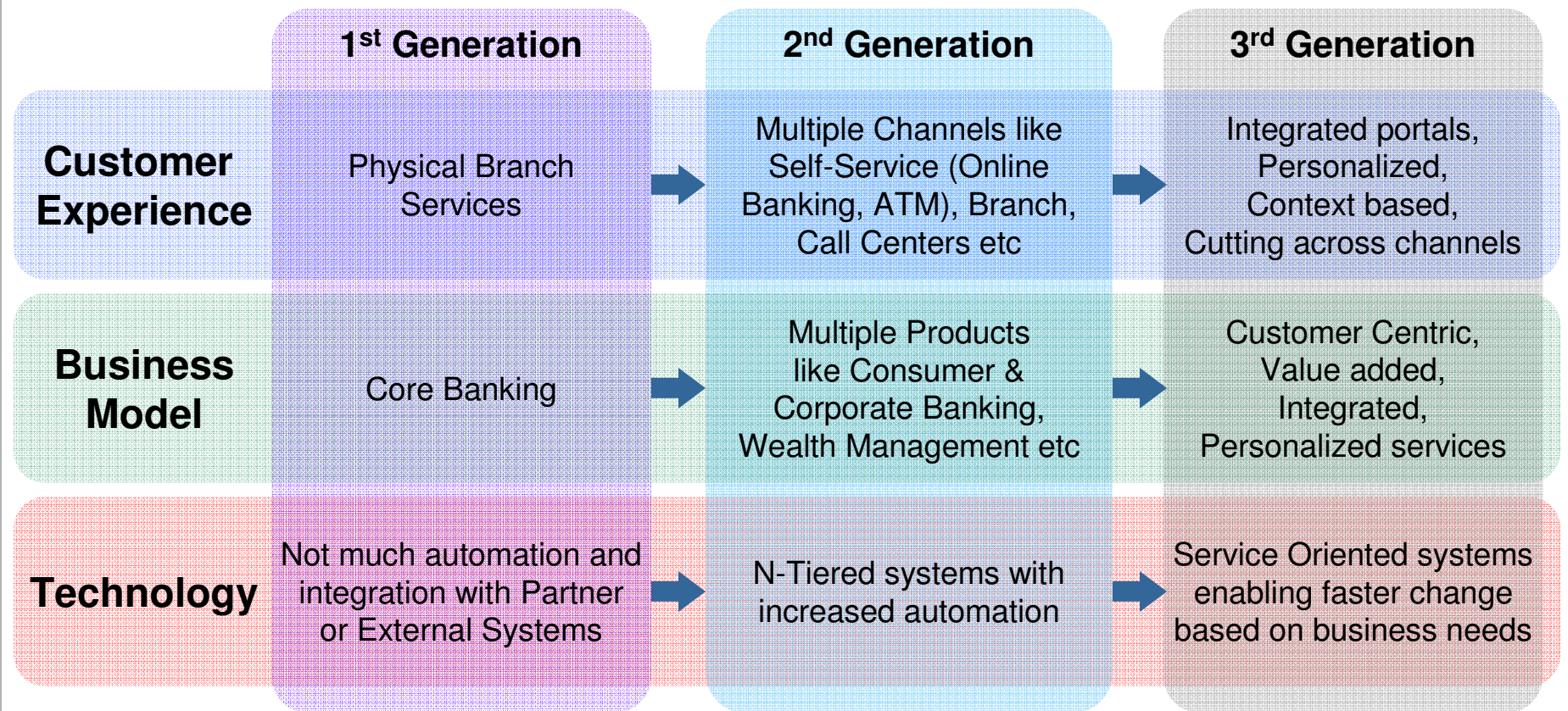
Service Orientation Vs Traditional Approach

Critical IT Capabilities needed

- Ability to create business solutions faster through reuse of existing capabilities
- Agile business processes
- Core capabilities as reusable business services
- Integrated systems with seamless information flow
- Secure and managed infrastructure



Evolution of Banking



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How does a Service Oriented Bank look like

Service Oriented Bank - Core Capabilities

Customer Interaction and Delivery Capabilities

- Access Services like Self-Service & Branch services etc
- Customer Relationship Management

Products and processing Capabilities

- Deposits & Savings, Credit & Lending, Credit Cards, Treasury, Trade Finance etc
- Account based, Customer based, Trading Operations etc

Sales, Marketing and Product Management Capabilities

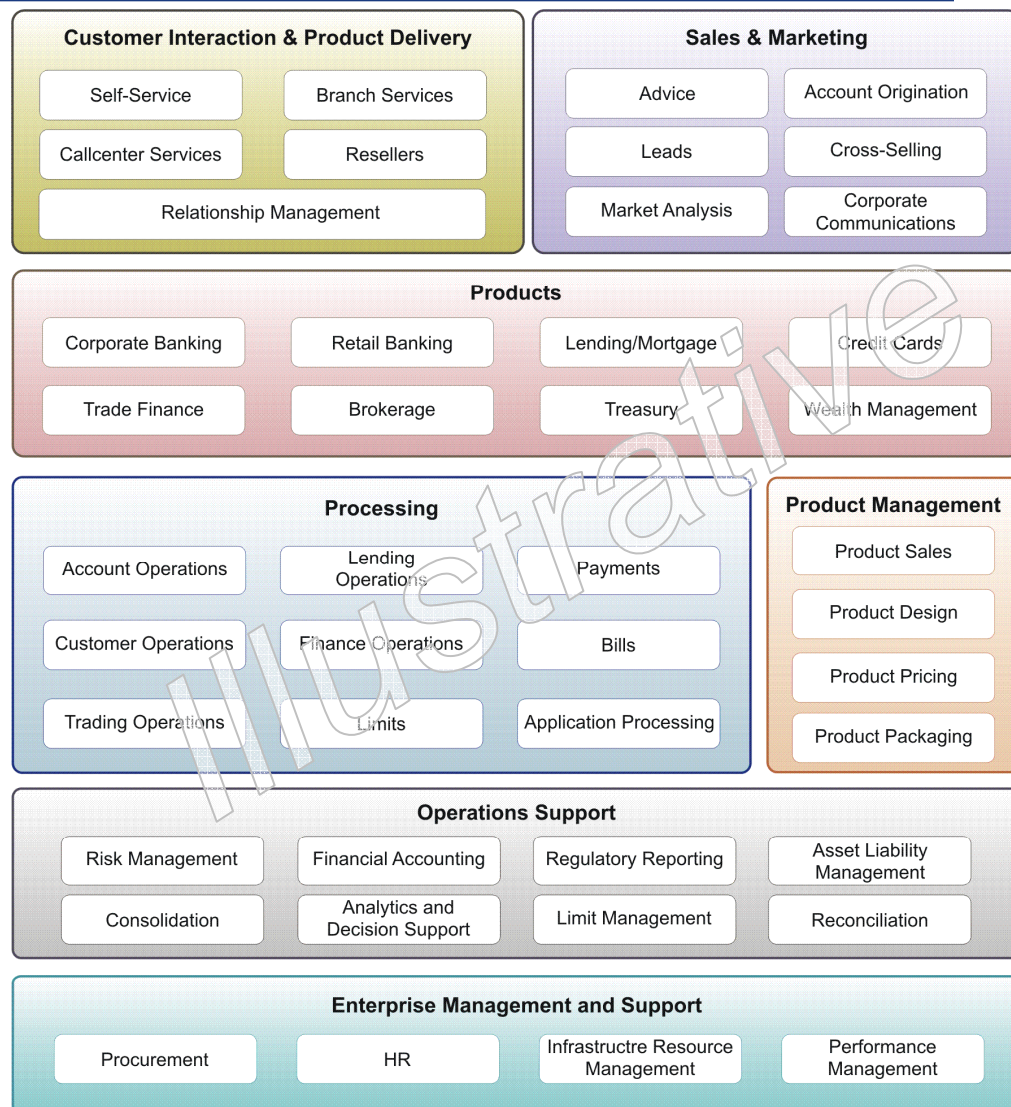
- Cross-Selling, Lead management, Advice
- Market Research
- Designing and launching of Products

Operations Support Capabilities

- Analytics, Compliance, Settlements etc

Enterprise Management Capabilities

- Channel Management, HR, Procurement, Performance Management etc



Service Oriented Bank - Service and Process Classification

Customer Interaction and Product Delivery Services

- Self-Service Channel Services
- Branch Services
- Call Center Management Services

Sales & Marketing Services

- Leads Management, Origination, Segmentation Market Analysis, etc

Cross Functional Processes and Services

- Relationship Management, Customer Portfolio Management, Cross-Selling etc.

