

Banking Technology Course

Core Banking Focus



Agenda

- Course Delivery Schedule
- Starter Quiz
- Introduction to Banking technology
- Introduction Banking Product Lines and Product Types
- Thought Paper and Presentation Topics – Team Assignment

Course Delivery Schedule

- 6 Weeks of 3 Classes Per Week, Each class 2 hours
 - Week 1 – August 5th, 6th, 7th
 - Week 2 – August 19th, 20th, 21st
 - Week 3 – Sept 23rd, 24th, 25th
 - Week 4 – October 7th, 8th, 9th
 - Week 5 – October 28th, 29th, 30th
 - Week 6 – Nov 10th, 11th, 12th
- Each Session will consist of
 - Starter Quiz
 - Lecture
 - From September 9th – 30 Mins Presentation by Student Group on their Assigned Topic
- First Week - This Week
 - Day 1 – August 5th (2:00 – 3:00) - Introduction to Banking Technology & Banking Product Lines (1 Hour Session)
 - Day 2 – August 6th (10:30 – 12:30) - Retail Deposits Overview – Time/Fixed Deposit Walkthrough & App Demo
 - Day 3 – August 7th (1:00 – 3:00) - Retail Lending Overview - Unsecured Lending Walkthrough & App Demo

Note:

- Mobile Phones – Do not bring to class or Completely Switch off
- If students have any specific topic they want to discuss, share the topic and we can try to schedule

Starter Quiz

- In Which Industry when you make a Sale, Money leaves the Seller
 - *Hint*
- Which is World's Oldest Central Bank
 - *Hint*

Introduction to Banking Technology

Banking technology has evolved **from simple record keeping systems** to **complex digital ecosystems** that power the global financial industry

- ✓ Enables 24/7 banking operations
- ✓ Facilitates secure financial transactions
- ✓ Supports regulatory compliance
- ✓ Enables Financial and Business Ecosystem



This course explores **Corebanking Platforms** and its ecosystem (Bank Channel Apps, Payment and Embedded Finance Apps, Enterprise Components, Enterprise/Cloud Services) that form the technology backbone of Modern Banking

Core Banking Platform

Core Banking Platform

Central software solution comprising of a collection of Banking Product Processors that processes daily banking transactions and updates customer account records. **It is the Heart (Core) of the Bank**



Deposits Management



Payment Processing



Loan Management



Regulatory Compliance

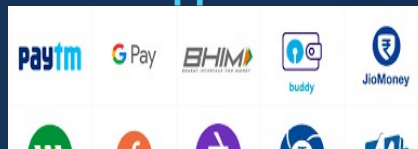


Core banking platform is surrounded by (i.e. Integrates / Interfaces with)

Bank Channel Apps



Payments & Embedded Finance Apps



Enterprise Components

- Customer
- Bank Definition
- General Ledger
- Alerts Rendering

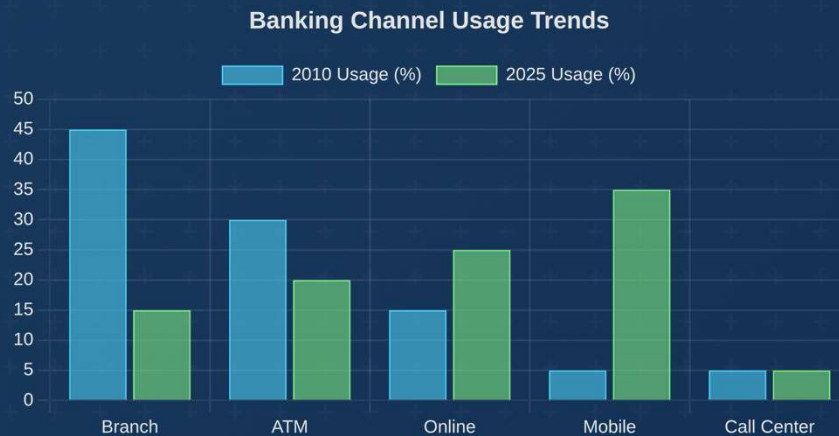
Enterprise/Cloud Services



Bank Channel Apps

Various bank provided touchpoints through which customers interact with financial institutions.

Channels can be Customer Self Service (e.g.. Mobile Banking App, Internet Banking App, ATM) or Bank Employee Assisted (e.g.. Branch, Call Centre) or Bank Partner Assisted (e.g.. Sales & Service Agent, Collection Agent ..)



Branch

Physical locations offering full-service banking with face-to-face interactions.

