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# FinTech™

**Accion Fintech Practice and Current Landscape**

# Sub-verticals and Customers

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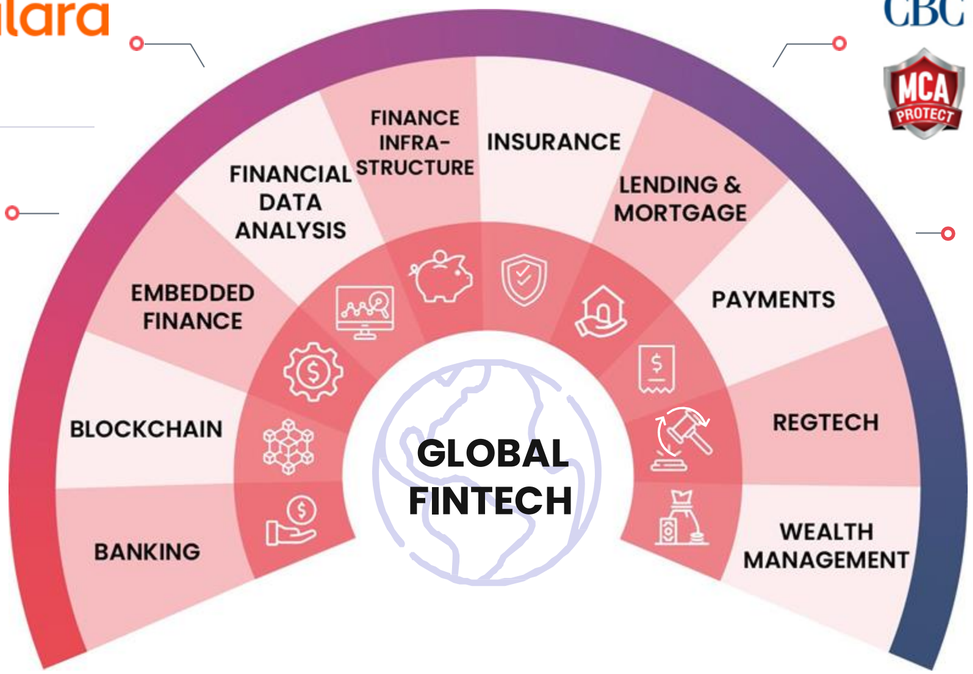


- INSURANCE: AON GLOBAL Insurance Brokers Pvt. Ltd., First American Property & Casualty Insurance Company, AmMetLife
- FINANCE INFRA-STRUCTURE: The Clearing Corporation of India Ltd.
- LENDING & MORTGAGE: CBC Innovis, MCA PROTECT, KINARA CAPITAL, kw KELLERWILLIAMS
- PAYMENTS: Company.com, Thync, fastacash, VISA, MasterCard
- REGTECH: International money transfer and tracking software
- WEALTH MANAGEMENT: honeydue, ENVESTNET, Edelweiss, Confluence, IFSG, owl, TRUCENDENT
- FINANCIAL DATA ANALYSIS: Perfios, BrightQuery, Avalara, Grant Thornton
- EMBEDDED FINANCE: PROMETHEUS, CHANGE HEALTHCARE, echo HEALTH VENTURES, CORVESTA, finvi, ENTERTAINMENT PARTNERS, cinch
- BLOCKCHAIN: Bullish, TMPLR
- BANKING: UOB, BACKBASE, CHOICE BANK, CIMB BANK, CHUBB, Standard Chartered, YES BANK

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# Spectrum of Fintech Core Functions across all sub-verticals

## Product Engineering

- New product development
- Platform porting
- Product re-engineering
- Technology migration
- Integration services

## Fintech Applications

- Microservices
- Data integration & interoperability
- Re-engineering of legacy applications
- User experience design
- Cloud optimization & monitoring
- Compliance and regulatory applications

## Data Mgt & Analytics

- Data warehousing
- Business intelligence
- Data analytics
- Machine learning with NLP
- Conversational UI
- Chatbots
- RPA

## AI & ML

- Fraud detection and prevention
- Advisory and Investment predictions
- Risk management
- Customer service
- Marketing
- Digital assistants
- Network security
- Algorithmic trading
- Loan underwriting
- Rules engine

## Cloud Services

- Cloud consulting
- Cloud infrastructure
- Cloud engineering
- Cloud migration
- Cloud optimization & monitoring

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# Major trends in financial services are driving the need for transformation

### Challenging industry economics

**70%**

Gap in price-to-book ratio of banks vs all other industries highlighting a need for business models to evolve[1]

### Rapidly growing, complex regulatory requirements

**60%**

Increase in operating costs for regulatory compliance over the last decade;[2] new regulatory standard published every 6 minutes[3]

### Competitive dynamics and disruption

**31%**

31% of US consumers named a FinTech as their primary financial relationship;[4] banks' cloud spending is forecast to grow almost 2.8X faster than overall IT budgets for the next 4 years. [5]

### Heightened digital expectations

**48%**

of consumers now consider mobile banking their primary account access method (up from 15% in 2017);[5] 1,409 US bank branches closed in 2023.[6]

Sources: (1) McKinsey; (2) Deloitte; (3) Thomson Reuters (4) EY (5) IDC or Deloitte (6) Bankrate (7) S&P Global

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# FinTech Customers

Company.com Thync

Payments processing, card developers, & subscription billing software tools

honeydue

Tools to manage bills and track personal and/or credit accounts

CBC Innovis

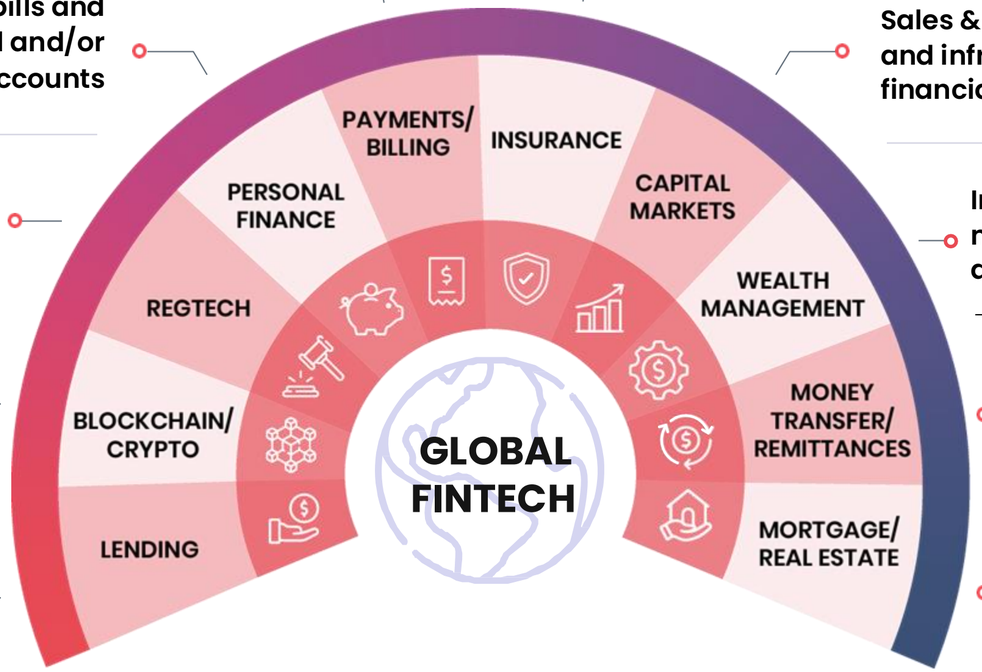
Audit, risk, and regulatory compliance software

TMPLR

Companies leveraging blockchain technologies for financial services

MCA PROTECT KINARA CAPITAL

Marketplace lending & alternative underwriting platforms




First American Property & Casualty Insurance Company · Fuzion · Change Healthcare · echo Health Ventures · G · Corvesta

Companies selling insurance digitally or providing data analytics and software for (re)insurers

Sales & trading, analysis, and infrastructure tools for financial institutions

owl · Trucendent · Edelweiss

Investment and wealth management platforms and analytics tools

Confluence · Envestnet · IFSG

International money transfer and tracking software

fastacash · TimesofMoney

Mortgage lending, digitization, and financial platforms

kw KELLERWILLIAMS

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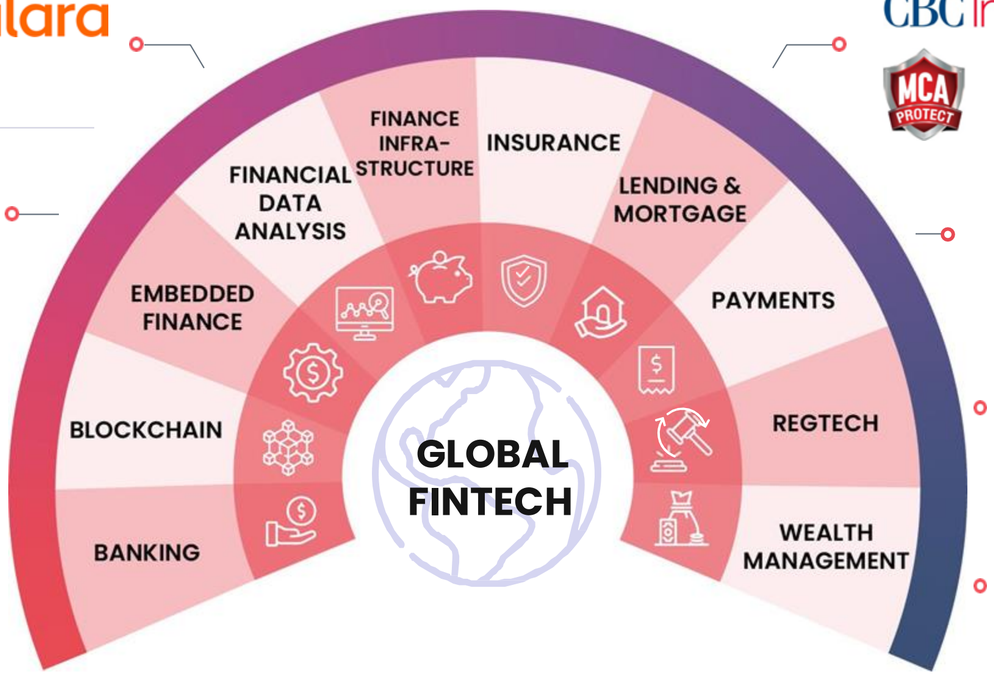
# BFSI Customers




The Clearing Corporation of India Ltd.

AON GLOBAL Insurance Brokers Pvt. Ltd.

First American Property & Casualty Insurance Company

AmMetLife

Perfios

BrightQuery

Avalara

CBC Innovis

MCA PROTECT

KINARA CAPITAL

kw KELLERWILLIAMS

PROMETHEUS

CHANGE HEALTHCARE

echo HEALTH VENTURES

CORVESTA

finvi

ENTERTAINMENT PARTNERS

cinch

Company.com

Thync

fastacash

VISA

MasterCard

Bullish

TMPLR

UOB

BACKBASE

CHOICE BANK

CIMB BANK

CHUBB

Standard Chartered

YES BANK

honeydue

ENVESTNET

Edelweiss

Confluence

IFSG

Owl

TRUCENDENT

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# Banking Customers

MasterCard

CIMB BANK

CHOICE BANK

Hong Leong Bank

Standard Chartered

UOB

VISA

CHUBB®

CITY NATIONAL BANK The way up.®

BACKBASE

PRUDENTIAL Always Listening. Always Understanding.

AON GLOBAL Insurance Brokers Pvt. Ltd.

AmMetLife

Gibraltar BSN

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# FinTech Landscape

**Accion's Fintech Landscape includes, but not limited to, these pillars of financial inclusion...**

## Banking

- Retail Banking solutions
- Open Banking
- Digitization of operations / processes

## Payments

- Integrations
- Mobile Solutions
- Digital POS
- Aggregators
- Digital Wallets
- Remittance
  - Digital Transfer
  - Money transfer through social media

## Credit

- Credit Score
  - Experion
  - Equifax
  - TransUnion
- Digital Lending
- Credit Score Analysis
- LOS / LMS Integrations
- Digital Disbursements & Payments

## Wealth Management

- Advisory Solutions
- Financial Planning
- Portfolio Management
- Estate Planning
- Retirement Planning
- Expenses Planning

## Insurance

- B2B Insurance platform
- Digital Claims and Settlement
- Other InsurTech

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# Lending Lifecycle and Fintech Horizontals

| LOAN / LENDING LIFE CYCLE & SOLUTION OFFERINGS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Pre-Application | Application | Underwriting | Loan Approval | Disbursement | Servicing | Monitoring & Delinquency Mgt | Closure | Post-Closure |
| Marketing and Lead Gen | Submission | Credit Assessment | Offer | Notification | Payment Scheduling | Account Mgt | Notification | Credit Reporting |
| Initial Screening | Document Colleciton | Risk Analysis | Acceptance | Fund Transfer | Processing | Collection | Release of Docs | Feedback & Review |
| | | Decision Making | | | Customer Support | Early Intervention | Final Payment | |
| | | | | | | Default Mgt | | |
| Open Banking, Aggregators & Integrations | | | | | | | | |
| Document Upload & Verification | | | | | | | | |
| Chatbots & Virtual Assistant | | | | | | | | |
| RPA Solutions for Automation - follow ups, real-time updates, reminders, notifications, etc | | | | | | | | |
| GRC - Security | | | | | | | | |
| Identity Verification, Digital Identity, Biometric Authentication | | | | | | | | |
| Fraud Detection & Other AI ML solutions | | | | | | | | |
| Customer Data Analytics - social listening, social media, browsing history, purchase patterns, Demography, trends, sentiment analysis | | | | | | | | |
| Cloud Computing | | | | | | | | |
| Blockchain Tech | | | | | | | | |
| User Experience & Usability - mobile applications, digital | | | | | | | | |

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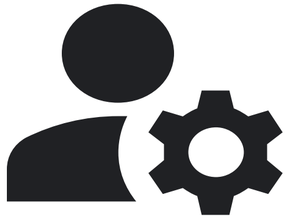
# In response to these trends, banks are innovating and transforming