Product Services and processes

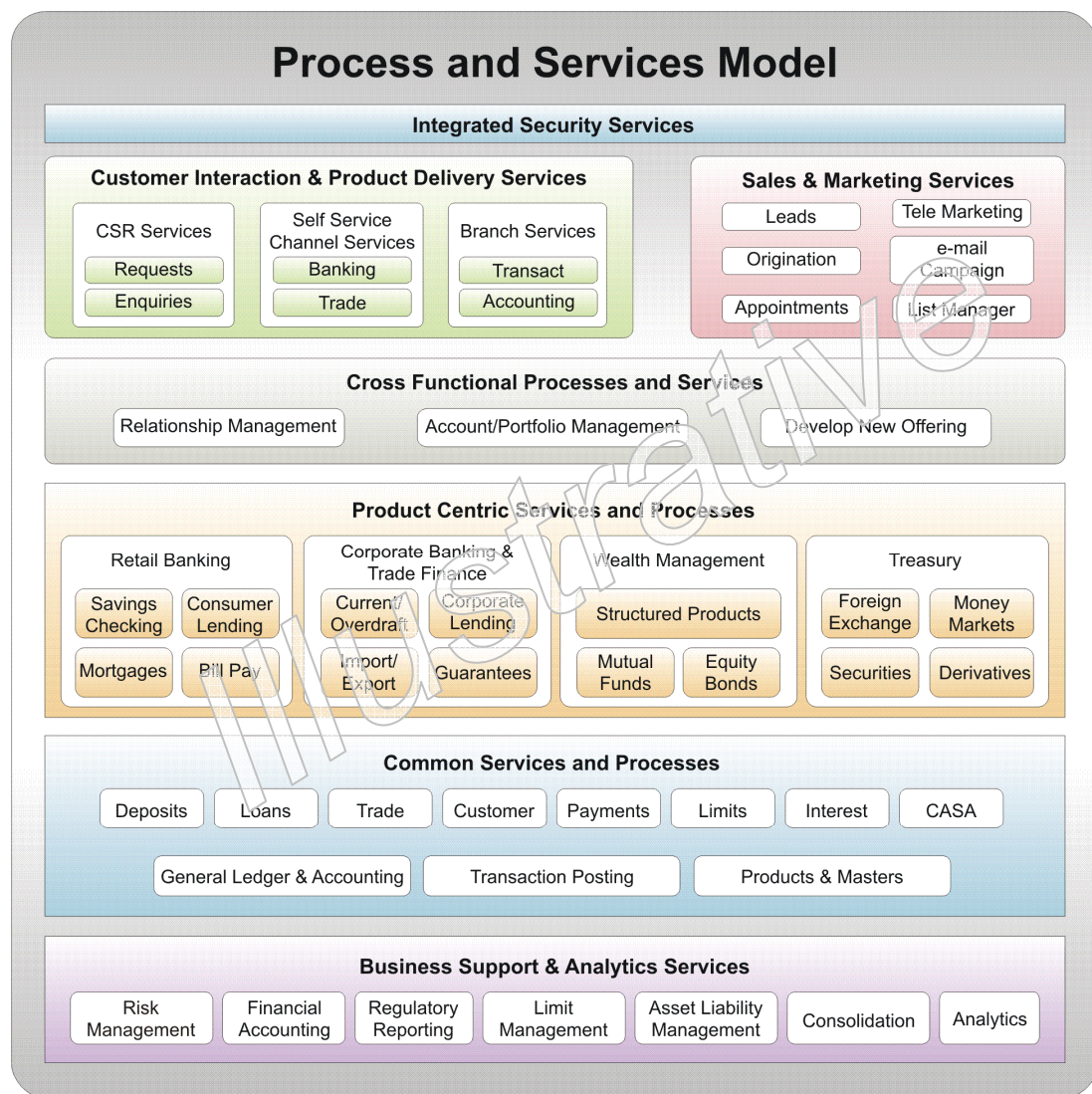
- Retail Banking
 - Savings & Checking, Consumer Lending, Mortgages, Bill Pay etc
- Corporate Banking
 - Current/OverDraft, Corporate Lending, Import/Export, Guarantees
- Wealth Management
 - Structures Products, Mutual Funds, Equity Bonds
- Treasury
 - Foreign Exchange, Derivatives, Securities, Money Markets etc

Common Business Services and Processes

- Deposits, Limits, Funds, Customer, Payments
- General Ledger, Transaction posting, Products & Masters
- Product Design, Product Launch

Business Support and Analytics Services

- Risk Management, Customer Analytics etc



Service Oriented Bank – Architecture Layers

Composite Application Layer

- Personalized, Context based
- Reusing capabilities from layers below
- Loose coupled, easy to modify
- With integrated security

Shared Capabilities Layer

- Shared Services for core processing
- Encapsulating legacy and new components exposed as services
- Orchestration of these services to perform business processes