Technologies: Teller systems, CRM, queue management



ATM

Self-service machines for cash withdrawals, deposits, and basic transactions.

Technologies: Cash recyclers, biometrics, contactless



Internet Banking



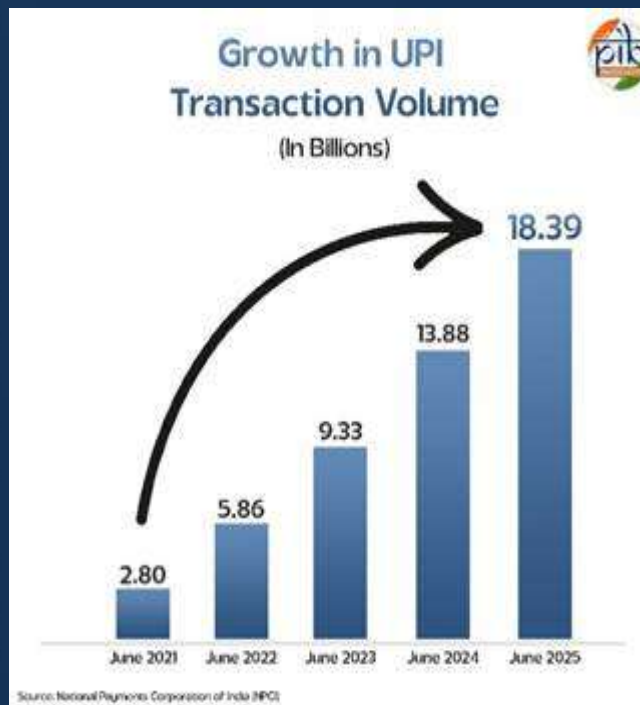
Mobile Banking



Call Center/Back office

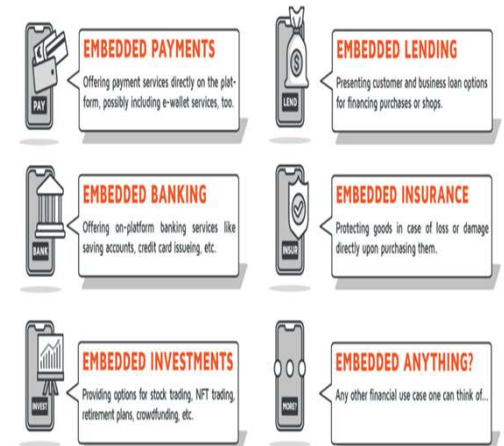
Payments and Embedded Finance Apps

Payments and Embedded Finance Apps are various non bank provided touchpoints that initiate financial Transactions for customers.



TYPES OF EMBEDDED FINANCE

Embedded Finance is an umbrella term for various forms of financial services that are integrated in an otherwise non-financial digital platform. Possible Embedded Finance applications include:



Enterprise Components

- Business Components each modelled on a Banking Functional Domain, Is the SOR of the Information for that Domain and provides all the SW capabilities needed for the Domain
- As the word "Enterprise" indicates these components are at the Bank overall Enterprise Level and integrate with 1 to many Bank Core Product Processors that constitute the Core banking Platform
- Can be "CRUD" components or "Transactional components" or "Data Aggregation Components"

Examples of Enterprise Components

- Customer Master
- Bank Definition Master
- Alerts Rendering
- Statements and Notices Rendering
- Collections
- Collateral
- Loan (Account) Origination
- Enterprise Product Catalog
- Enterprise Pricing
- Payments Hub
- Fraud Detection
- General Ledger
- Data Warehouse (Reports, Extracts, Analytics)
- Compliance & Regulatory Reporting

Enterprise / Cloud Services

- Common Technology Components / Services that are typically leveraged by call Components in the Solution Ecosystem i.e. Corebanking Platform Product Processors or Enterprise Components ..

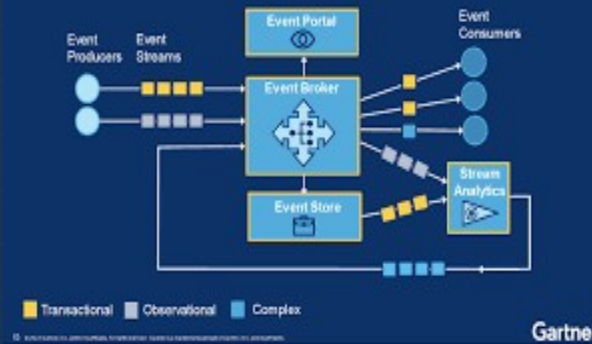
Key Enterprise Services for Core Banking Platform