**Drive growth through personalization and transforming distribution**



**Streamline and automate middle and back office operations**

**Improve operational and financial risk management**

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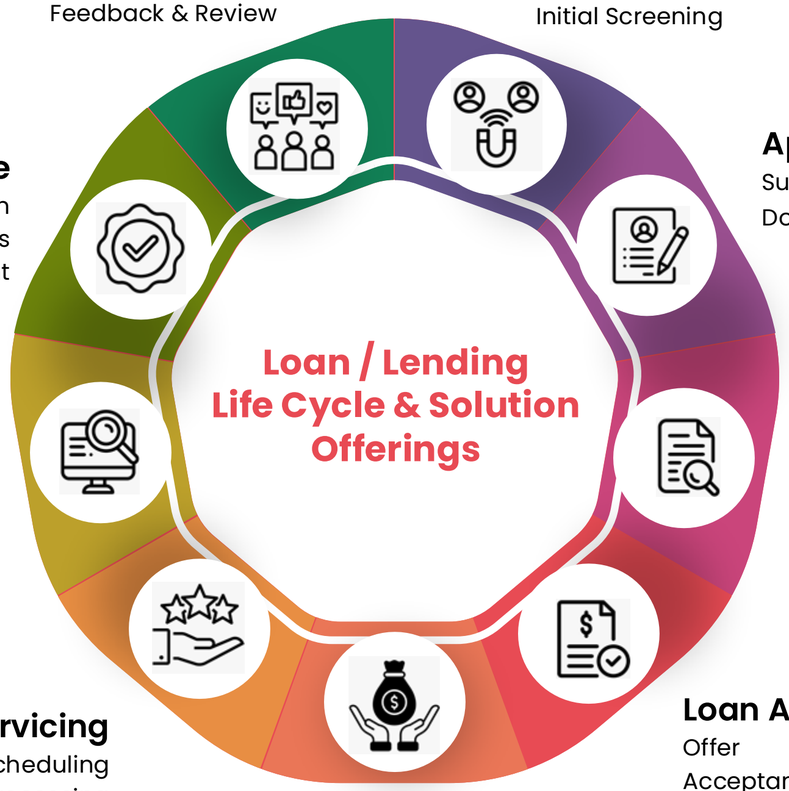
# Digital Transformation - across all Financial Pillars




**Post-Closure**
Credit Reporting
Feedback & Review

**Pre-Application**
Marketing and Lead Gen
Initial Screening

**Application**
Submission
Document Collection

**Underwriting**
Credit Assessment
Risk Analysis
Decision Making

**Loan Approval**
Offer
Acceptance

**Disbursement**
Notification
Fund Transfer

**Servicing**
Payment Scheduling
Processing
Customer Support

**Monitoring & Delinquency Mgt**
Account Mgt
Collection
Early Intervention
Default Mgt

**Closure**
Notification
Release of Docs
Final Payment

Open Banking, Aggregators & Integrations

Fraud Detection & Other AI ML solutions

GRC - Security

Document Upload & Verification

Customer Data Analytics - social listening, social media, browsing history, purchase patterns, Demography, trends, sentiment analysis

Chatbots & Virtual Assistant

Cloud Computing

RPA Solutions for Automation - follow ups, real-time updates, reminders, notifications, etc

Blockchain Tech

Identity Verification, Digital Identity, Biometric Authentication

User Experience & Usability - mobile applications, digital

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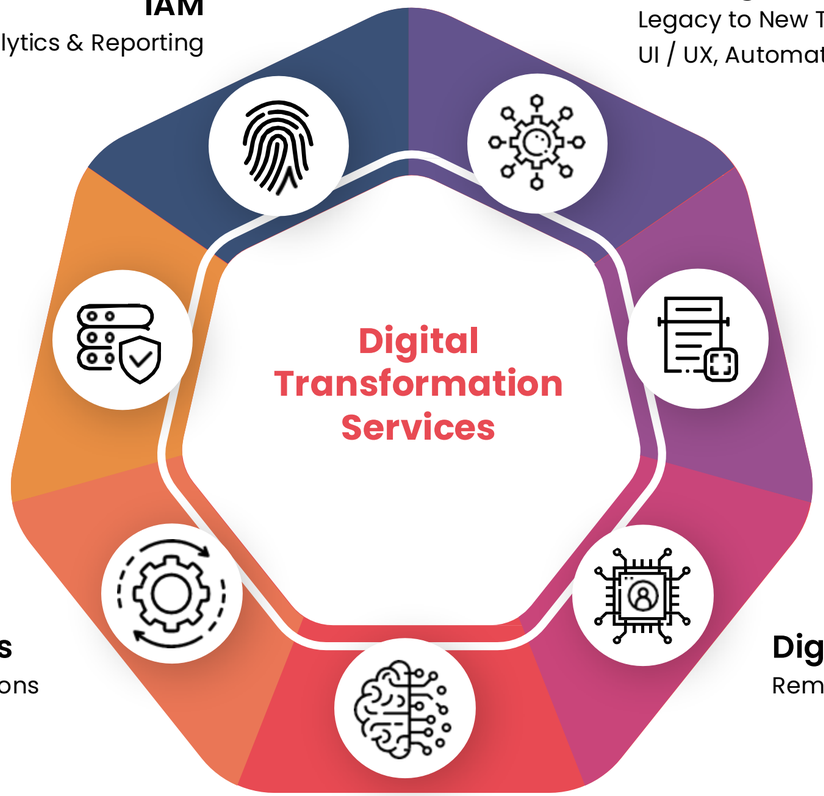
# Digital Transformation - across all Financial Pillars

**IAM**
GRC, Data, Analytics & Reporting

**Re-engineering Solutions**
Legacy to New Tech Migrations, Microservices,
UI / UX, Automation Frameworks, Vernacular Applications




**Security**
GRC, Data, Analytics & Reporting

**Automated Tools for Paper based processing**
Scanned and Electronic Data - OCR Readers, Parsers,
Digital Signatures- DocuSign, SignNow

**Managed Services**
Automated processes and operations

**Digital Identity**
Remote Verification, Touchless Verification

**AI/ML**
Fraud Detection & Prevention, Branding, Social Listeners,
Data Profiling and Categorization

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# Generative AI holds immense value and productivity gains for banking

**$200–340 B**

value potential in banking

**9–15%**

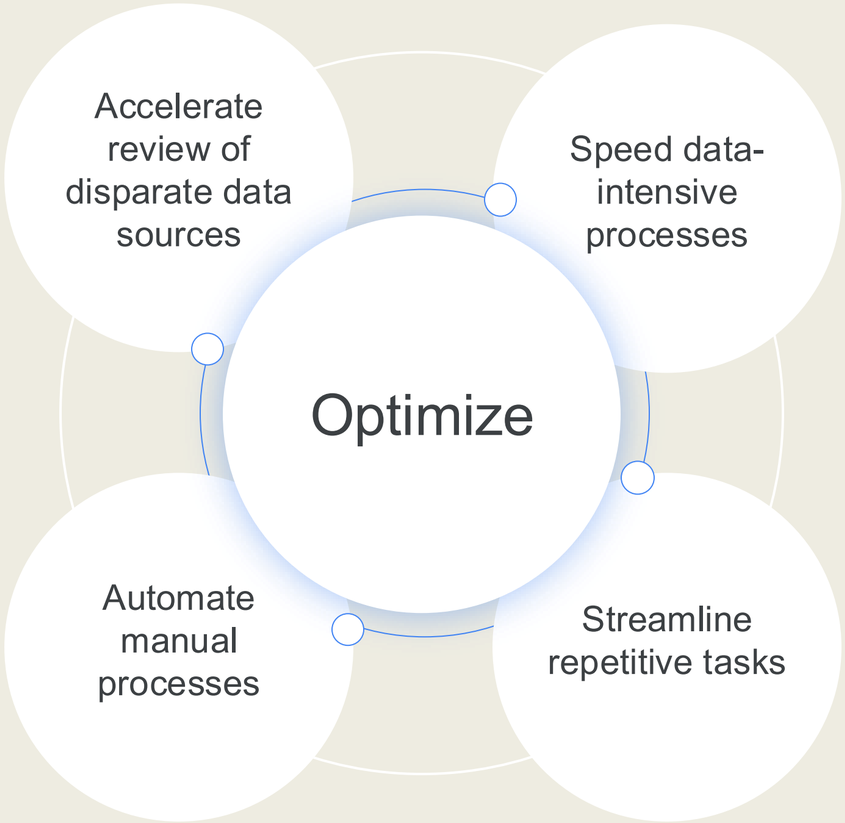
**increased productivity** of the banking industry's annual operating profits

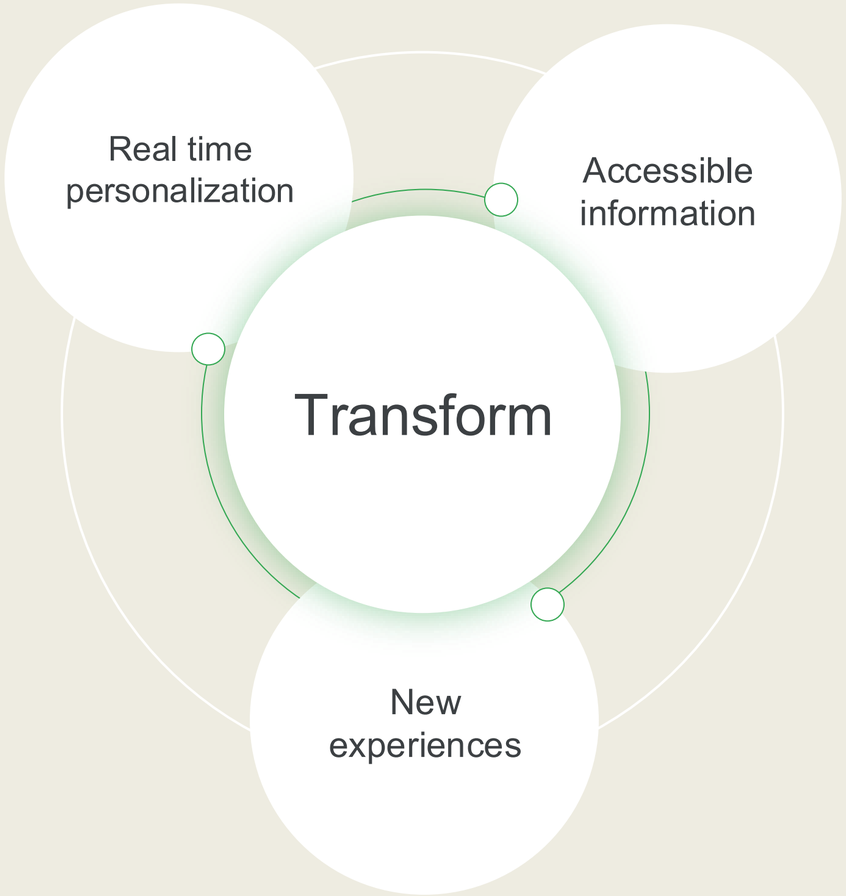
## Productivity gains

| | |
|---|---|
| **Customer Service** | +30–45% of current servicing costs |
| **Marketing** | +5–15% of total marketing spend |
| **Software engineering** | +20–45% of current annual spending |
| **R&D** | +10–15% of overall R&D costs |

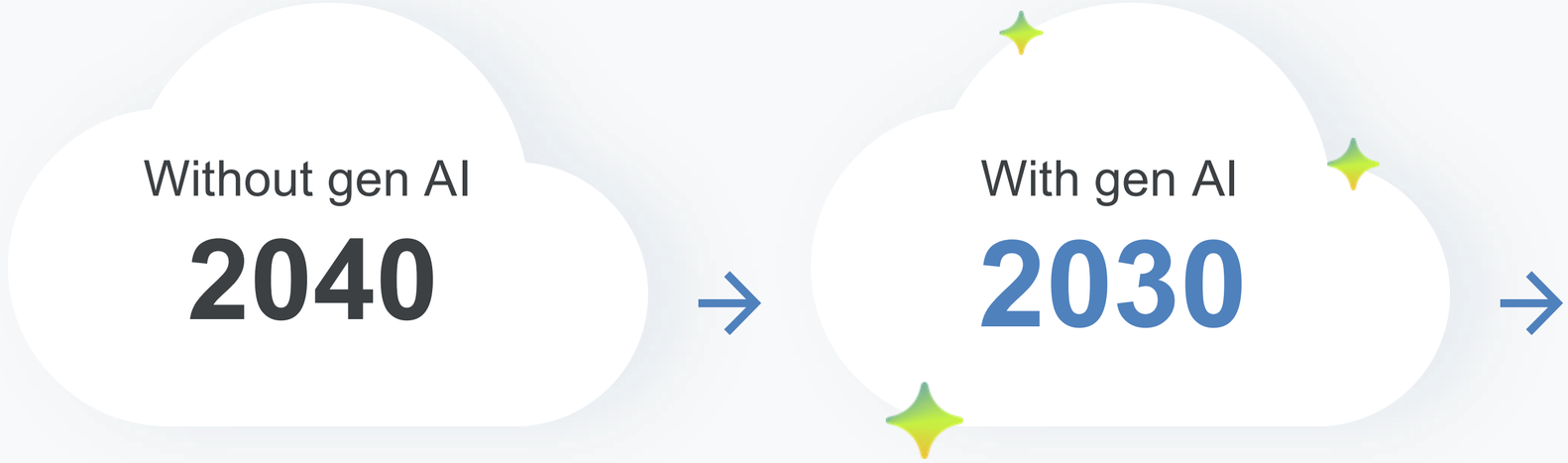
Source: "Economic potential of GenAI" McKinsey, 2023