Product Engines Layer

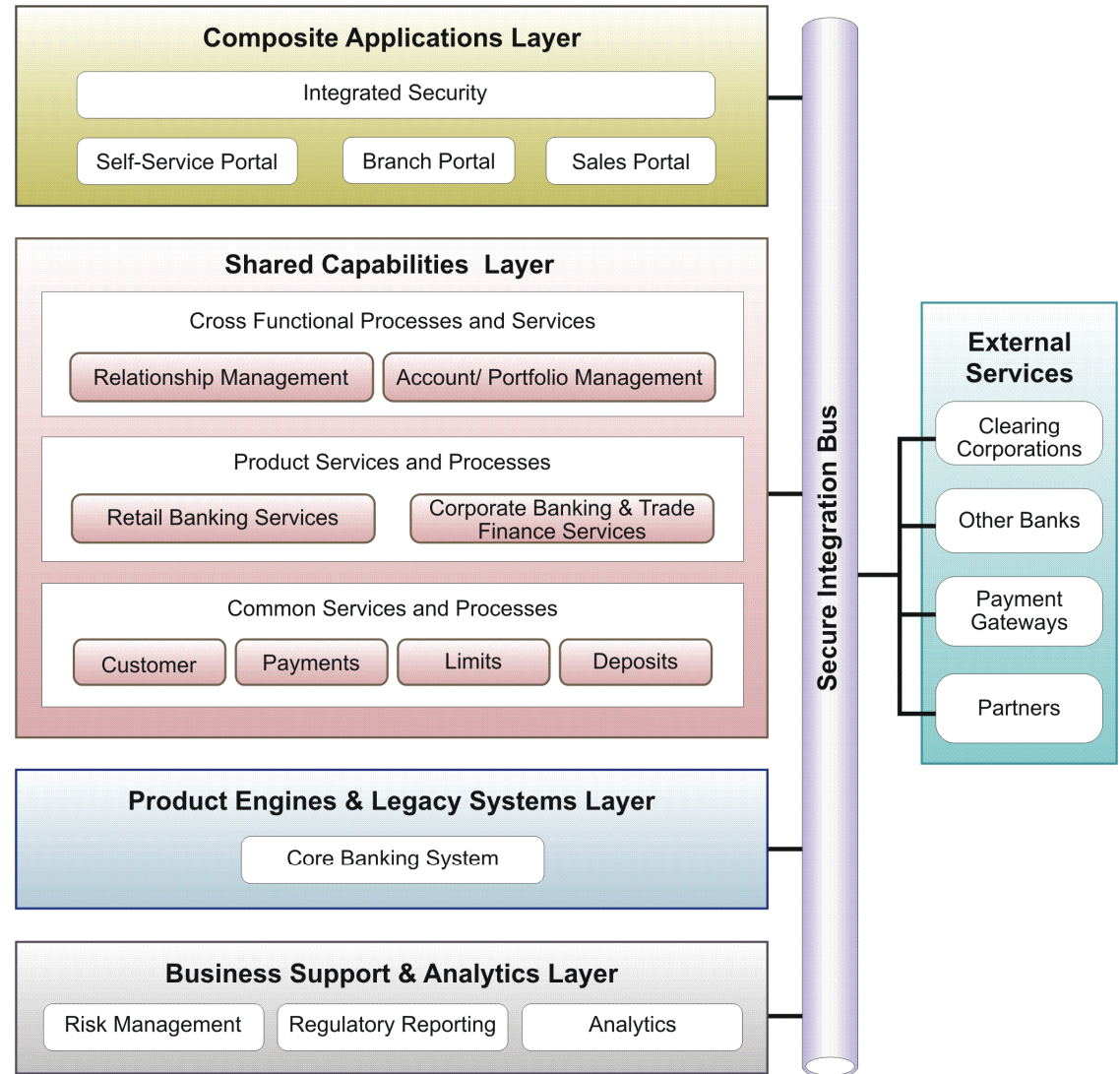
- Legacy Systems , specialized packages and product engines

Business Support and Analytics Layer

- Analytics, Compliance, Settlements, Consolidation, Statements etc

External Services

- Clearing Corporations, Payment Gateways, Partners etc



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Approach for Service Orientation

Approach for Service Orientation

Drivers and Value Propositions

- Value Maps, KPI, CSFs, ROI and Quick Wins

Analysis and Architecture for Service Orientation

- Top Down Capabilities, Business Function & Process Analysis
- Bottom up AS-IS Analysis
- Enterprise Architecture approach to define SOA End State (TO-BE) Models

SOA Transformation Initiatives

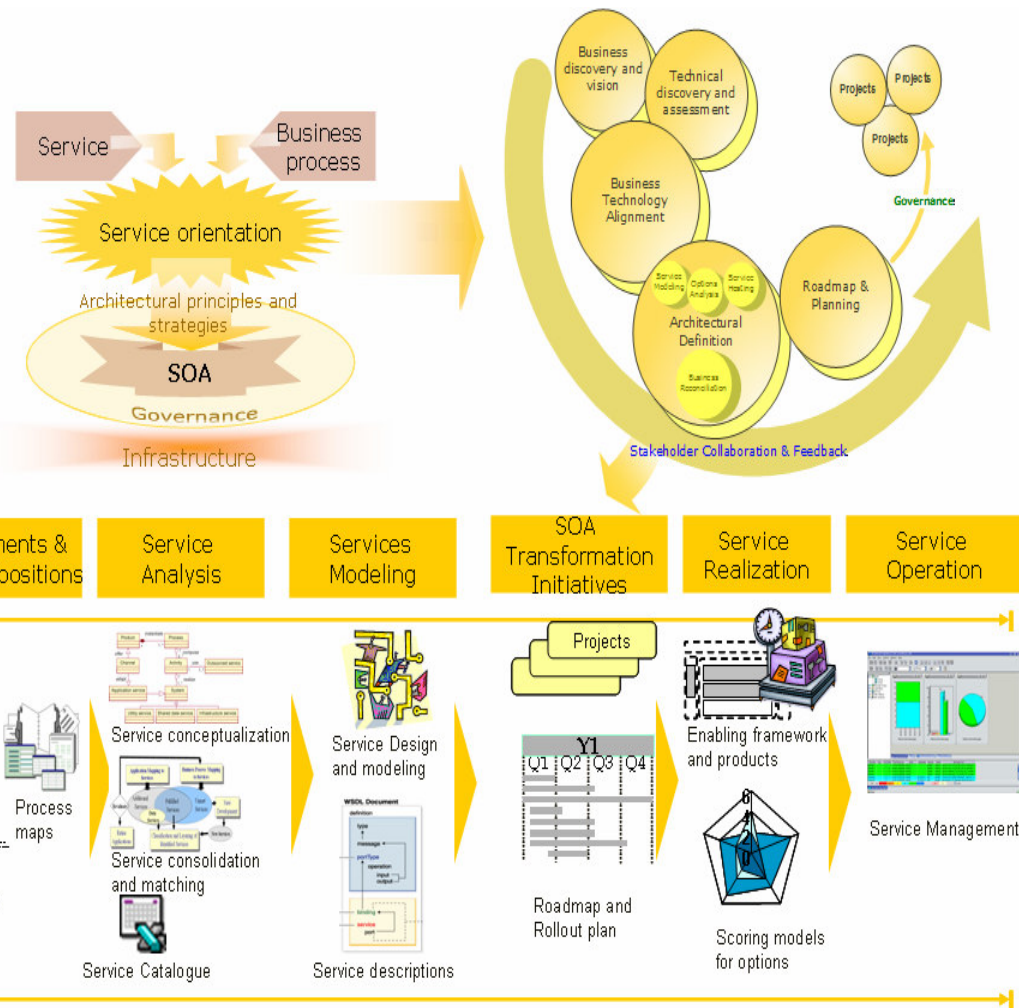
- SOA Programs and Projects, Change Management

SOA Realization

- SOA Accelerators
 - Technical Building Blocks and Frameworks
 - Infrastructure Products
- Detailed Design and Development

SOA Operational Considerations

- SLA Management, Registries, Repositories, Management



Source: Infosys Research

Approach for SOA – Incremental Business Solution Driven

- Think Big Start Small
- Start with small Tactical Projects first driven by a business need
 - Enable Cross Selling entailing integration of the sales initiatives across channels
 - Unify Customer View entailing integration of data across the different touch points
 - Relationship product initiatives to tie multiple products to add value to the customer
- Followed by large initiatives
 - Top Down Enterprise Service orientation