API Management

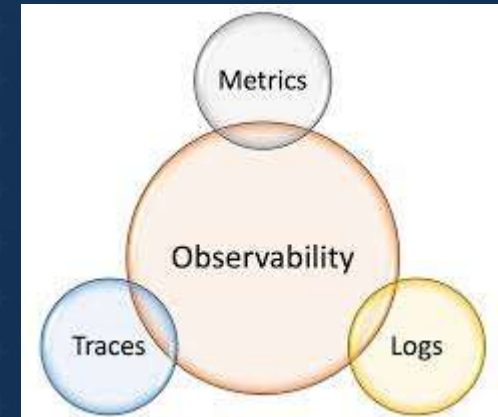


Event Management

Event Platform Engineering



Observability / Monitoring



Identity Management



Batch Scheduler



Others

- Database Services
- Storage Services
- Container Management Services
- Caching Services
-

Trends in Banking Technology

The banking industry continues to evolve with **emerging technologies** reshaping financial services.



Open Banking & APIs

Secure data sharing between financial institutions and third-party providers

Example: Account aggregation services, financial management apps



Blockchain & DLT

Distributed ledger technologies for secure, transparent transactions

Example: Cross-border payments, smart contracts, digital identity



AI & Machine Learning

Intelligent systems for fraud detection, risk assessment, and personalization, SW Development

Example: Chatbots, predictive analytics, credit scoring



Cloud Adoption

Migration from on-premises infrastructure to flexible cloud environments

Example: SaaS core banking, hybrid cloud deployments

Banking Technology Adoption Trends (%)



Introduction to Banking Products

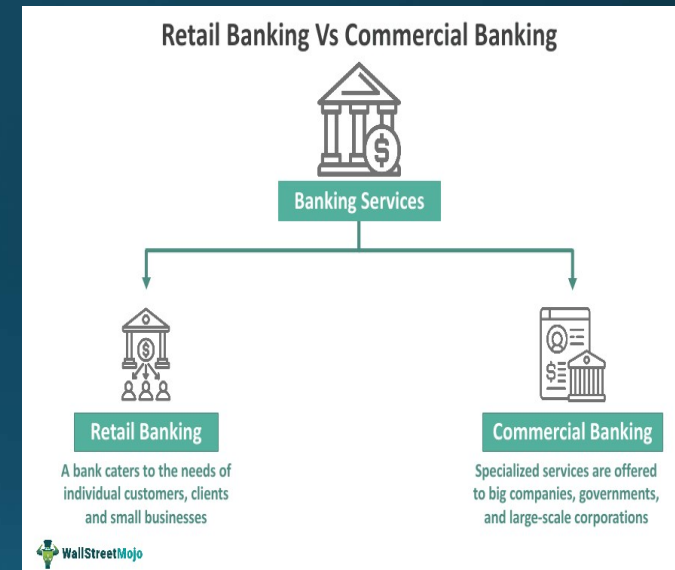


Major Banking Product Lines

- Banking at the highest level is divided into 2 major Segments
 - Retail – Covers Individuals and Micro/Small Business
 - Commercial – Covers Large Corporations and Institutions
- Products within each of these are broadly classified as:
 - Deposits
 - Loans
- Four Major Banking Product Lines
 - Retail Deposits
 - Retail Lending
 - Commercial Deposits
 - Commercial Lending
- Hundreds of Banking Products can be offered spanning these 4 Product Lines

Note:

- Banks offer Other Products Like Cards
- Capital Markets, Investment Banking, Leasing are out of scope for this course



Retail Banking

- Major Product Types:
 - Deposits: Savings Accounts, Current/Checking Accounts, Fixed Deposits, Retirement/Pension Accounts
 - Loans: Personal Loans, Home Loans (Mortgages), Car Loan, Education Loan...
 - Others: Cards (Credit Card, Pre Paid Card, Forex Card, Debit Card ..)
 - Note: Banks can also distribute products like Insurance, Investment Banking Products like Mutual Funds these are not covered in the Banking Technology Course.
- Purpose: Serve day-to-day banking and credit needs.
- Target Consumer: Individual and Micro/Small Business
- Product Conceptualization: Based on customer segmentation (mass, affluent, HNI), financial behavior, and lifecycle needs.
- Product Currencies: Typically offered in Country's currency but can be offered in other currencies (e.g.: Fixed Deposits in Indian Rupees, US Dollar, Euro)
- Product Distribution: Self Service (ATMs, Mobile Banking, Internet Banking), Employee Assisted (Branches, Relationship Managers, Call Centers), Partner Assisted (Sales Agents, Collection Agents)
- Servicing Model: Low touch, for High Value Customers Relationship Managers assigned
- Regulatory Compliance: Varies by Country and Product Type and is dictated by the Country Regulator