# Generative AI can be applied to re-shape process and experiences



# The transformation is underway



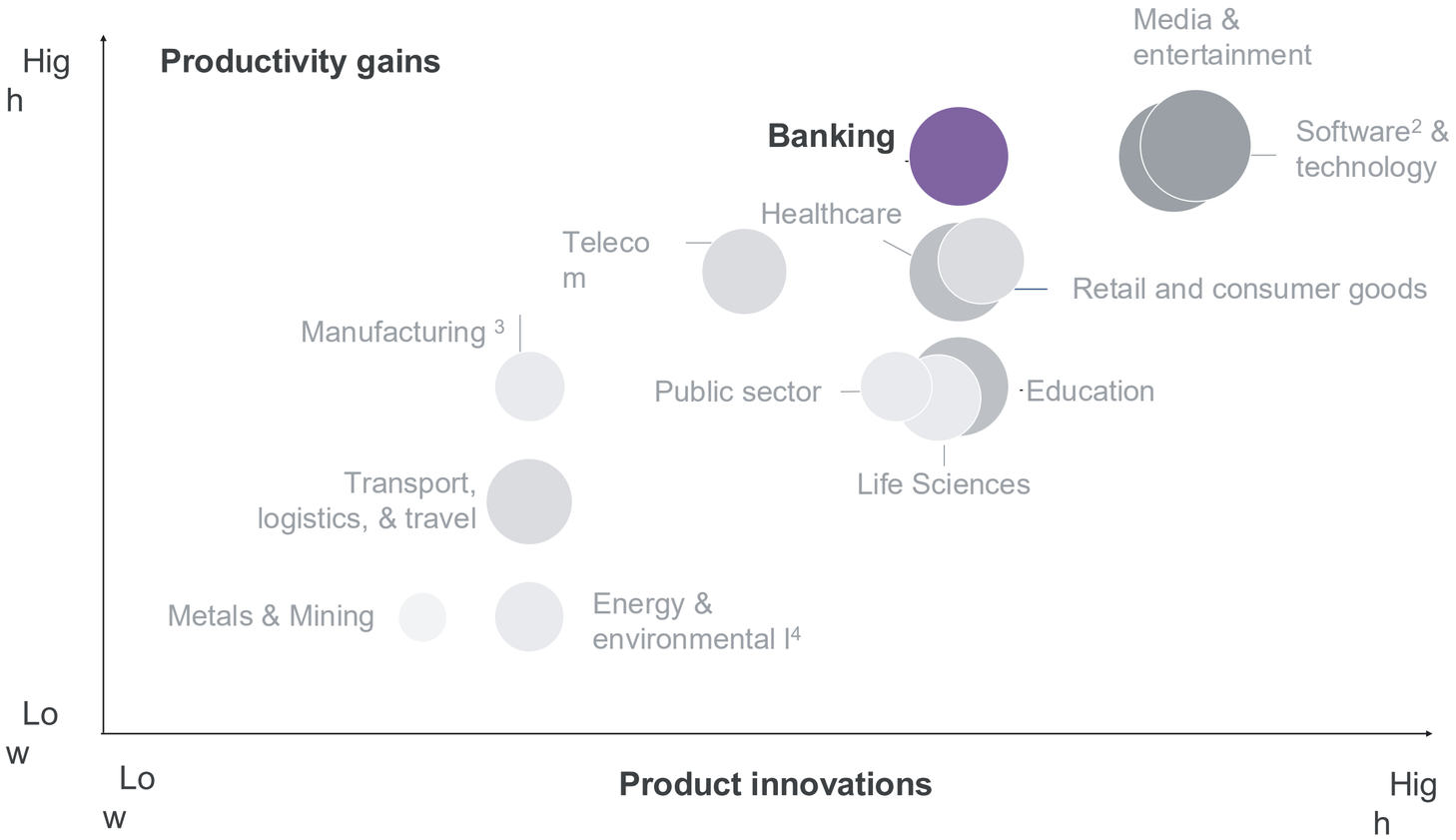

**Gen AI has accelerated automation by 10 years** with a projection of 50% of current tasks being automated by 2030.

**More advanced countries will have a faster adoption curve** due to financial pressures and competition.

Includes data from 47 countries (~80% of global employment); 2017 based on activity and occupation mix from 2016, GenAI scenario based on 2021 data; scenarios differ by tech automation potential, timelines, economic feasibility and tech diffusion rates
Source: McKinsey Global Institute: “The economic potential of generative AI: The next productivity frontier”

# Generative AI will have a transformative impact in banking

## Impact of gen AI across industries [1]

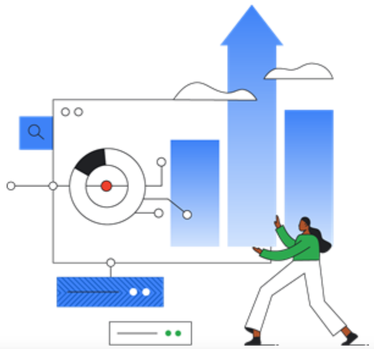



1. For each industry, industry-specific software is included 2. Industry-agnostic software 3.Includes aerospace and defense, automotive and assembly, chemicals, semiconductors, basic materials 3. Includes auto retail. 4. Includes oil and gas, power. Source: McKinsey Global Institute: “The economic potential of generative AI: The next productivity frontier”

**$200–340 B**

impact in the banking industry

# Accion Gen AI focus for Banking and Financial Services



## Reimagine distribution, financial advice and guidance

Bring your products to wherever customers are and create a better customer experience

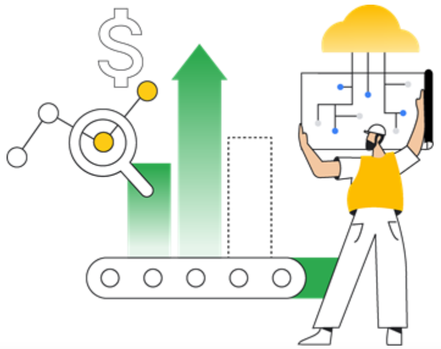
**Use cases**

Data distribution & monetization

Personalize customer interactions

Advanced marketing analytics

Embedded finance / open banking



## Automate middle and back office operations

Modernize technology, eliminate paper, and automate routine interactions

**Use cases**

Automate document processes

Time series anomaly detection

Financial forecasting

Improve call center efficiency

## Improve risk prediction & transform management of financial data

Simplify reporting, better predict and manage risk

**Use cases**

Detect and prevent financial crime (fraud, AML, and more)

Perform value-at-risk and ‘what if’ calculations

Streamline regulatory reporting processes

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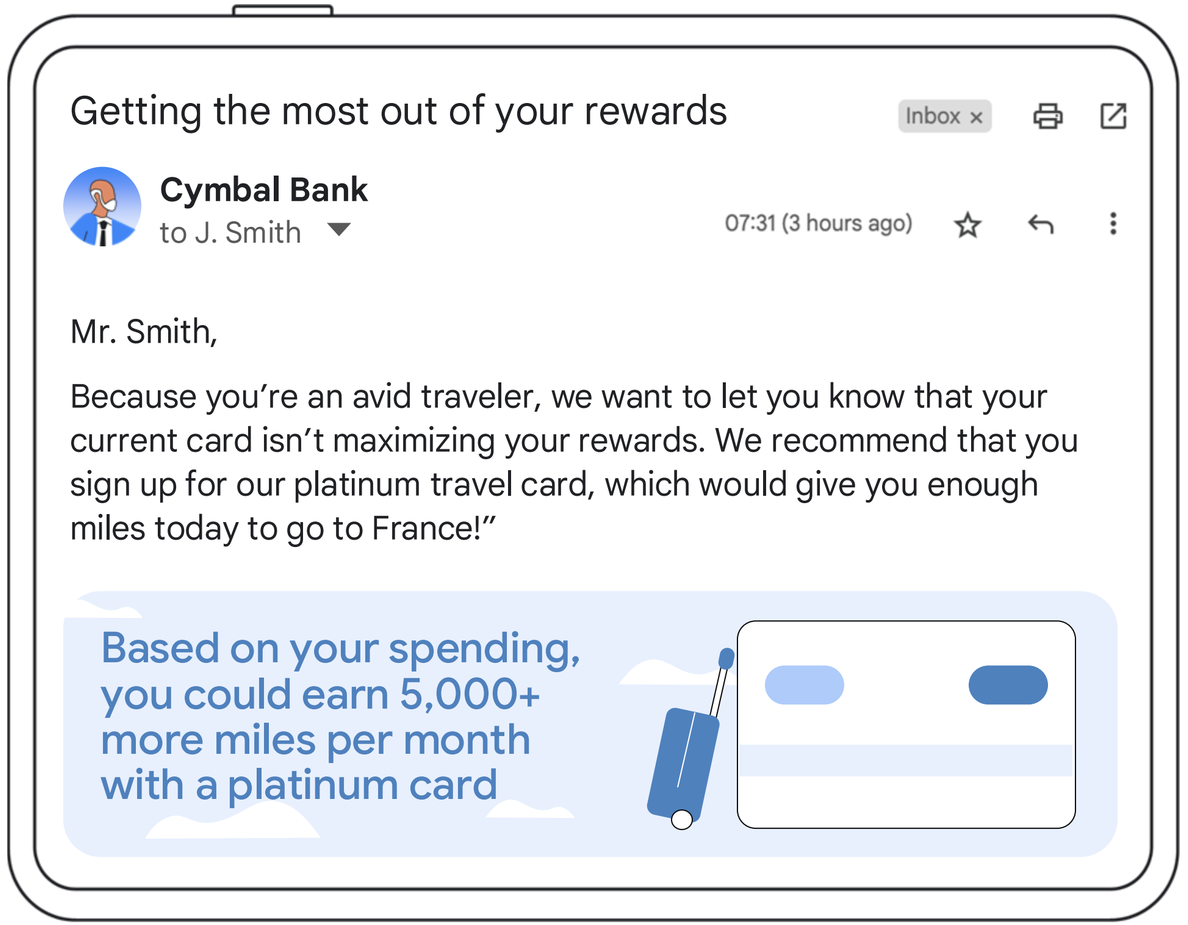
Reimagine distribution and financial advice and guidance

# Personalized financial recommendations

Example only

Improve cross-sell and retention strategies through one-to-one instead of one-to-many messaging.

Tailor financial product recommendations via conversational language that are hyper-personalized and reinforces a “you know me” experience.



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Reimagine distribution and financial advice and guidance

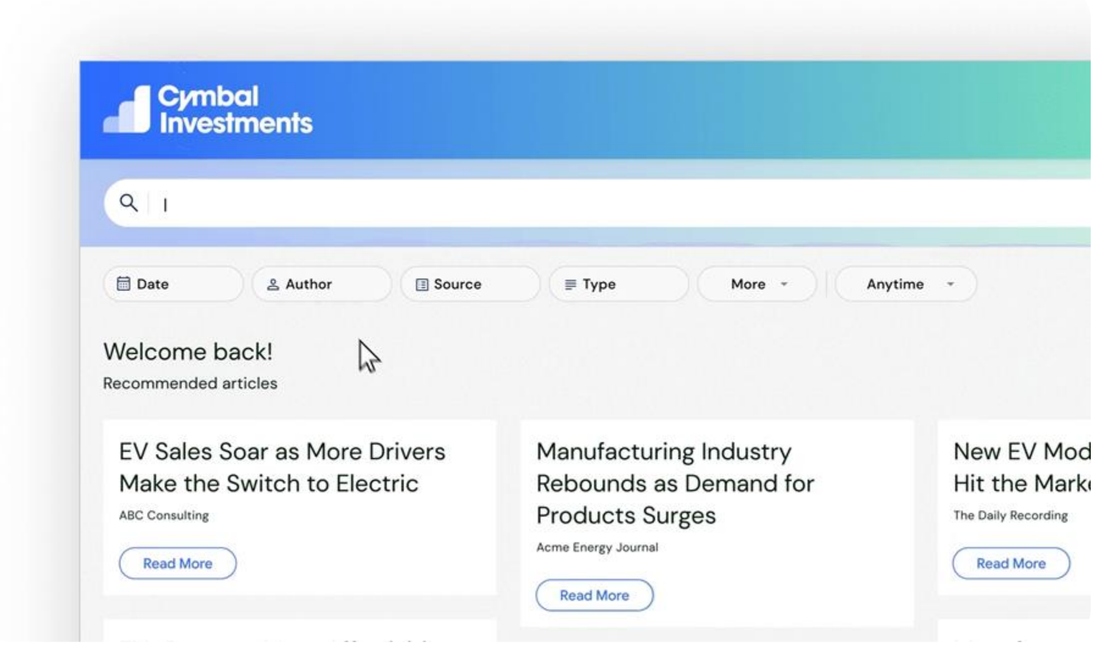
# Capital markets research

Example only

Generate intelligent summaries of relevant documents with sourcing provided, helping analysts focus their time on the most important information.

**Example:** Gen AI can explore topics with natural language, assist in sentiment analysis, and aggregate financial data

Investment manager




Summarized view of research from internal and external data sources

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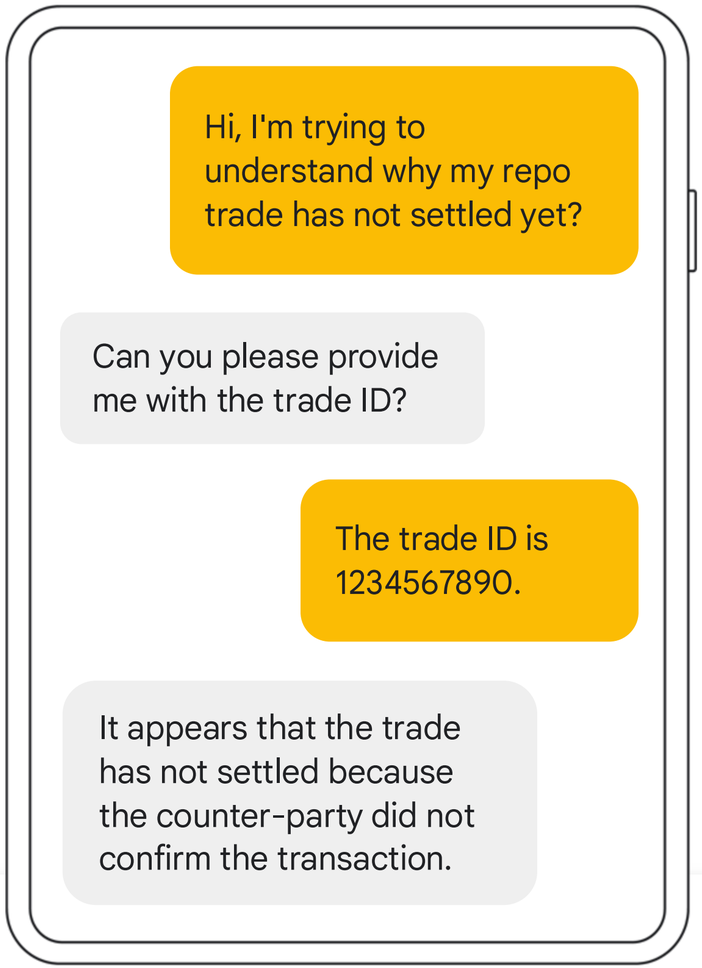
Automate middle and back office operations

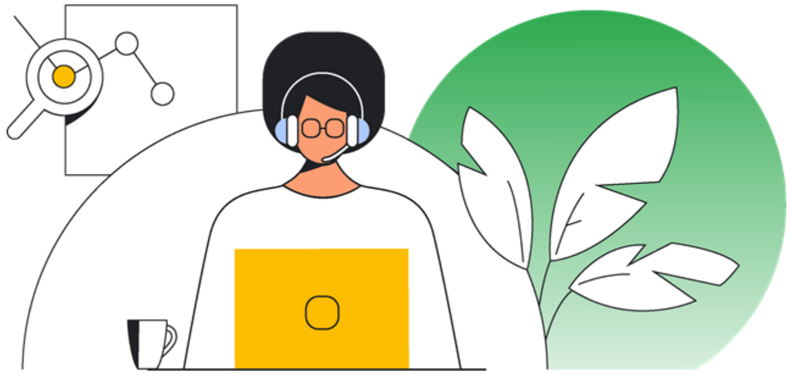
# Enhanced virtual assistant

Example only

Improve back office productivity by helping to locate and summarize information as well as improve communication between internal groups and directly with customers.

**Example:** Using generative AI, market participants can interact with trade facilitators to better understand settlement failures and how to resolve them.