Accelerators for Service Orientation

Reusable Models

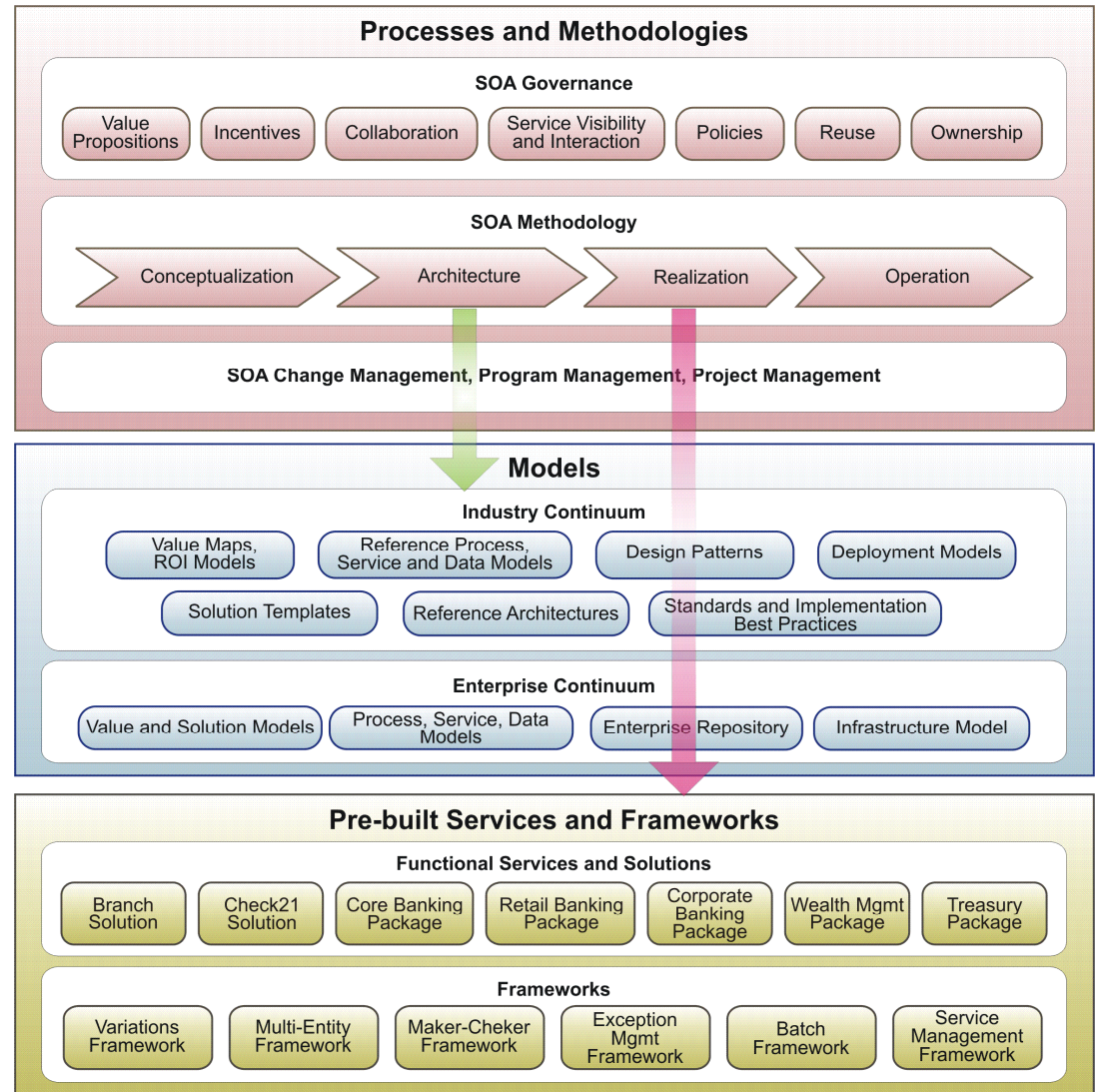
- Process, Service and Data models for different business functions
- Reference architectures

Frameworks and Pre-built Services

- Providing reusable building blocks like Infrastructure services like security, notification
- Incorporating industry best practices
 - design patterns
 - With popular open source/COTS solution options
- Packages providing pre-built services and capabilities
- Integrated Workbench with templates and tools for faster development
 - Project templates with automated build, integrated unit testing etc
 - Reusable solutions as code templates

Processes and Methodologies

- SOA Methodology, SOA Governance etc



Accelerators for Service Orientation - Frameworks

Multi-Channel Access and Composite Application Frameworks

- Web, Mobile, IVR, Portal Frameworks

Process Frameworks

- Workflow, BPEL/BPM, BAM Frameworks

Shared Application and Data Services Frameworks

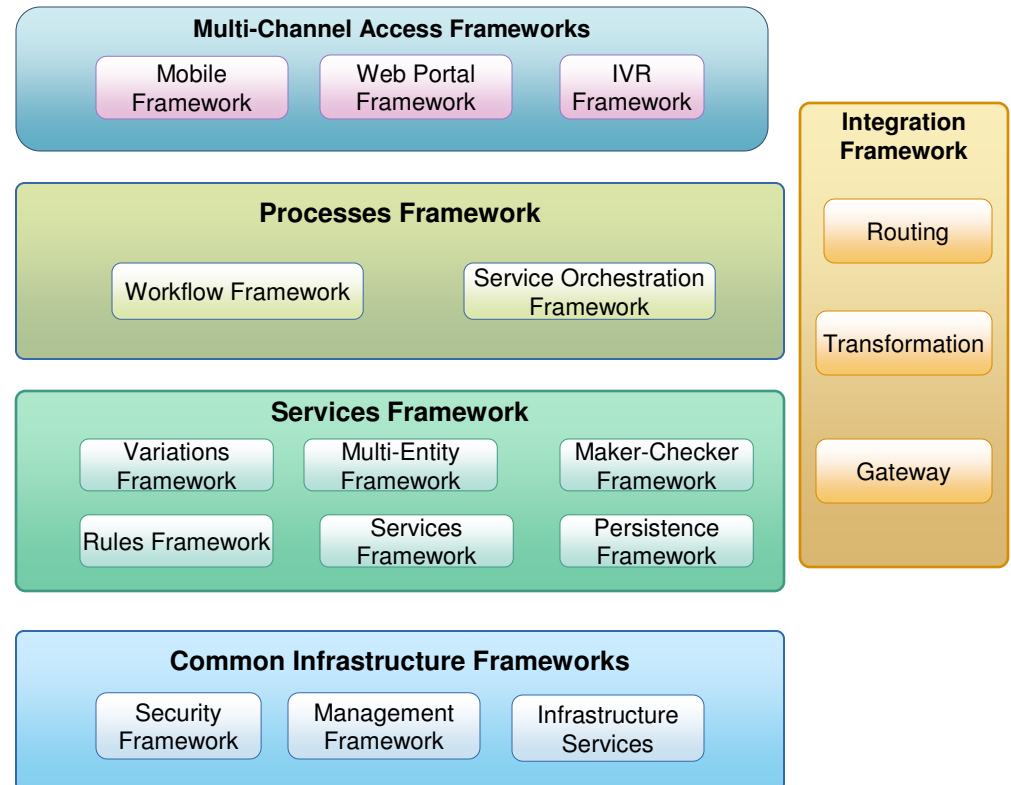
- Enabling Shared capabilities and integrated data access
- Variations Framework, Multi-Entity Framework, Maker-Checker Framework, Purge Framework etc
- Services Framework, Rules Framework, Persistence Framework, Batch Framework
- RAD tools, Code Generators

Integration Frameworks

- Routing, Transformation, Gateways

Common Infrastructure Frameworks

- Security Frameworks (Authentication, Authorization, Audit, SSO)
- Management Frameworks (Monitoring, Alerts)
- Infrastructure Services (Logging, Error Management, Notification etc)