Commercial Banking

- Major Products:
 - Deposits: Business Checking, Cash Management Services
 - Loans: Working Capital Loans, Term Loans,
 - Others: Trade Finance, Treasury Services, Corporate Bonds
- Purpose: Support business operations and growth.
- Target Consumer: large corporates, institutions, government entities.
- Product Conceptualization: Based on industry, turnover, creditworthiness, and business lifecycle.
- Product Currencies: Typically offered in Country's currency but can be offered in other currencies (e.g.: Fixed Deposits in Indian Rupees, US Dollar, Euro)
- Product Distribution: Corporate branches, Relationship Managers, Digital Portals.
- Servicing Model: High-touch Relationship Manager led, with digital dashboards for reporting and transactions.
- Regulatory Compliance: Varies by Country and Product Type and is dictated by the Country Regulator

Major Types of Banks

- Banks can be categorized in to various types, the categorization can vary by Country. Based on the Category:
 - Segments of customers they serve can vary
 - Types of products they can offer can vary and accordingly their Core Banking Platform capabilities & types of Banking Apps can vary.
 - Regulatory/Compliance can vary
- In India the Major Types of Banks are:
 - Central Bank (RBI)
 - Responsible for monetary policy, currency management, establishing Regulatory/Compliance and supervision of other banks.
 - Commercial Banks – Most Common Type of Banks – Technology Platform for these is what we will focus in this course
 - Public Sector
 - Private Sector
 - Foreign Banks
 - Cooperative Banks
 - Owned and operated by their members, who are also their customers.
 - Focus on providing financial services to specific communities or groups, often in rural areas.
 - Regulated under the Co-operative Societies Act.
 - Regional Rural Bank
 - Established to provide banking and credit facilities to rural areas, particularly to small and marginal farmers, agricultural labourers.
 - Sponsored by commercial banks
 - Supervised by the National Bank for Agriculture and Rural Development (NABARD).
 - Others
 - Specialized Banks – e.g. EXIM Bank
 - Small Finance Banks – Focus on Micro Businesses, Unorganized Sector
 - Payment Banks – New Category, focusing on facilitating financial transactions and promoting financial inclusion, Can Deposit only up to 1 Lakh, Cannot issue Loans

Session Summary



Universe of Banking Technology – Incredible Breadth & Depth, Constantly Evolving and Mission Critical

Bank Channel Apps



Large Ecosystem of Applications

Payment & Embedded Finance Apps



**Core Banking Platform
(Modular Core Product Processors)**

Enterprise Components

- Customer
- Bank Definition
- General Ledger
- Alerts Rendering

Enterprise/Cloud Services



Analysis and Thought
Paper Topics –
Team Assignment



Analysis and Thought Paper Topics – Team Assignment

Topic Name	Team	Presentation Date
OCEN (Open Credit Enablement Network) – India	2	Sept 23 rd
ONDC (Open Network for Digital Commerce) - India	6	Sept 24 th
Stablecoin	4	Sept 25 th
AI in Financial Fraud Prevention and AML	12	Oct 7 th
Embedded Finance – Concept, Evolution, Future Trends	8	Oct 8 th
Global Payment Schemes Analysis and Comparison India – UPI US – ACH Europe – SEPA Brazil - Pix	3	Oct 9 th

Analysis and Thought Paper Topics – Team Assignment

Topic Name	Team	Presentation Date
Consumer Persona's – Banking Usage and Needs Analysis (Accounts, Types of Transactions, Volumes of Transactions, Types of Banking/Payment Apps used, How do they Interact/Interface with Bank, Regulations applicable for these Product Types, Are there gaps /improvements they would like to see from their Banking Product Features or would like Banking Products to be Offered and How they are Serviced/Supported by Bank), Banking Tech Requirements / expectations based for the analysis of these consumer Persona's		
Individuals – Student, Your Parents	1- 5 2- 1	1- Oct 28 th 2- Nov 11 th
Micro/Small Business (2 Persona's) – e.g. Street Vendor/Auto Driver, Kirana Shop/Small Farmer/Small Restaurant	1- 9 2- 11	1- Oct 29 th 2- Nov 12 th
Start up / Entrepreneurs	7	Oct 30 th
Large Institution (MIT Manipal)	10	Nov 10 th