Google Cloud

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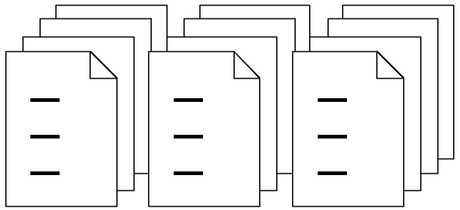
Automate middle and back office operations

# Document search and synthesis

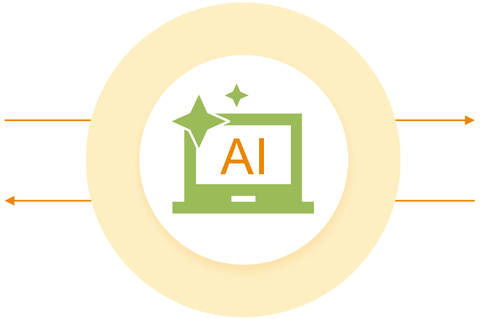
Example only

Improve the ability to understand large document sets to help identify, summarize, and explain relationships to other documents.

**Example:** Using gen AI, a relationship manager could quickly identify relevant contract clauses that need to be updated and then generate tailored communications to notify the customer of the change.



Existing contracts




"Flag all customers with LIBOR in their contract and automatically send them updated T&Cs that alert them to the replacement of LIBOR"

[Dear customer]

We are writing to inform you about an important change to your contract.

The London Interbank Offered Rate (LIBOR) is a benchmark interest rate that is used to price many financial products, including loans, mortgages, and derivatives.

Your contract currently refers to LIBOR. As a result of the LIBOR phase-out, we are updating your contract to reference a new benchmark interest rate, the Secured Overnight Financing Rate (SOFR).

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Improve risk prediction & transform management of financial data

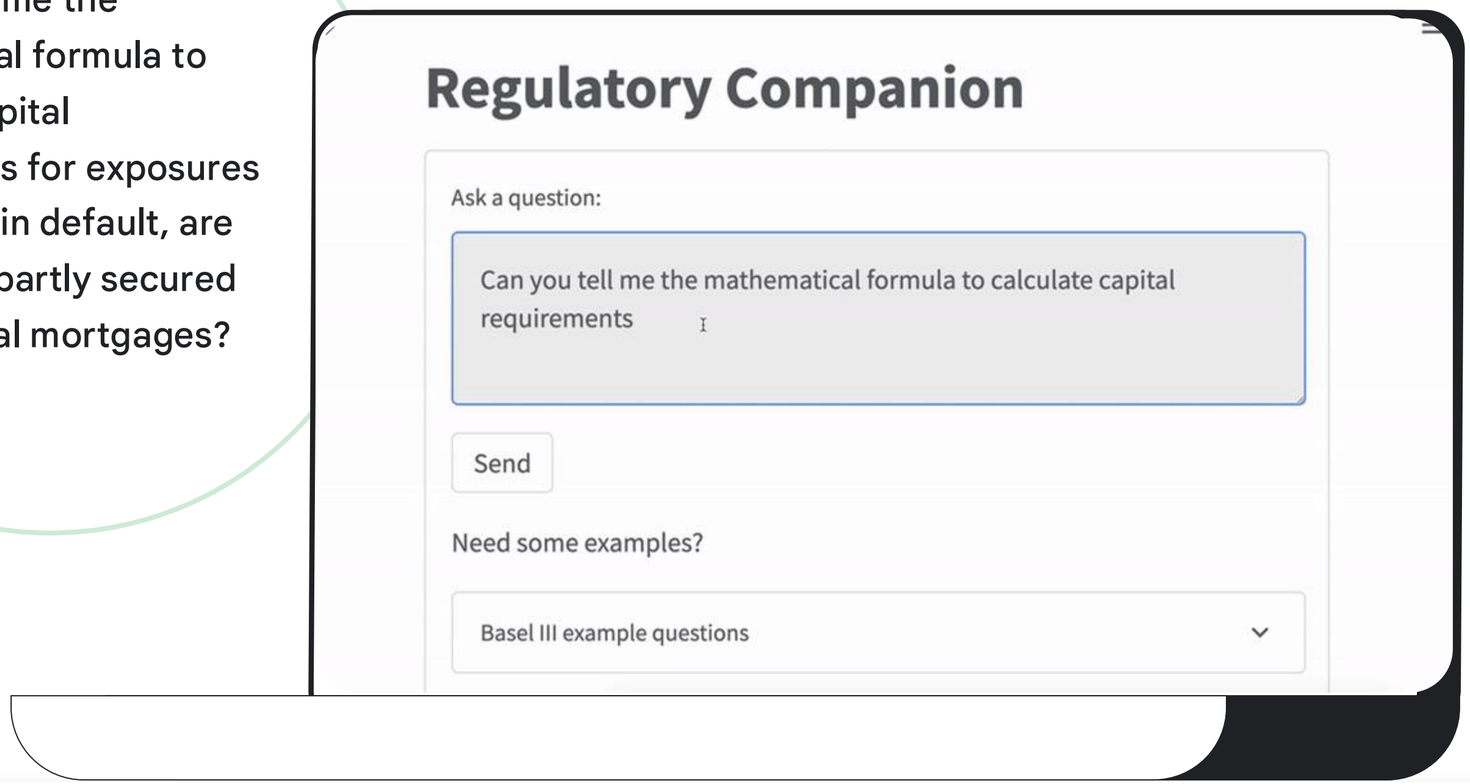
# Regulatory code change consultant (developer efficiency)

Example only

Help developers understand the underlying regulatory or business changes that will require them to change code, and assist in automating coding changes.

**Example:** Gen AI can summarize a relevant section of the Basel III framework to help a developer understand the section's intent, identify the related parts of a product document and code repository.

Can you tell me the mathematical formula to calculate capital requirements for exposures that are not in default, are secured, or partly secured by residential mortgages?



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# Pursuing Generative AI transformation

## Identify & prioritize use cases

Evaluate business needs along with generative & traditional AI capabilities

## Data first strategy

Bring together disjointed data sets and strong governance to lay a solid AI foundation

## Organizational readiness

Assess your organization's current status along with costs & benefits of AI solutions

## Test and scale

Not all AI is built equal. POC often and fail fast to identify what works for your business.



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# Case Study | A Multi-Platform Digital Banking solution

## Customer Profile

A commercial bank created to meet the banking needs of the local community. The company's banking services include savings deposits, mortgages, personal loans and internet banking, enabling customers to avail of retail banking services locally.

## Challenges/Requirement

- Implementing Automated Azure Landing Zone
- To implement RPA/Power Automate workstream
- To implement Data Analytics - Visualizing and Automating Data Platform for ERM

## Solution Delivered

- Implemented and automated Azure Landing Zone
  - Deployed web UI and implemented API based integration which helped in reducing the manual effort of doing multiple entries
- Implemented RPA workstreams
  - Implemented Power Automate based automation in HR Operation/Data.
- Implemented Data Analytics
  - Automated identification of fake customers, addresses and information provided to identify the defaults and fake customer entries on FinTech platform

## Outcomes/ Benefits

- Implemented and automated Azure Landing Zone
  - Helped in Cost Reduction & Process optimization/automation
- Implemented RPA workstreams
  - Process Improvement and quick risk identification
- Implemented of Data Analytics
  - Reduction in manual effort - Automation of Monthly/Quarterly/Yearly/Ad-Hoc Reports in risk area, data quality checks are all automated which was earlier manual effort and time consuming

**Cloud Infrastructure**

Microsoft Azure

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# Case Study | NextGen Wealth Management and Banking App

## Customer Profile

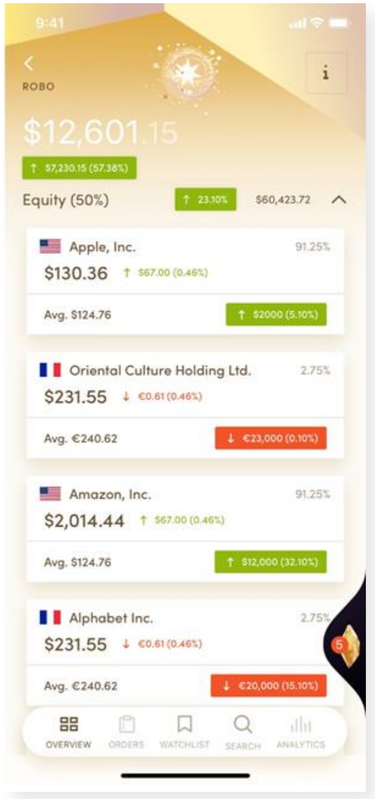
Bank provides a digital modernization approach to banking and wealth management for next-gen users with best-in-class client experiences and a groundbreaking approach to wealth management.

## Challenges/Requirement

- Mobile and WEB App with fully loaded security features and advanced UX platform

## Solution Delivered

- Front end development of Hybrid Mobile apps for iOS and Android and Web
- Key digital features include: mobile onboarding, Biometric and Face recognition, digital assets trading, AI enabled wealth management
- Key security features include:
  - Authentication Profile - 4 finger Touchless ID
  - Login by FaceID / TouchID
  - Manage / Register Devices - setup of primary device & block device
  - Document Verification - ID, Address verification




**User Interface**
ReactNative, Unity3D

**Databases & Indexing Engines**
MongoDBA

**App Services & Integration**
Kong API Gateway, NewGen, Finacle, SIX, CleverTap

**Cloud Infrastructure**
AWS, Kafka

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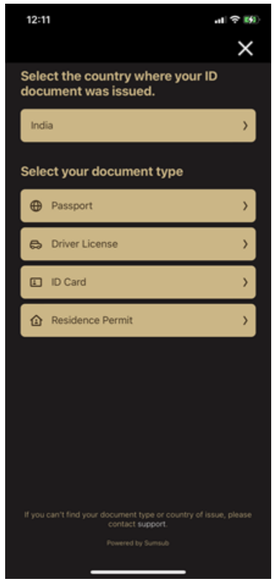
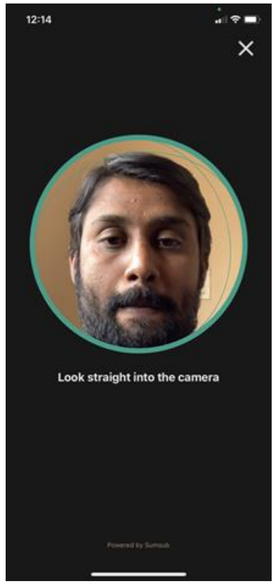
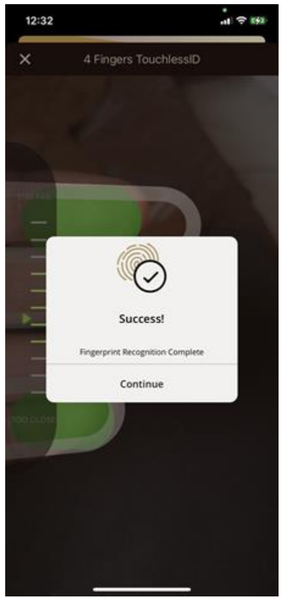
# Case Study | NextGen Wealth Management and Banking App (Cont'd..)







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# Case Study | Facilitating innovation in digital payments & platforms

## Customer Profile

- Technology company in the global payments industry.
- Operates the world's fastest payments processing network, connecting consumers, financial institutions, merchants, governments and businesses in more than 210 countries and territories.
- Its facility in Pune alongside Vadodara represents the company's largest Tech Hub outside of the US to drive the development of cutting-edge payment technologies aimed at enabling a cashless world.

## Challenges/Requirement

- Set up offshore team outside US for building solutions facilitating Digital innovation and digital payments platforms
- Shortage of skilled resources in the payments & platform space
- Quick ramp up of resources at regular intervals

## Solution Delivered

- Provided resources including Business Analysts, Web UI developers, Backend developers, Testers, System Analyst, Engineering Services Members, Scrum Master, Team Lead , & Project Managers to work in a cutting edge, innovative environment of digital platforms & payments
- Core Activities undertaken:
  - Merchant Registration and setup
  - Add Developer Accounts to Merchant Profile
  - Developer Registration and Request Sandbox Creations
  - Design Services integration
  - Review and Approve
  - Access Sandbox Credentials
  - Production Migration

**User Interface**
JSF, Primefaces, AngularJS, HTML5, CSS3, jQuery, Android UI, iOS UI

**App Services & Integration**
Java, J2EE, JSF, Spring, Hibernate, Web service

**Databases & Indexing Engines**
Oracle, MySQL, SQL Server

**Cloud Infrastructure**
N/A

**DevOps**
Selenium, SOAP UI, JBehave, Dynatrace, Splunk, Bamboo

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# Case Study | Facilitating innovation in digital payments & platforms (Cont'd..)

*The partnership with Accionlabs helps the client in setting up an innovative digital infrastructure platform to facilitate the development of cutting-edge payment technologies aimed at enabling a cashless world.*

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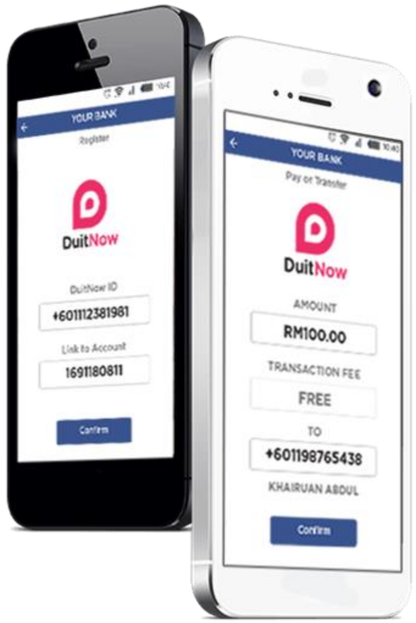
# Case Study | Real-time Retail Payments Platform (RPP)

## Customer Profile

- MyClear RPP will introduce instant payments and instant collections for all bank customers to make e-Payments as quick and frictionless as cash




## Solution Delivered

- Entire new screens for DuitNow transfer( Input Page, Confirmation Page and Acknowledgement Page) and NAD maintenance(Registration, De-registration and update account).
- Online service for NAD enquiry and NAD Update to Paynet system.
- Integration with ESB, SIBS, CMS, Cardlink and FA team.
- Add Favourite logic and screen for DuitNow Transfer.
- Transaction Type and Limit setup
- DuitNow new online service and integration with respective systems.
- New Paynet error message maintenance.
- New shortcut login for DuitNow at Mobile app.
- SMS TAC message changes.
- CT- Account enquiry and transaction online services to Paynet.
- Integrating with recon system.
- Change Requests and other enhancements to the application.

*By partnering with Accionlabs, the client is able to transform Malaysia's epayment infrastructure, which provides real-time payment services*

**User Interface**
Angular 2, MFP, Javascript, SASS, jQuery, Bootstrap

**App Services & Integration**
Spring, Hibernate, DB2, Gradle

**Databases & Indexing Engines**
DB2

**Cloud Infrastructure**
N/A

**DevOps**
N/A

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# Case Study | Personal Financial Planning App for Couples

## Customer Profile

- Small team of passionate developers , on a mission to outsmart money, together
- Honeydue is a personal finance app for couples which helps them in tracking bills, bank account balances, and spending together.