Source: Radien – Infosys SOA Realization Framework

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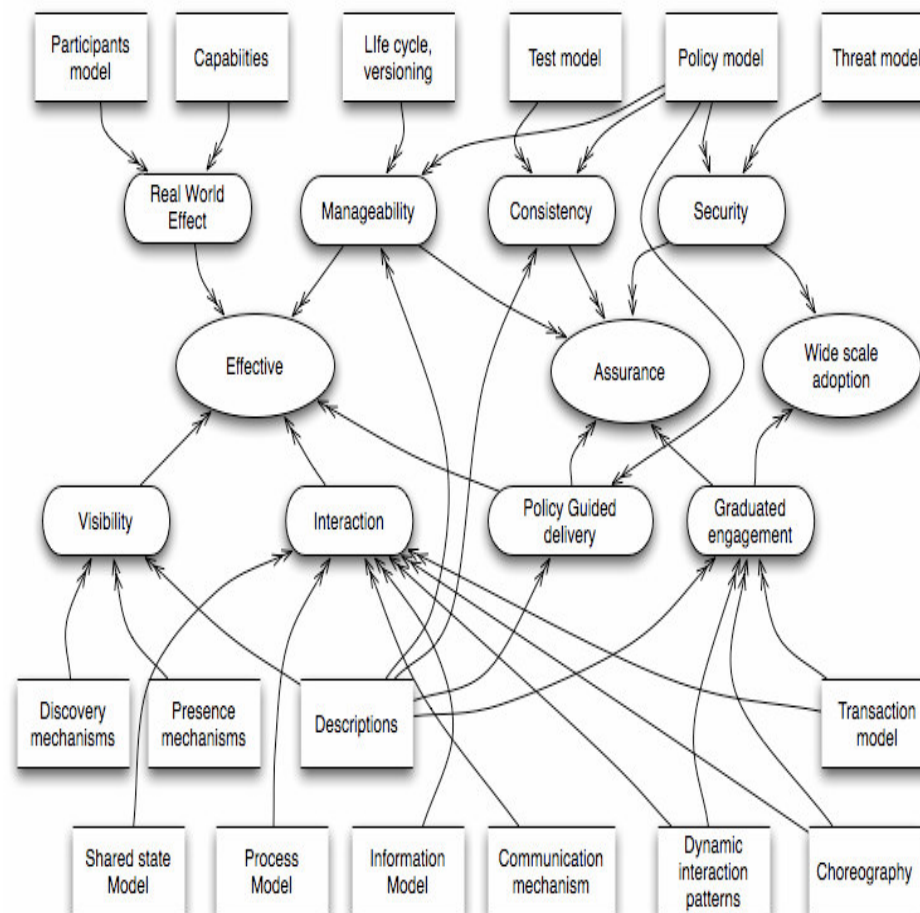
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Service Orientation in Banks – Critical Success Factors

Critical Success Factors for SOA

To be successful, SOA Model has to achieve

- Effectiveness
 - Visibility
 - Awareness
 - Service Description and policy
 - Mechanisms for discovery
 - Mechanism for detecting presence
 - Interaction.
 - Communication
 - Information model
 - Process model
 - Real World Effect
 - Realization of capabilities
 - Participants
 - Policy guided delivery
- Assurance
 - Security
 - Consistency
 - Graduated Engagement
 - Manageability
- Wide scale adoption
 - Scalability and Performance
 - Reusability
 - Loose Coupling, Interface driven abstraction
 - Cross platform support
 - Low cost of entry
 - Support for globalization and localization



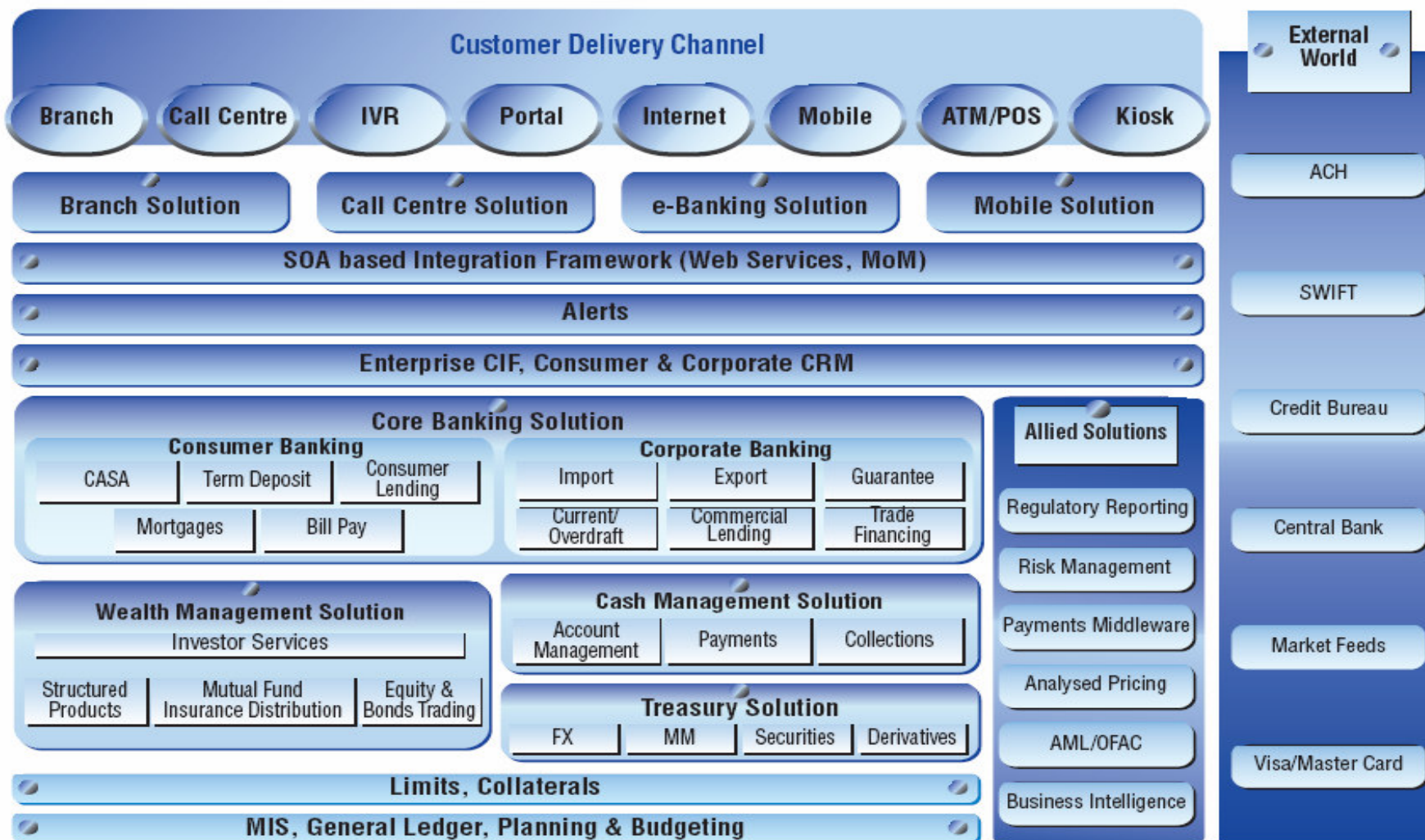
Source: www.oasis-open.org

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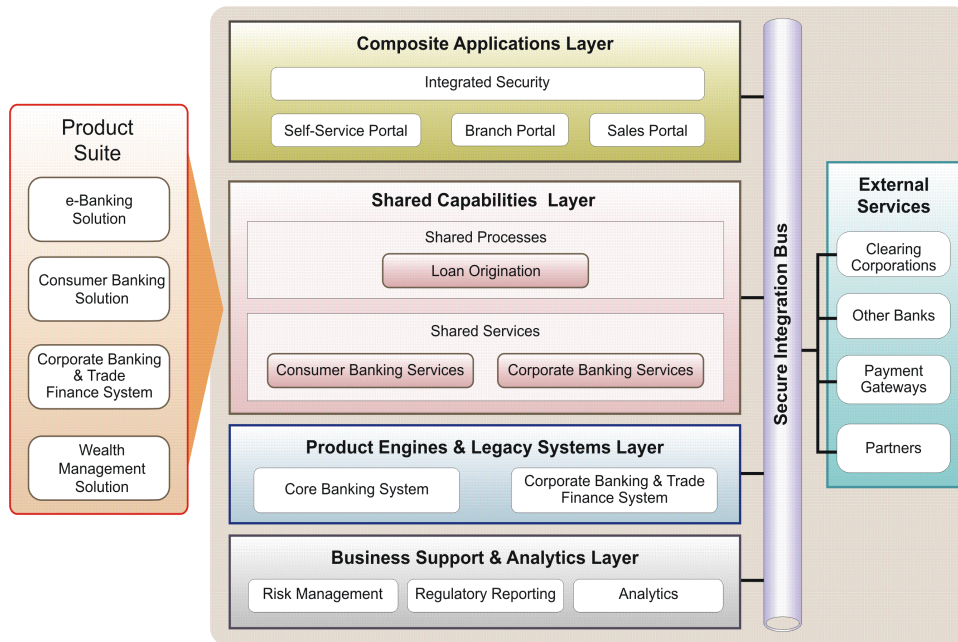
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Case Study: Service Orientation of Finacle