## Challenges/Requirement

- Reliance on spreadsheets by couples to manage/share their finance activity
- Constant need for proactively checking upcoming bills
- Multiple Bank accounts– Multiple statements
- Messy bank statements
- Build native mobile apps for the iOS & Android platform

## Solution Delivered

- Front end development of native iOS & Android app with 5 core modules for 2 user types: User and Partner
- Provide options to choose how much you share with your partner
- Lists all transaction done by you/partner
- See all of your bank account balances in one place, neatly organized.
- Automatic categorization of all your spending in a graphical display or chart
- Reminds you when it's time to pay your bills through notifications
- Get offers based on different categories of products - credit cards, savings investments, loans & insurance..
- Leveraged MPAndroidChart library for visualization in Android & Charts in iOS
- Trello for creating tasks and managing project activities

**User Interface**
Swift 3.0, Objective-C

**App Services & Integration**
Mobile (iOS and Android)

**Databases & Indexing Engines**
N/A

**Cloud Infrastructure**
N/A

**DevOps**
Github, XCode, Trello

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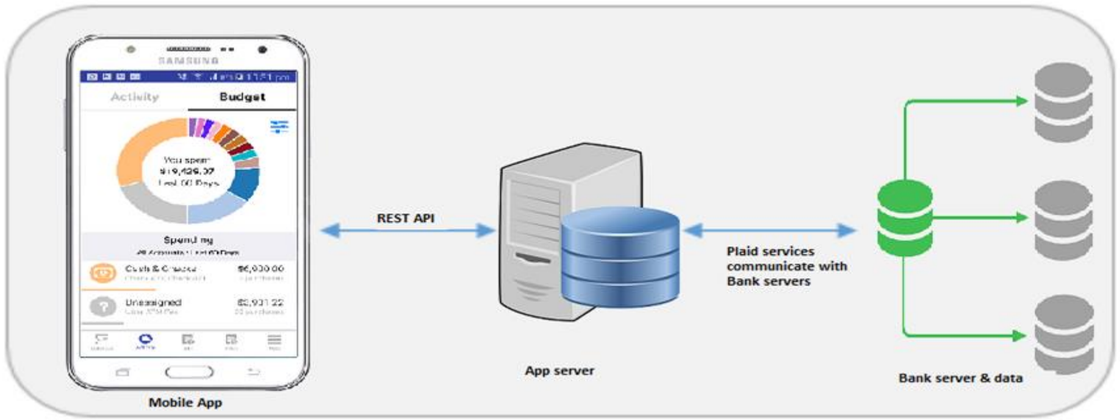
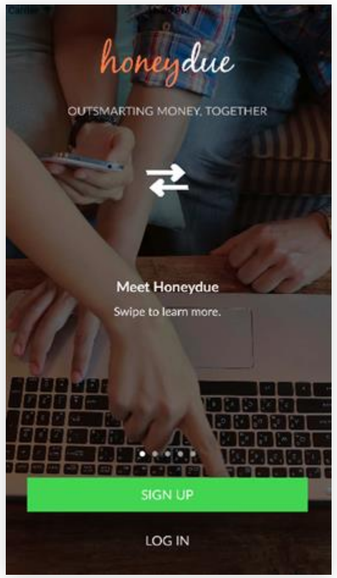
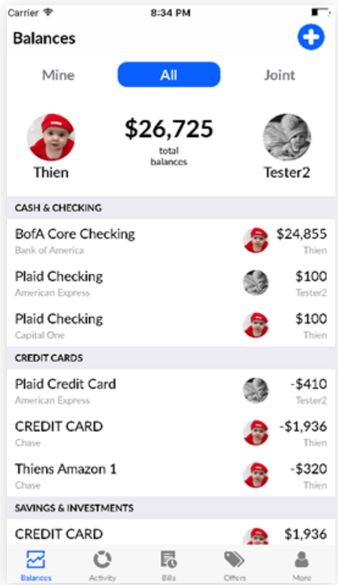
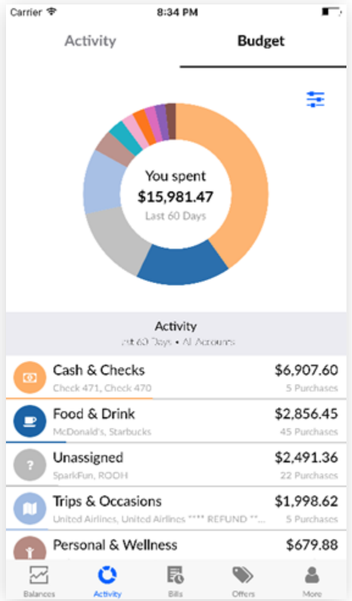
# Case Study | Personal Financial Planning App for Couples (Cont'd..)




*By partnering with Accion Labs, the client develops a personal financing app which helps couples in jointly tracking bills, bank account balances, and*

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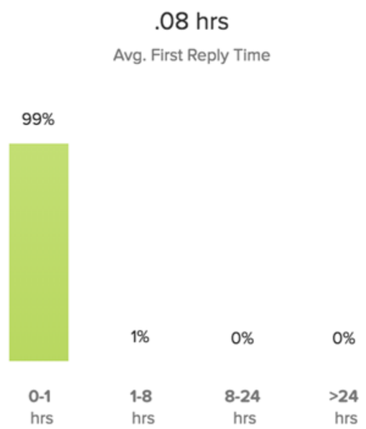
# Case Study | Product Support for Digital Banking Platform

## Customer Profile

- Leading provider of Omni-Channel Digital Banking Platform in banking and financial sector.
- Their product unifies functionality from traditional core systems and new fintech capabilities into a seamless digital customer experience, drastically improving any customer channel.

## Challenges/Requirement

- Need for a global product support team to service clients in various geographies across the world.
- Set up product support teams in multiple geographies to utilize global clock.
- Adhere to stringent SLA for support tickets.




## Solution Delivered

- Constitution of a 6-member team: 1 Lead, 5 Sr. Software Engineers (Full Stack Developers)
- Technical analysis of issues
- Determining root causes of issues
- Deliver hotfixes, patches, and bug fixes
- Engineer code workarounds for mission critical issues.
- Providing on-demand active support during production release.
- Proposed 24x7 support to meet the evolving needs of the client
- with guaranteed response times.
- Geographically dispersed team to provide 24x7 support (3 team members from Kuala Lumpur, Malaysia and 4 from India)

*By partnering with Accionlabs, the client is able to maintain the First response time (FRT) SLAs to less than 5 mins.*

**User Interface**
HTML/HTML5, JS, CSS, AngularJS, D3JS

**App Services & Integration**
Node.js

**Databases & Indexing Engines**
PostgreSQL, MongoDB

**Cloud Infrastructure**
AWS

**DevOps**
GitHub, Jenkins

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# Case Study | B2B Insurance Platform for a leading Insurance Provider

## Customer Profile

- One of the leading providers of Insurance, Reinsurance broking and Risk Management services in the Indian subcontinent
- 40 plus years of a rich legacy in claims services, risk management and broking services
- Headquartered in Mumbai with over 400 + highly skilled and experienced professionals across 11 locations in India
- Over 2000 clients and servicing over 800 MNC clients spread across India.

## Challenges/Requirement

- Build capabilities from scratch after demerger from parent company
- Transition to a digital platform from existing process which stores huge volume of business & customer data in unstructured formats: excel sheets, word documents, & PDFs
- Develop dashboards with rich interactive visualizations in the form of graphs & reports
- Build a digitised solution for increased scalability & seamless corporate integration
- Develop web & mobile solutions with both end-user & admin level access privileges

## Solution Delivered

- Building a well-balanced team with Frontend, Backend, BA, & QA experts under EDC model
- Microservices based architecture for more scalability & flexibility
- 2-week sprint cycle with team spread across 5 distributed geographical locations
- Development of REST API's for seamless B2B platform integration
- Developed Interactive visualization through graphs & reports for demographics & claims related data pertaining to claims status, claims filed, claims lost, claims ratio, rejected claims etc.
- Leverage MariaDB towards OLTP & MongoDB for archiving data & analytics
- Issue tracking through Redmine & automated deployment through Jenkins

**User Interface**
AngularJS, HTML5, Bootstrap, JQuery, CSS3

**App Services & Integration**
NodeJS

**Databases & Indexing Engines**
MariaDB, MongoDB

**Cloud Infrastructure**
Public Cloud

**DevOps**
GitHub, Jenkins, Redmine

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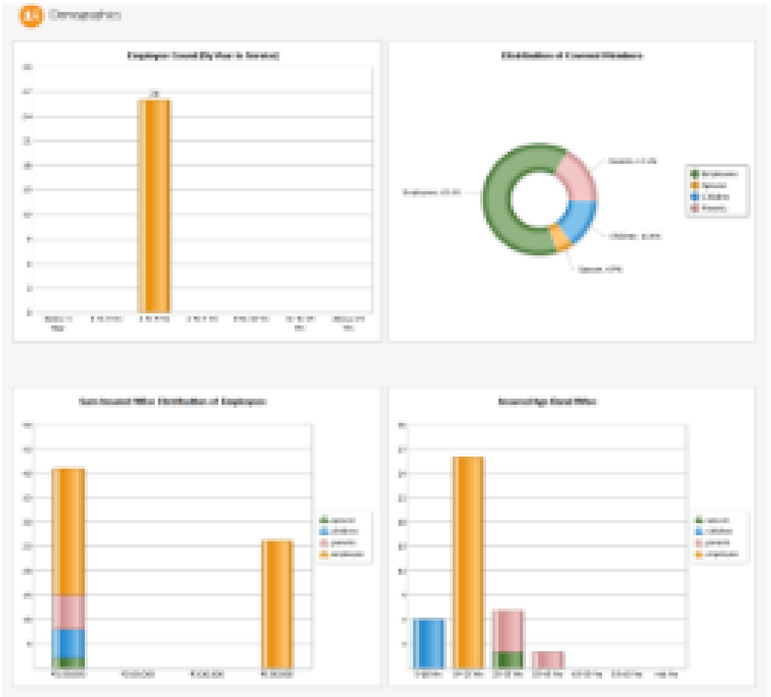
# Case Study | B2B Insurance Platform for a leading Insurance Provider (Cont'd..)



*By partnering with Accionlabs, the client digitizes its insurance operations through a web & app-based platform for its corporate clients—resulting in improved process & cost efficiencies, and a greatly enhanced customer experience.*

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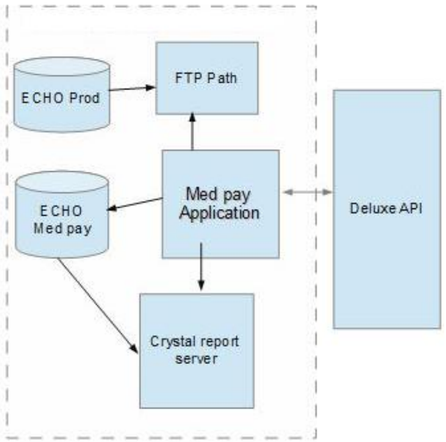
# Case Study | .NET based automation tool for processing healthcare payments

## Customer Profile

- Leading provider of electronic healthcare payment solutions in the US connecting payers, healthcare providers and members (patients)
- Processes more than 60 million payment transactions and pays over $16 billion annually to providers and members through the premier plan payers in the country.

## Challenges/Requirement

- Manual paper based process was time consuming & error prone, leading to inordinate transaction delays, taking anywhere between 2-3 days
- Need for an automated tool to perform the same operation with less time and quality
- Lack of any proper documentation
- Troubleshooting issues due to non-maintenance of any activity logs




## Solution Delivered

- Constitution of 7-member team:
  - 1 Lead, 1 Scrum Master, 1 Senior Developer, 3 Junior Developer, 1 QA Lead and 1 QA Junior
- Agile Scrum development methodology
- Development of a native .NET app which imports data in required form and sends it to a 3rd party player dealing in e-checks, virtual cards, & ACH enrolment.
- Interfacing .NET application to the 3rd party tool via a Web API (Nancy) framework
- Implementation of automation tool significantly reduces transaction processing time from 2 days to 5 minutes.

*By partnering with Accionlabs, the client develops an automation tool which directly takes inputs from a particular source and imports data at various locations with different business functionalities saving significant amount of time.*

| User Interface | App Services & Integration | Databases & Indexing Engines | Cloud Infrastructure | DevOps |
|---|---|---|---|---|
| N/A | Web API, Native.NET | SQL Server 2016 | N/A | TFS, TestRail |

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# Case Study | Admin Portal to Unify platform users for Fintech organization

## Customer Profile

- Financial advisory technology solutions to drive better financial outcomes and make financial wellness a reality for more people.
- Products aim to provide investment, portfolio and wealth management solutions to the end customers across various platforms.

## Challenges/Requirement

- An ENV partner/customer, when using multiple ENV platforms, requires to work with multiple platforms to gather & define users/access management requirement - No single point of management for customer identity to ENV network.
- Every ENV platform provides different user/access authentication & SSO methods & gateways for the same user accessing from Mobile, Desktop, and API.
- The requirement was for an ENV partner/customer, when using one or multiple ENV platforms, can work with a single point of management to define user/access requirements to the ENV network.

## Solution Delivered

- Constitution of 14-member team:
  - 1 Technical Manager, 1 BA SM, 3 UI & 4 BE developers, 4 Automation QA, 1 Devops engg.
- Agile Scrum development methodology
- Development of a Web Admin Portal UI with OKTA as IAM provider. The OKTA provides the authentication of users from Multiple platforms and supports the SSO features through JWT token.
- Implementation of QA automation framework with Cypress tool.
- QA API and UI automation significantly improves the real time onboarding of customers without much hassles.