Finacle is a Comprehensive Banking Solutions Suite



Goals and Strategies for Service Orientation of Finacle



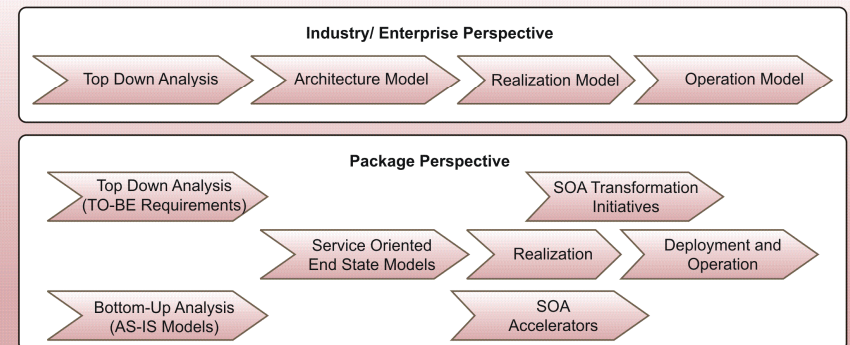
SOA Transformation Strategy

- Transformation Approach
 - Analysis and Architecture from Industry and package perspectives
 - Defined SOA methodology
- Transformation Initiatives
 - Tactical Initiatives
 - Service Orientation of most used capabilities
 - Multi-Channel Integration Solution Initiative
 - Unified Customer View Solution initiative
 - Long Term Initiatives
 - Service orientation of Core Banking Package
 - Service Orientation of e-Banking Solution Package
 - Service Orientation of the Unified Banking Solution Package

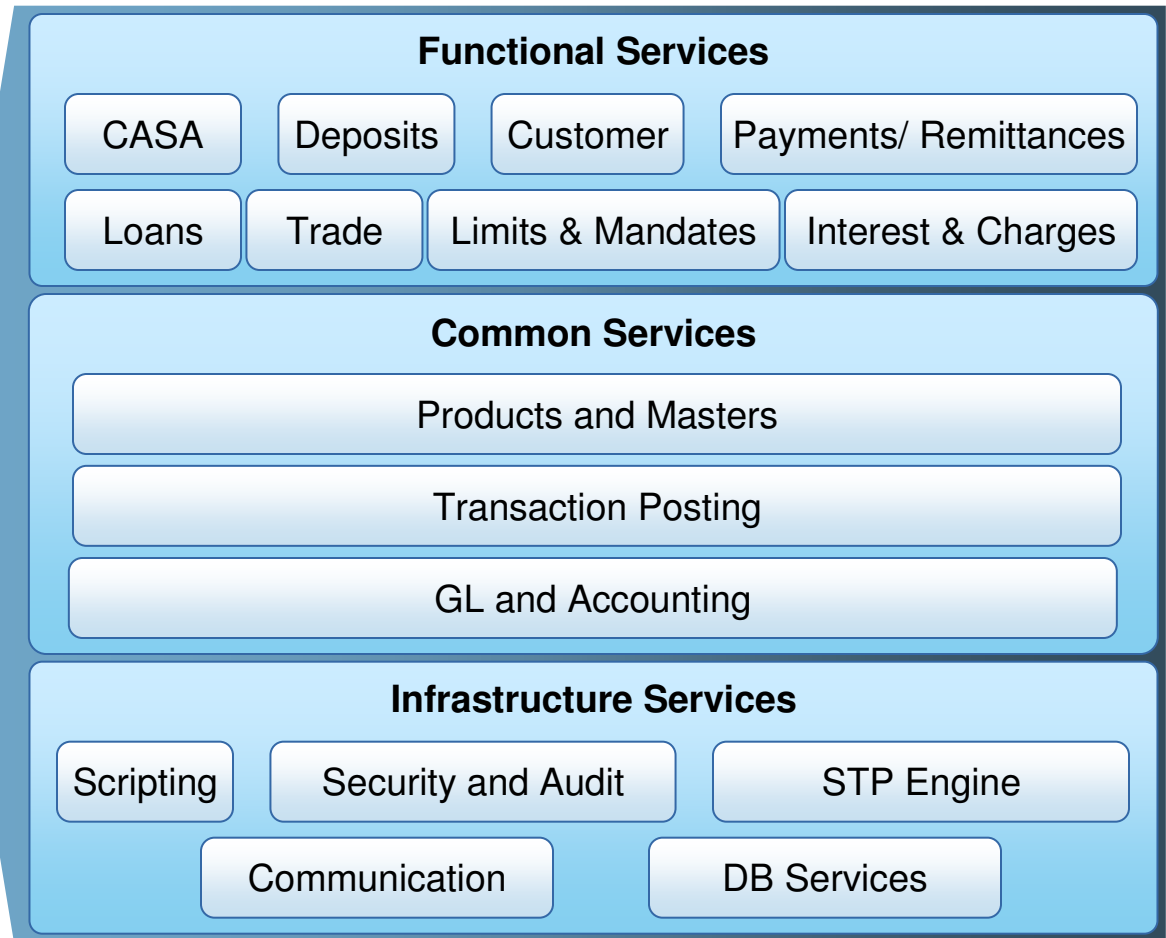
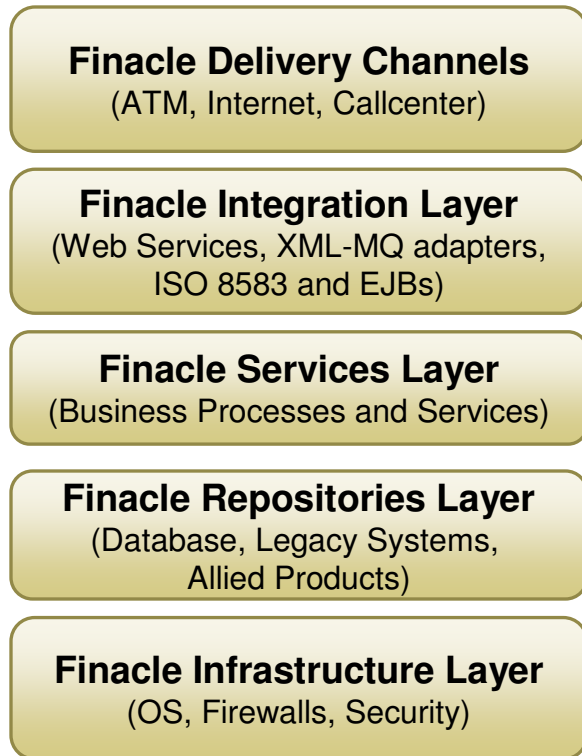
SOA Transformation Goals

- Product Silos to Integrated Services Suite
- Core Capabilities as reusable business processes and services