**User Interface**
React JS, Storybook components, HTML, CSS

**App Services & Integration**
Java Spring boot, Microservices, OKTA IAM

**Databases & Indexing Engines**
AWS DynamoDB, S3

**Cloud Infrastructure**
AWS KMS, Gitlab

**DevOps**
Terraform Scripts, CI/CD pipeline with Sonatype quality integration

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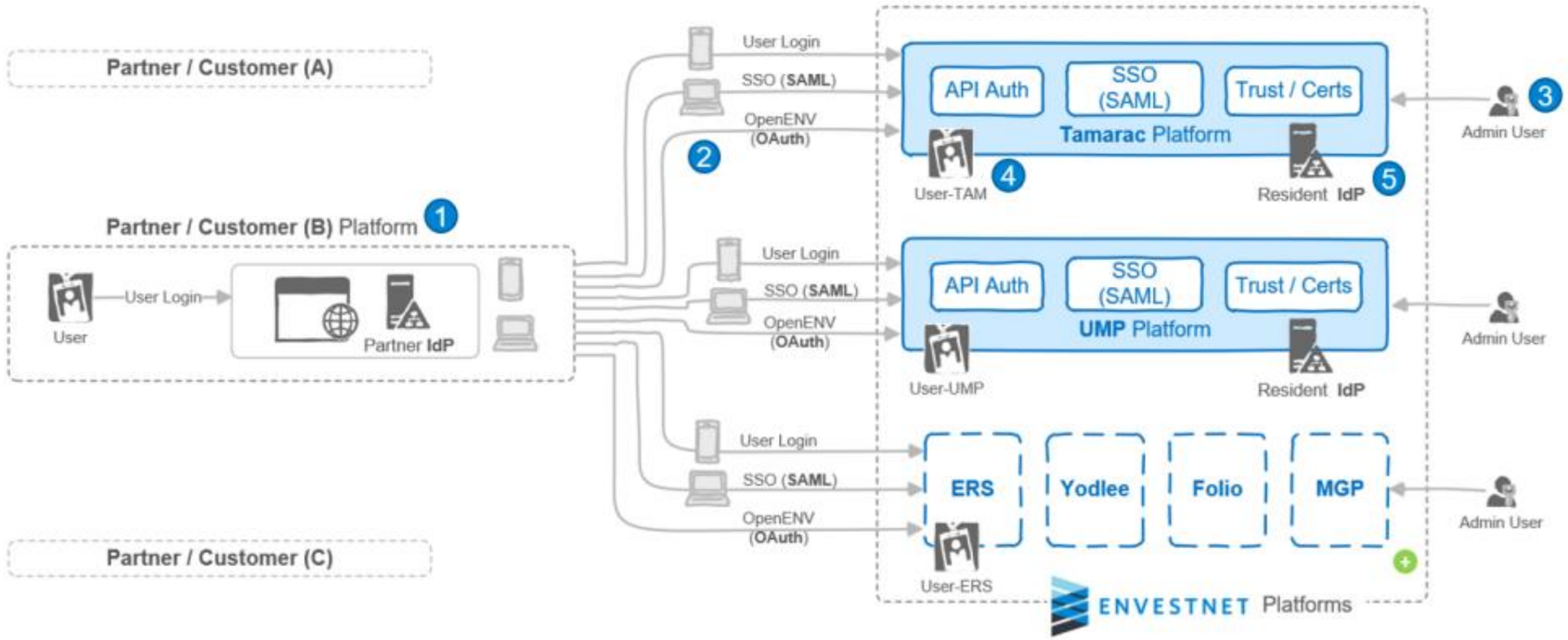
# Case Study | Admin Portal to Unify platform users for Fintech organization (Cont'd..)




*By partnering with Accionlabs, the client develops an Admin portal UI with integration of OKTA as the IAM provider which helps to solve the problem of having to manage millions of users under various platforms. The solution unifies all users via authentication and managed through OKTA.*

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# Case Study | Fraudulent Claims Processing for a Data Analytics Insurance Co

## Customer Profile

- A data mining and analytic services dedicated to serving the informational needs of the Long-Term Care (LTC) insurance industry

## Challenges/Requirement

- Manual and rigorous screening of a large number of claims often in the range of 12,000 to 15,000 open claims
- Lack of any automated process for claims analysis
- Basic portal for claims processing without any multi-tenancy or collaboration features
- No risk analysis to sound out any potential fraud
- Very basic case investigation management

## Solution Delivered

- Web-based case management solution to manage and track fraud scoring and investigation
- Custom-designed business rules engine to score and prioritize all claims based on the likelihood of fraud
- Centralized, workflow-driven solution to track investigations and manage case workflows
- Automatically-routed claims over a set threshold to the case manager for follow up action
- Business rules in XML format
- Enhanced security through data isolation for each client
- Mix and match of different conditions for business rule creation
- De-coupled architecture model, enables client DBs to be in multiple nodes if required
- Multi-tenancy SaaS architecture and greater collaborative environment for analysts with options to add notes, share attachments and delegate tasks

**User Interface**
HTML5, CSS, JS, jQuery, Bootstrap

**App Services & Integration**
Java,J2EE, Groovy

**Databases & Indexing Engines**
SQL Server, Teradata

**Cloud Infrastructure**
Private Cloud (Expedient)

**DevOps**
N/A

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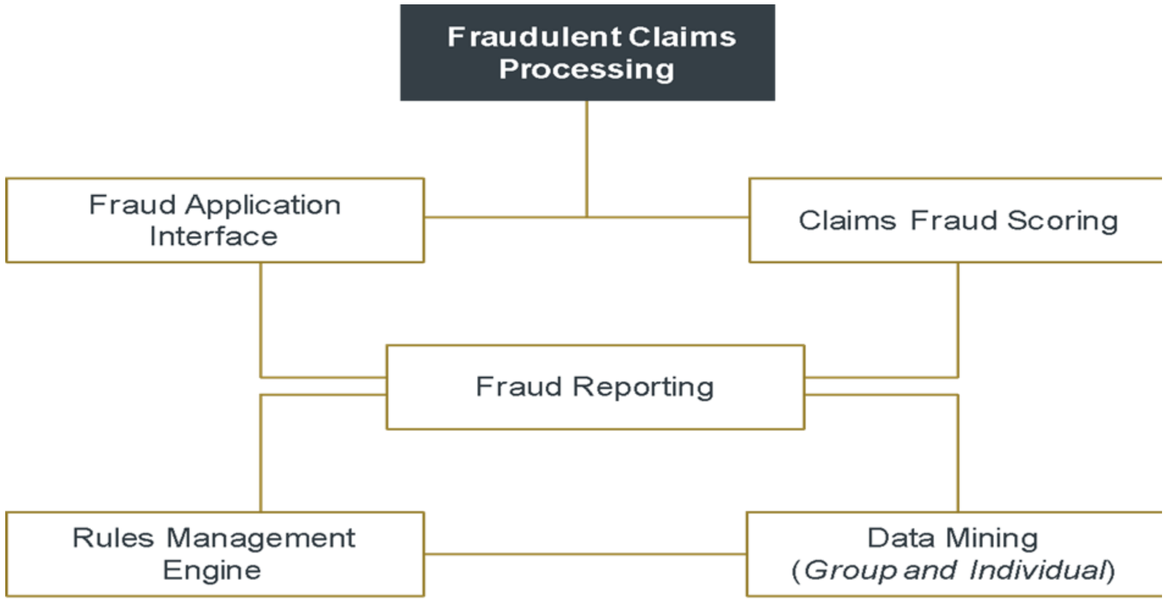
# Case Study | Fraudulent Claims Processing for a Data Analytics Insurance Co (Cont'd..)




*By partnering with Accionlabs, the client released a multi-tenancy web application for the LTC insurance industry, helping them identify potential fraud at the earliest, minimize ongoing fraudulent claims payments and limit litigation costs.*

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# Case Study | Web-based personal wealth investment platform

## Customer Profile

- Exciting new startup that wants to revolutionize traditional wealth management
- Provides wealth management services to United States households who have historically had little access to professional financial advice.
- Attempt to be a disruptor in the traditional wealth management space by using low-fee ETFs and mutual funds to improve diversification, invest efficiently, and lower fees.

## Challenges/Requirement

- Existing architecture is not scalable and maintainable in nature.
- Transition to an intuitive & modern UI/UX platform
- Re-engineer monolithic application into a seamless REST based architecture
- Leverage modern UI frameworks like Bootstrap, D3JS
- and AngularJS to provide superior UX to customers.

## Solution Delivered

- Constitution of team with following members:
  - UI Lead – Offshore, UI Developer – Offshore, Backend Developer – Offshore, QA Engineer – Offshore
- UI design & architecture by using Angular Ionic
- Simplified portfolio analysis & allocation aided by interactive visualizations in the form of numerous financial charts & graphs by leveraging D3JS library
- Implementing REST APIs for seamless communication between UI & backend components
- QA Automation using Selenium framework.
- Used third party integration (Authy API) for multi-factor authentication
- Leverage Jenkins and Github for automated build deployment.
- Enhanced UI & UX provides a simple trading platform for investors leading to ease of use, faster transactions, & generating long term customer loyalty.

**User Interface**
Angular Ionic

**App Services & Integration**
Ruby on Rails

**Databases & Indexing Engines**
MySQL

**Cloud Infrastructure**
AWS

**DevOps**
GitHub, Jenkins

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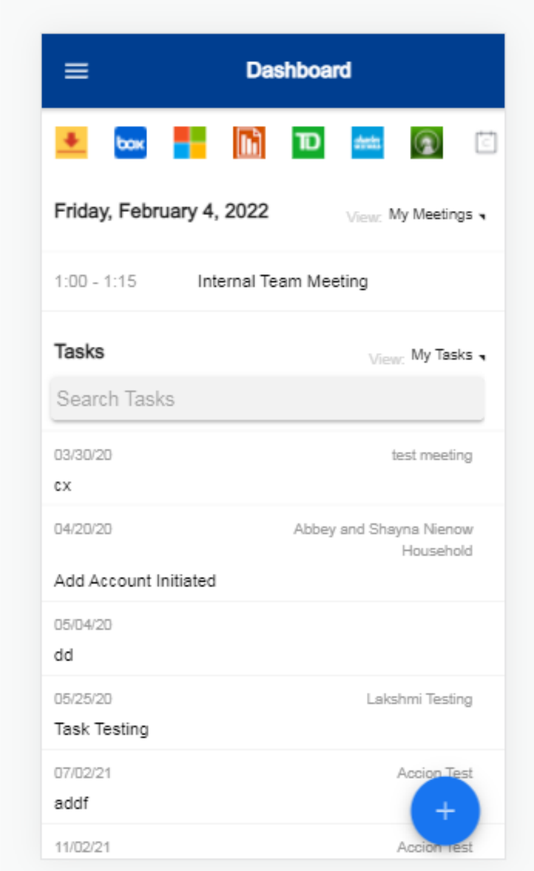
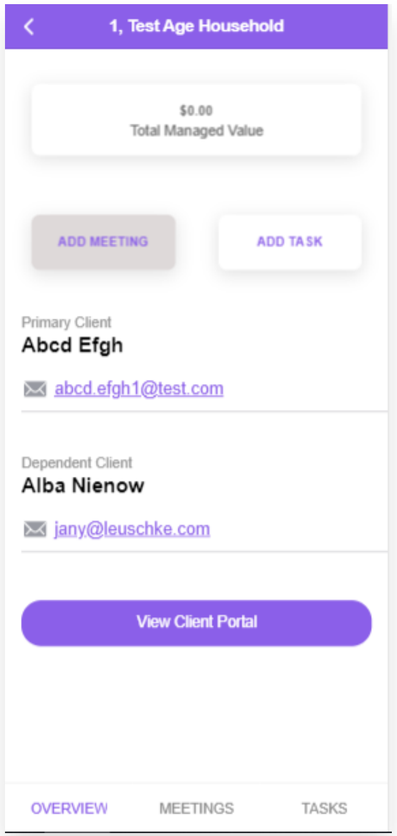
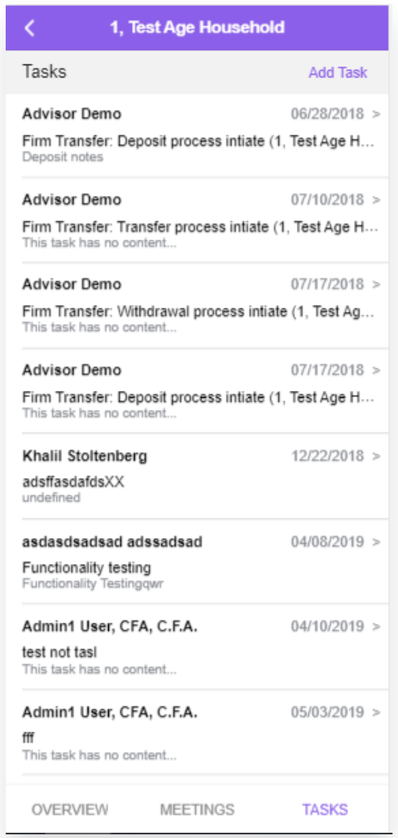
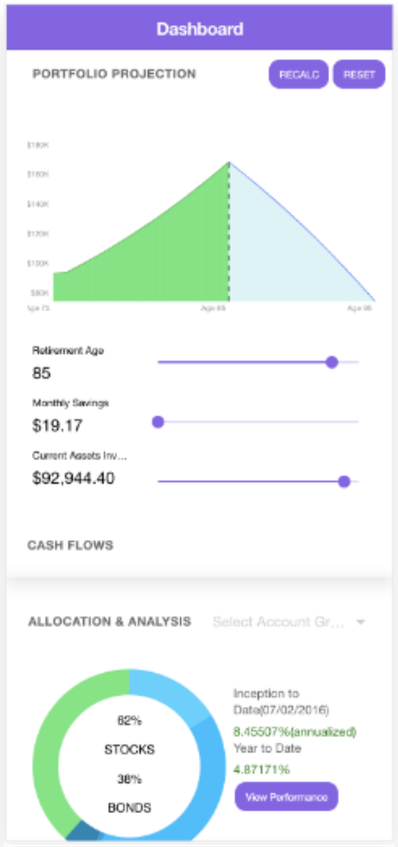
# Case Study | Web-based personal wealth investment platform (Cont'd..)