Approach for Service Orientation of a Package



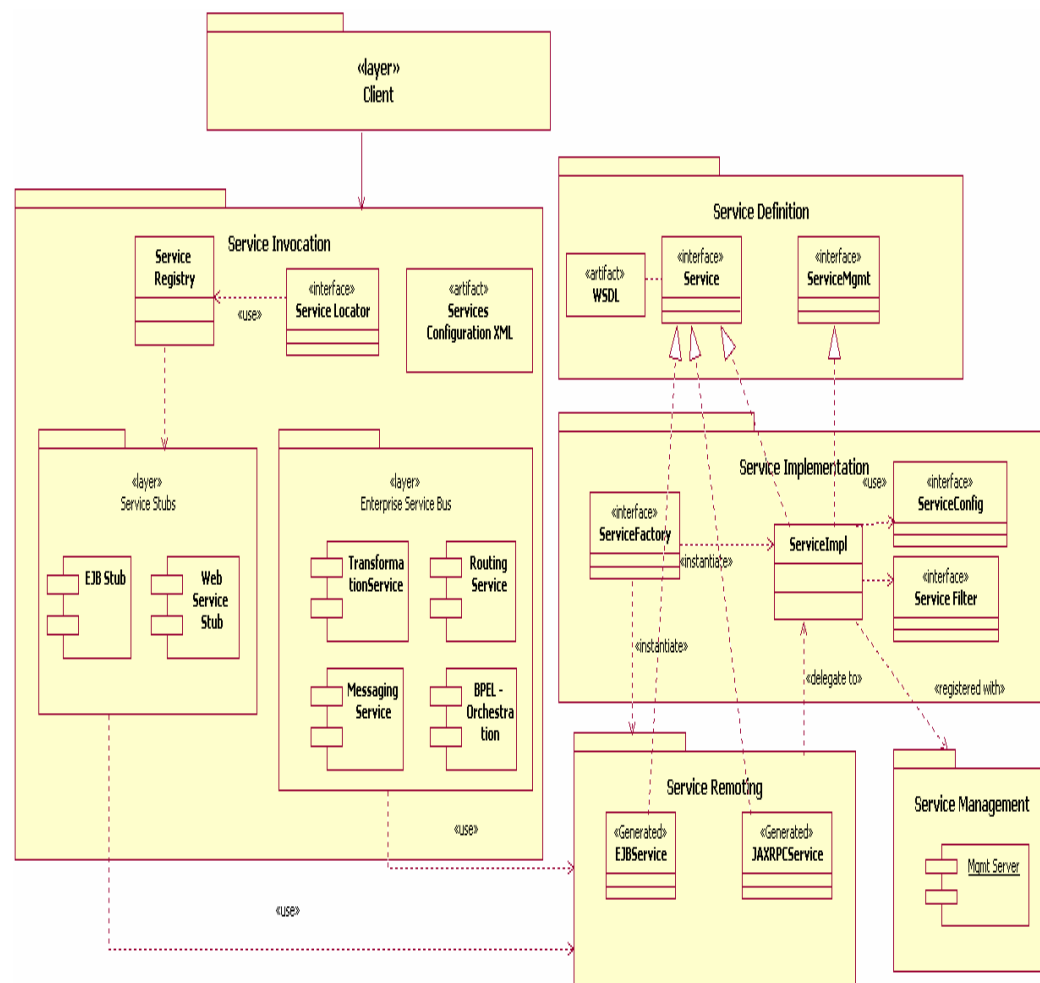
Finacle Service Orientation



Finacle Services Framework for SOA Realization

Framework for Services Realization

- Service Definition
 - Service Functional Interface
 - With EJB/JAX-RPC Wrappers
 - With converters to WSDL & Vice Versa
- Service Registry & Lookup
 - Service Locator for lookup
 - Service Factories to create services
 - Service Registry to hold instances
- Service Configuration
 - Parameter Configuration
- Service Management
 - Management Interfaces, Alerts
- Service Orchestration
 - BPEL Engine for Macro flows
 - Request Handler Chaining for micro flows
- Service Invocations
 - Pluggable mechanism for different implementation types
 - C/C++, POJO, EJB, JAX-RPC etc
 - Integration Bus
- Service Cross Cutting Concerns
 - Service Filters