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# Case Study | Wealth management platform for Estate Planning Implementation

## Customer Profile

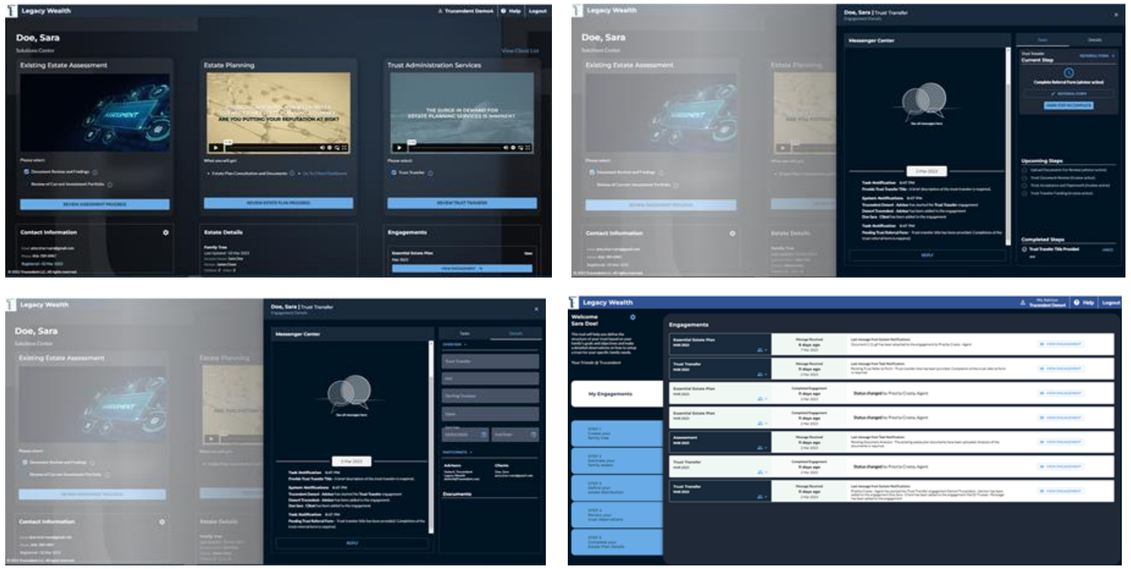
- Leading wealth management company for Estate planning, generational wealth handover and management of client assets with the support of a corporate trustee
- Patented algorithms for recommendations

## Challenges/Requirement

- Different communication platforms for advisors, clients, attorneys and trustees
- Lack of holistic view / approach of generational wealth and estate planning
- Documentation management

## Solution Delivered

- Workflow for different persona's
- Standalone platform for all the persona within the engagement
- Digital document management within the platform using HelloSign Integration of 3rd party detailing with Trust Transfer within the Trucendent platform




*By partnering with Accionlabs, the client developed a comprehensive platform for advisors of generational wealth management and estate planning.*

**User Interface**
React with hooks, Material UI, Next.JS, Pendo, Bit, Figma

**Backend**
Azure functions, Blob storage, Elmah, Sonar Cloud

**Databases & Indexing Engines**
SQL Server 2016

**Cloud Infrastructure**
N/A

**DevOps**
TFS, TestRail

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# Case Study | Collateral free Business Loans for MSMEs through Web and Mobile Apps

## Customer Profile

- Kinara Capital is an RBI registered company and it has successfully disbursed loans to more than 36,000 MSMEs.
- Company envisions a financially inclusive world where every entrepreneur has equal access to capital.
- Company supports 300+ MSME Sub sectors & has disbursed Loans for 4000+ Crores across 3400 Pincodes.

## Challenges/Requirement

- Transform Kinara Capital from a NBFC to a FinTech company.
- Provide a platform to customers to check Eligibility Criteria, Complete KYC, Sign Loan Documents without any manual intervention.
- Completely digitized Document work.
- Automate the Loan disbursement Process within 24 Hours.

## Solution Delivered

- Constitution of 8-member team:
  - 1 Lead, 2 DotNet Junior Developers, 4 QAs and 1 BA Junior.
- Majorly involved testing of myKinara Application & PERDIX which was outsourced by a 3rd party Development team
- Building In-house APIs to support both the Loan Origination System (LOS) & Loan management System (LMS)
- Owning activities of writing BRDs, Testing end to end Functionalities, Build APIs & UAT activities.

**User Interface**
HTML, CSS, Bootstrap

**App Services & Integration**
REST API

**Databases & Indexing Engines**
SQL Server 2016

**Cloud Infrastructure**
AWS

**DevOps**
GitHub

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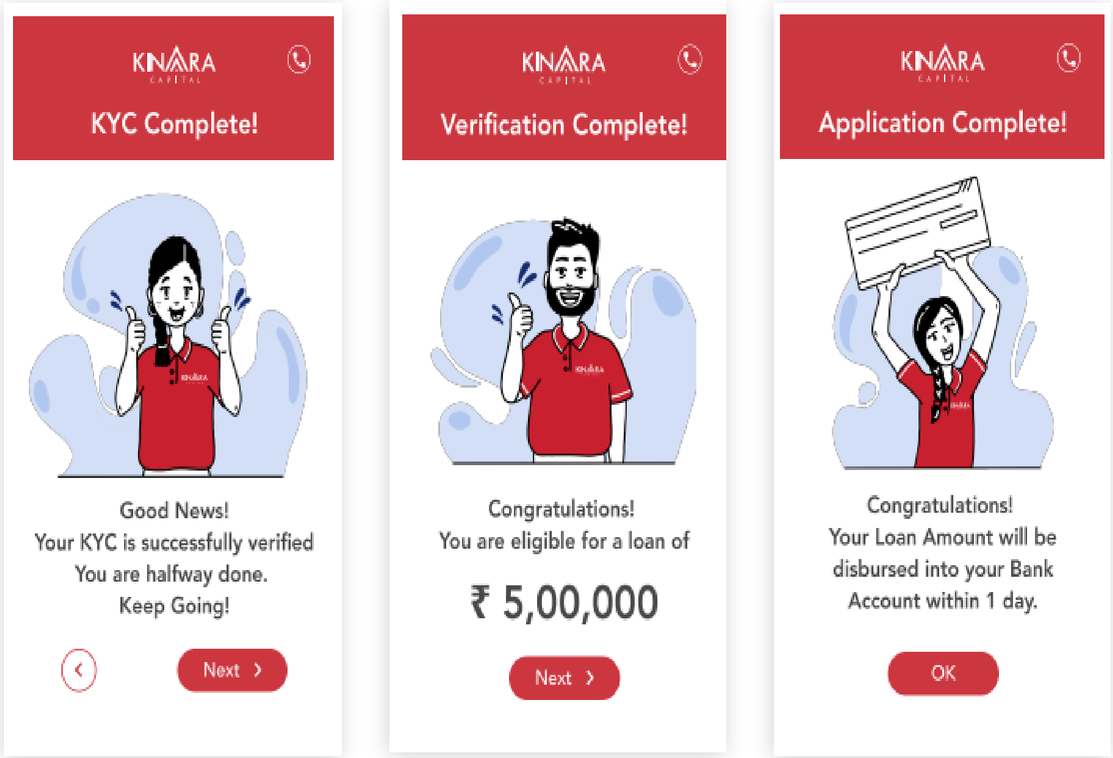
# Case Study | Collateral free Business Loans for MSMEs through Web and Mobile Apps (Cont'd..)




1 **Fast eligibility check**

Find out if your business is eligible in just 1 minute! Available in 7 languages. Zero document upload required for eligibility check.

2 **Secure KYC & income verification**

Provide your personal & business documents. Fully secure online portal with easy upload. Help is at your fingertips with chat or call.

3 **Quick loan disbursement**

Get money in your account within 24 hours! Digital loan approval with electronic bank deposit.

*By partnering with Accionlabs,the client manages Quality Assurance of myKinara Application & Perdix Systems along with building robust APIs which are required to engage this complex application.*

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# Case Study | Development of Mobile Apps for Peer-to-Peer (P2P) Payments

## Customer Profile

- A leader in technology platform enabling secure transfer of any type of payment, across any social and messaging channel, from any part of the world.
- Partners include remittance companies, mobile payment platforms, mobile wallet services, payment service providers, mobile network operators and social networks.

## Challenges/Requirement

- Develop a Mobile Solution as per Apple and Android standards for Payment Services
- Integrate popular social networks and messaging platforms
- Provide reusable components

## Solution Delivered

- Payment Solution in iOS and Android for users using popular social networks (Facebook, WhatsApp, Twitter, We Chat)
- Automate QA practices
- Develop Frameworks and SDKs aiding reusability
- Introduce Hybrid Apps  for Rapid App development (RAD)
- XOPO: https://vimeo.com/143710673
- Ping Pay: https://www.youtube.com/watch?v=iUYdEUWtYg0

**User Interface**
iOS, Android

**App Services & Integration**
Fastacash API's and SDKs

**Databases & Indexing Engines**
[Developed to 3rd party integration solution]

**Cloud Infrastructure**
[Developed to 3rd party integration solution]

**DevOps**
[Developed to 3rd party integration solution]

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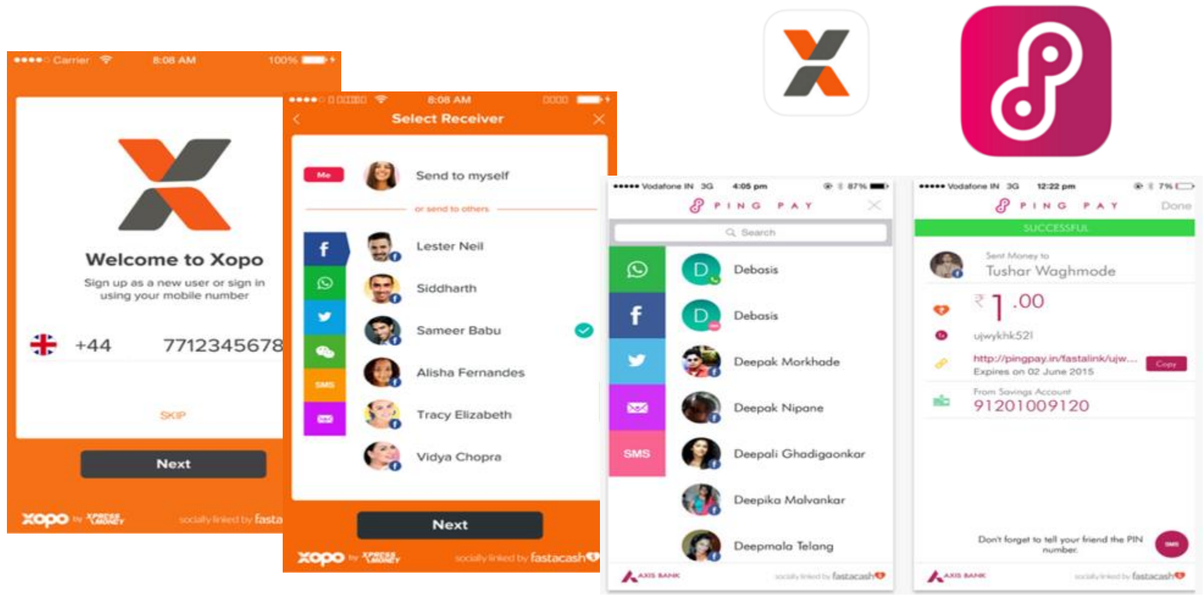
# Case Study | Development of Mobile Apps for Peer-to-Peer (P2P) Payments (Cont'd..)




*By leveraging Accionlab's Mobility expertise, the client releases apps based on technology which enables people to make seamless payments to friends via popular social networks and apps*

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# Case Study | Fintech Platform for an upcoming Start-up

## Customer Profile

- Small start-up planning big on providing a Fintech platform to provide lending to small and medium businesses
- It is funded by a brokerage firm and headquartered in Florida, USA – with not more than 50 employees
- Targeting with the US, has plans to expand into Canada and Europe

## Challenges/Requirement

- Start up portal – initiated building a clientele base
- Develop multiple channels including Web, Mobile (iOS, Android) and SalesForce
- Small businesses need a quick way to satisfy their funding requirements including working capital
- Funder wants to outreach to small businesses that require funding
- Brokerage wants a seamless way to collaborate with funders and business owners
- Easy and secure online loan application

## Solution Delivered

- Designed & Built a loan application platform that seamlessly connects brokerage with merchants and funders
- Built native cross-platform mobile (both iOS and Android) based applications
- Complete ownership of UI/UX design
- Production deployments over Amazon AWS cloud
- Evaluated and Integrated multiple 3rd party SaaS services like:
  - Digital signature of funding agreements (by SignNow)
  - Online access to bank statements (by Yodlee)
  - Obtain Merchant Credit Score (by Experian)
  - Process scanned & electronic documents (by IBM Datacap - Optical Character Recognition)
  - Create application functionality through SalesForce

**User Interface**
AngularJS

**App Services & Integration**
Yodlee, SignNow, Experian, IBM Datacap, Salesforce, Mobile, Web

**Databases & Indexing Engines**
PostgreSQL, Solr

**Cloud Infrastructure**
Amazon AWS

**DevOps**
GitHub, Redmine

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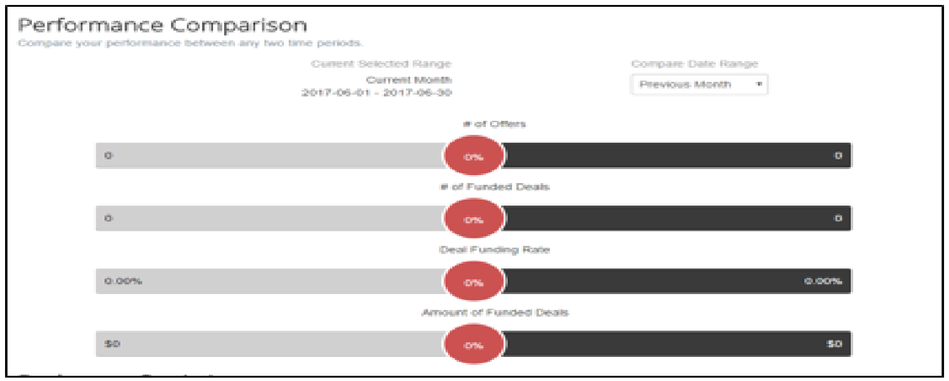
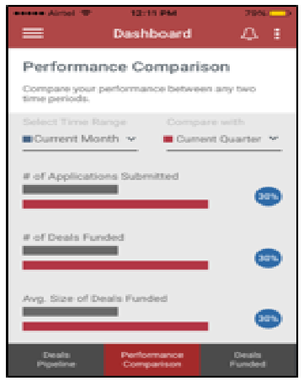
# Case Study | Fintech Platform for an upcoming Start-up (Cont'd..)





*Being the sole technology partner for the client, Accionlabs undertook various responsibilities like Digital transformation, Cloud integration, 3rd party SaaS identification and integration and User Experience design.*

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# Case Study | Development of Mobile Apps for best Forex Rates

## Customer Profile

- An online aggregator of foreign exchange dealers with objective to improve the consumer experience of carrying out their Forex transactions while travelling to or from India.