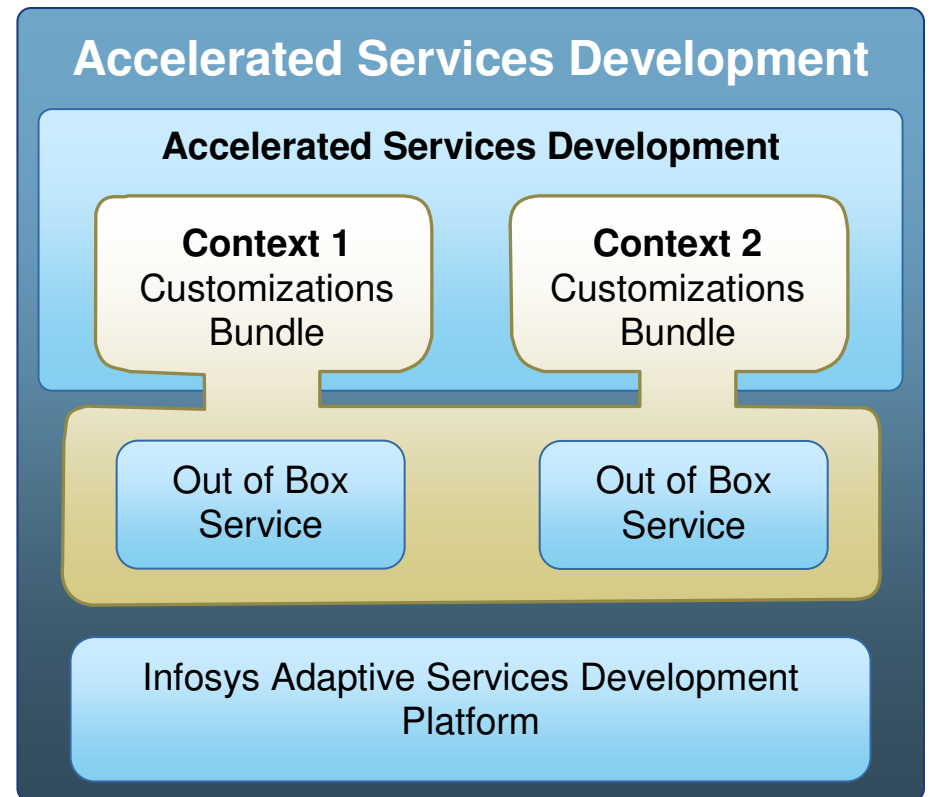


Radien – Infosys Services Realization Framework

Finacle Accelerated Services Development Platform

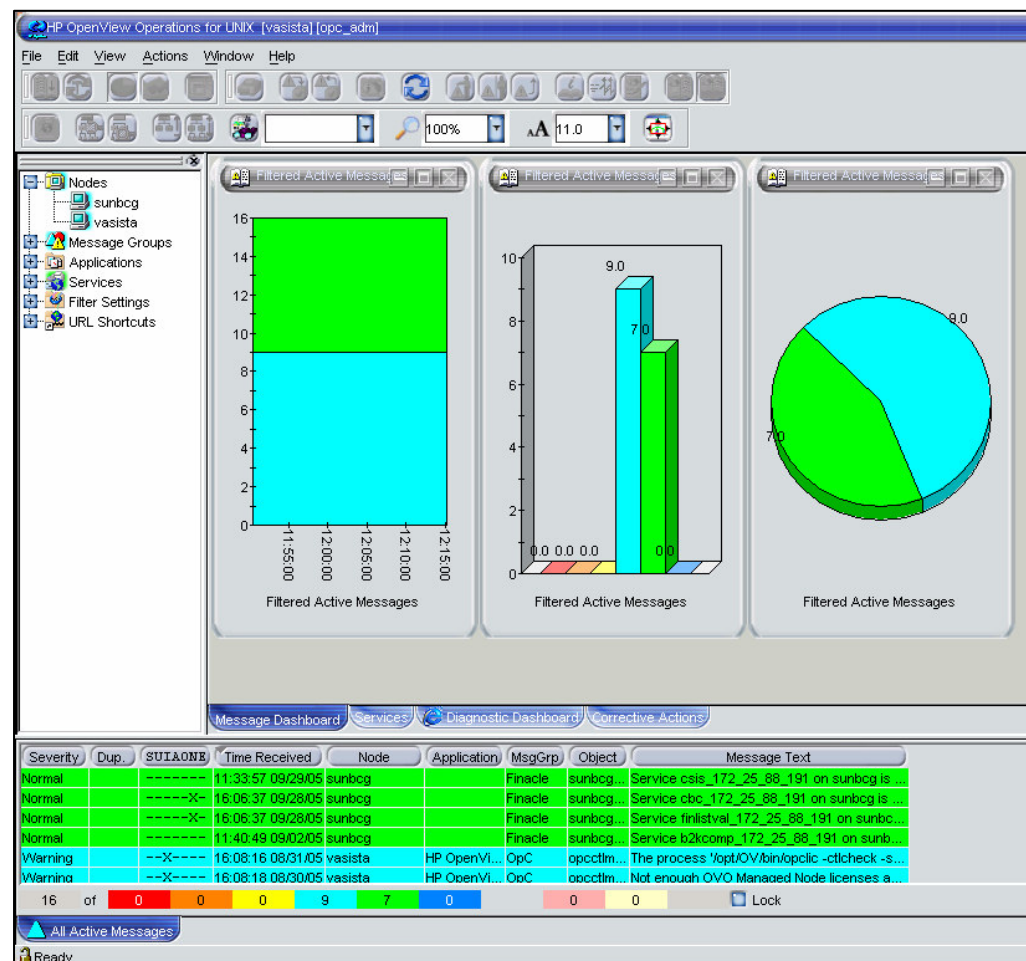
Accelerated Services Development Platform

- Core Building Blocks
 - Reference Architectures
 - Radien Adaptive Services Framework
 - Multi-Channel Integration Framework
 - Mobile Application Framework
 - Banking Industry Reference Business Process and Service Models
 - Xtensibility Framework and Toolkit to address product customization management and upgrades
 - Variations Framework
 - Context Driven Services Framework
 - Security, Management, Licensing Frameworks
 - Banking specific frameworks like Maker-Checker Framework, Multi-Entity framework
- Accelerated delivery through automation
 - Code generation tools
- Integrated Product development and management methodologies and tools

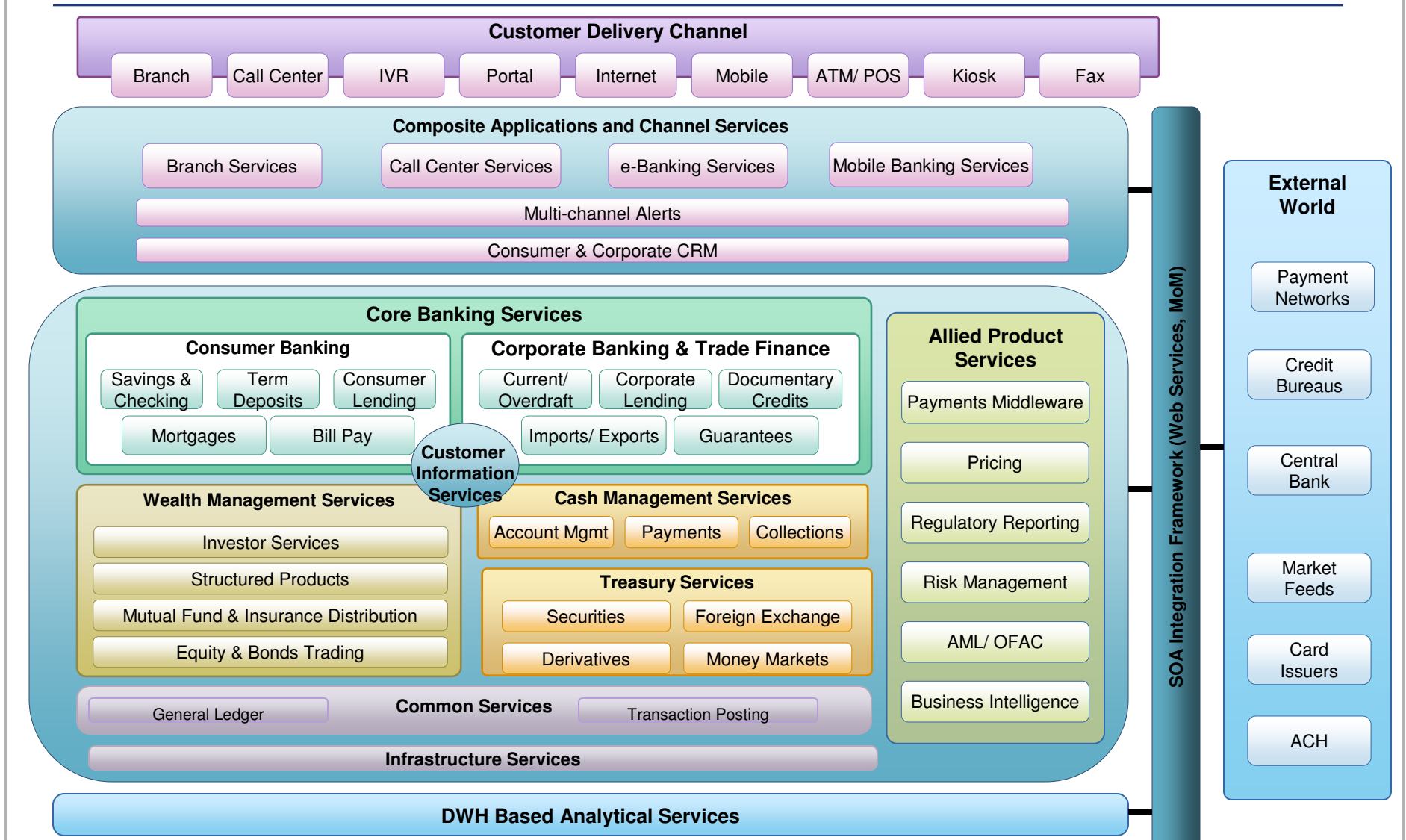


Finacle Services Management Framework

- Service Discovery to discover Finacle services running on nodes
- Remote Starting and Stopping of Finacle Services
- Health statistics of selected service
- Information on hanging Finacle processes on selected node
- Monitor templates for service status and overload warning
- Integration with enterprise management tools like HP OpenView, Tivoli



Service Oriented Finacle banking solution



Service Orientation of Finacle – Benefits

- Services Oriented Architecture that helps banks **create a future banking model** based on
 - Event driven services
 - Conceptualization of banking solutions in real time
- **Out-Of-Box Banking** Business Process and Service Models – to enable faster **solution conceptualization through composition**
- **Customer centricity** – 360 view, Cross sell and enhanced Service capability.
- Flexibility through parameterization and Xtensibility that enables
 - Meet time to market needs through **faster new product launch**
 - **Differentiate offerings** using unique processing rules defined using scripting for various business events
- **Accommodate Third party & legacy modules** within the framework using SOA & Business Process integration tools
- **High Scalability, Integrated Security and 24X7 Capability**

Authors

Shyam Doddavula,
HR Sudheer,
Sandeep Karamongikar,
Manoj Kumar Agrawal,
Prashant Dhananka,
Balamurali Srinivasan