## Challenges/Requirement

- Delivering a Mobile Solution to meet Apple App Store and Android Market Place development standards
- Integrate Google Map Services
- Integrate Chat Engine

## Solution Delivered

- Mobile Application iOS and Android for iPhone and Android users with Google Maps and Chat Engine integrated from HipMob
- Developed Restful API's and backend services in .Net
- https://www.youtube.com/watch?v=qhh4FsL4s9w&feature=youtu.be

**User Interface**
iOS, Android

**App Services & Integration**
Microsoft .Net

**Databases & Indexing Engines**
SQL Server

**Chat Engine**
HipMob

**Mapping**
Google Maps

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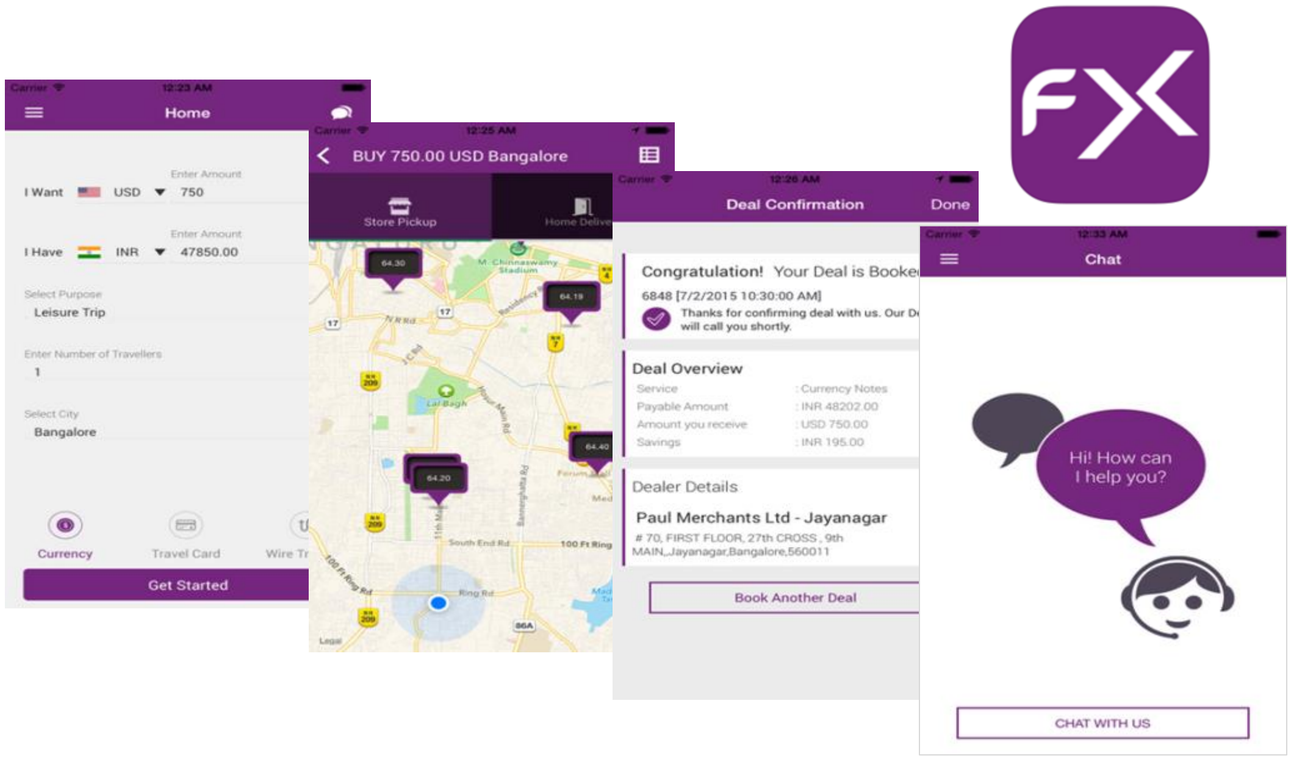
# Case Study | Development of Mobile Apps for best Forex Rates (Cont'd..)




*By partnering with Accionlabs, the client launches a unified mobile solution which offers competitive rates to users by comparing and choosing the best forex rates from different dealers in India.*

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# Case Study | Unified Data Repository for a Risk & Claims Management Company

## Customer Profile

- A leading CPA-directed program of professional and employment practices liability insurance for the accounting profession
- Operating in 40+ US Cities with over 1000 policyholders signed per month

## Challenges/Requirement

- Complex database schema running across several tables
- Risk analysis demands large scale change in queries
- Analytic algorithms spread across different stored procedures and complex algorithms
- Difficulty in maintaining data model
- Huge volume of structured and unstructured claims data
- Lack of any capability in processing or driving business outcomes from huge volumes of data

## Solution Delivered

- Unified big data repository combining structured and unstructured data over Hadoop
- Custom-designed Java ETL tool for data extraction
- Advanced text search and analysis for entity extraction
- Leverage OpenCV library towards pattern recognition and analysis in scanned documents
- Fast ad-hoc queries through a distributed processing engine using Hive and Impala
- Interactive analytical visualization

**User Interface**
HTML5, CSS, JS, Angular JS

**App Services & Integration**
Java, J2EE

**Databases & Indexing Engines**
Hadoop, Hbase, Hive, Impala

**Cloud Infrastructure**
Amazon EC2

**DevOps**
Grunt, Maven, Bower, Selenium, Karma, Jasmine, Protractor, Perfaccion, Jenkins, Chef, Ansible, Salt

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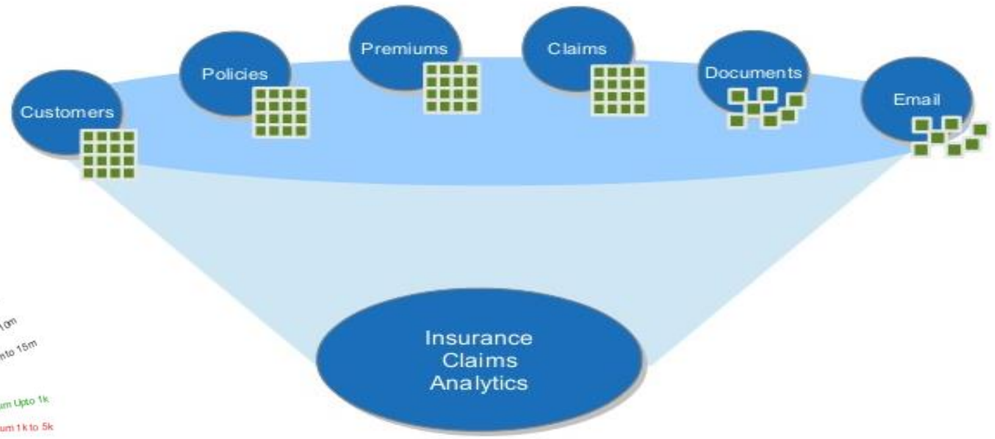
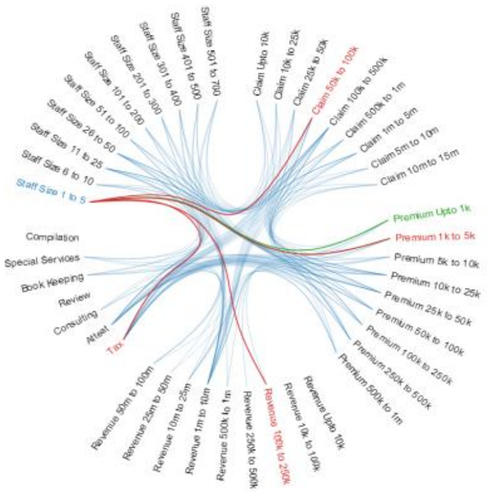
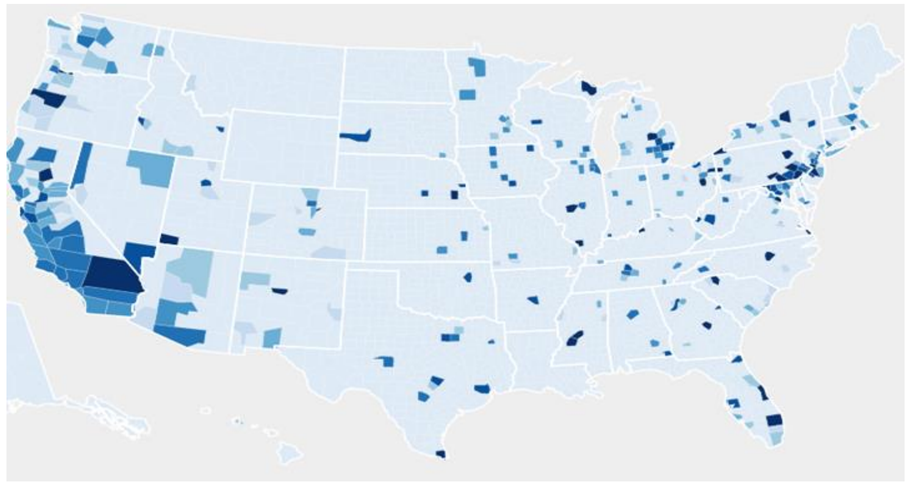
# Case Study | Unified Data Repository for a Risk & Claims Management Company (Cont'd..)



*By partnering with Accionlabs for a unified data repository, the client enhances its risk analysis and claims settlement process with a market-ready analytics platform and tools*

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# Case Study | B2C goal-based advisory tool for investment

## Customer Profile

- One of India's leading diversified financial services company providing a broad range of financial products and services to corporations, institutions and individuals
- Business interests spanning multiple asset classes and consumer segments across domestic and global geographies.
- Sizeable presence in large retail segment through its businesses such as Life Insurance, Housing Finance, Mutual Fund and Retail Financial Markets including Stock Broking

## Challenges/Requirement

- Design a Investor Questionnaire driven interface/workflow which facilitates automatic Mutual Fund portfolio allocation based on customer's risk profile, financial goals and investment preference
- Existing architecture is not scalable and maintainable in nature.
- Transition to an intuitive & modern UI/UX platform
- Enhance UI/ UX for customers by providing accessibility to features with minimal clicks
- Re-engineer monolithic application into a seamless REST based architecture
- Leverage modern UI frameworks like Bootstrap, D3JS
- and AngularJs to provide superior UX to customers.

## Solution Delivered

- Constitution of team with following members:
  - UI Lead – Offshore, UI Developer – Offshore, Backend Developer – Offshore, QA Engineer – Offshore, Scrum Master/offshore Coordinator
- Adhering to client's request for constant & dynamic changes in UI design/architecture
- Integrating ATOM -3rd party payment gateway with the web platform
- Simplified portfolio analysis & allocation using numerous financial charts & graphs by leveraging D3JS library
- Implementing REST APIs for seamless communication between UI & backend components and abstracting the presentation layer from the business logic.
- Enhanced UI & UX led to faster transactions, an easy to use trading platform, simplified research, & low brokerage rates

**User Interface**
HTML/HTML5, JS, CSS, AngularJS, D3JS

**App Services & Integration**
Node.js

**Databases & Indexing Engines**
PostgreSQL, MongoDB

**Cloud Infrastructure**
AWS

**DevOps**
GitHub, Jenkins

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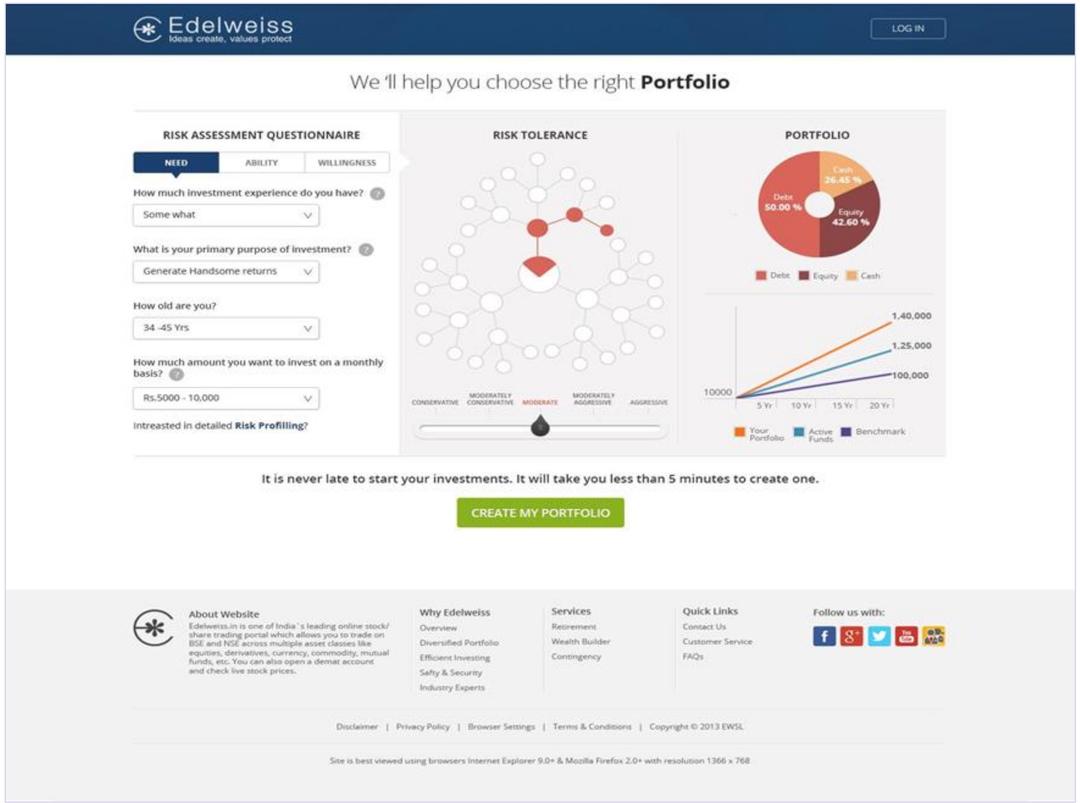
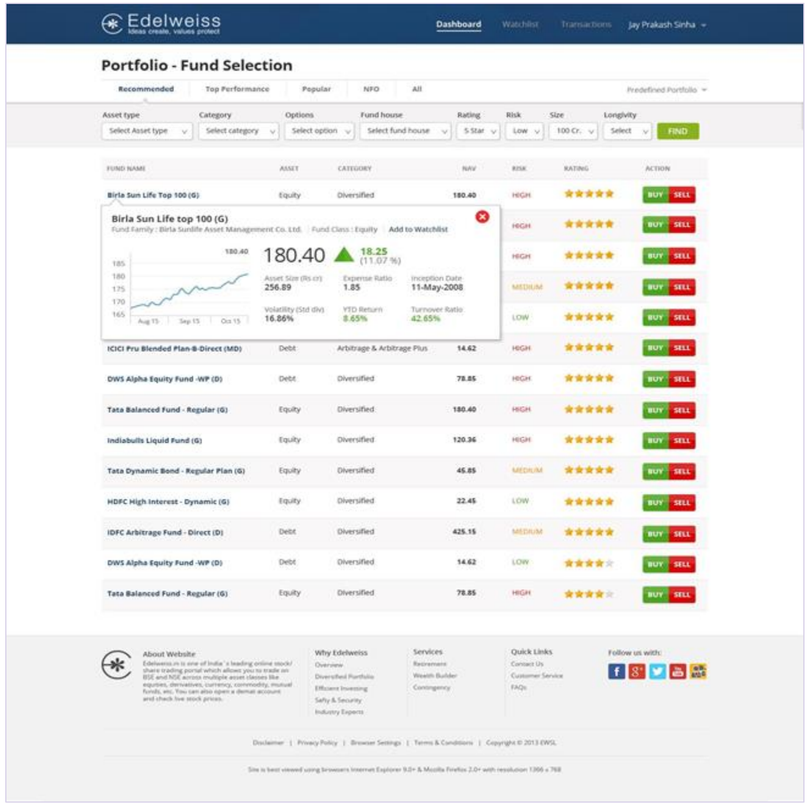
# Case Study | B2C goal-based advisory tool for investment (Cont'd..)




*By partnering with Accionlabs, the client transitions to an intuitive and modern UI/UX platform, resulting in an easy to use trading platform, faster transactions, simplified research, & low brokerage rates.*

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# Thank You

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