POV

ML-Powered Experiences for Financial Services
The financial services industry is gearing up for the next phase of tech-led business growth. With the pandemic driving digital disruption, clients and consumers demand personalized, contextual, and engaging experiences. Financial institutions will benefit from implementing data-driven AI/ML-based for acquisition, nurturing, and retaining customers and clients in this window of opportunity to adapt and innovate.

For the financial services industry, your data-driven systems of experience should consider the following pointers:

1. Seamless understanding of the customer, customer requirements, and customer journey to deliver a simplified, transparent, and rich customer experience. While it appears straightforward, complexities arise in the definition of the customer. This could be individuals or organizations. Therefore, understanding the customer, an account, or a professional is imperative.

2. A real or a near real-time crunching of customer interactions across multiple touchpoints and response with ML-based recommendations will enable organizations to provide both real-time and planned personalized engagement—leading to journey progression or journey completion at scale.

3. A flexible AI and ML workbench will help financial institutes upsell and cross-sell across a broad spectrum of offerings to prevent churn, plan targeted campaigns, etc. This will result in an increase in the Average Revenue Per Unit (ARPU,) loyalty, and prevent churn.

4. Maximize loyalty benefits to customers to attract referrals, request repeats, and prevent churn.

5. Ability to play with partner data like hotel stays, car rentals, park tickets, and more for lead generation and stronger conversion.

This brings us to two questions: how should financial institutions approach the data-driven ecosystem? How can they implement them at speed and scale while ensuring ROI?
The three distinct strides of the data-driven experience journey

Let us discuss each stride of the data-driven experience journey in detail.

**Strategy: Getting the client or customer-centric use cases right**

The first stride in the data-driven experience journey is: strategy and use case definition. There are two crucial factors under strategy:

a. Journey based approach to identifying use cases
b. Use case dependencies: data, business process, implementation complexity, and envisaged ROI.

**Journey based approach to identifying use cases**

In this digital era, shopping online has become the norm. Especially during the COVID-19 pandemic, online transactions and shopping saw an upward curve. In the past, immense significance was given to the user interface or user experience for short and long format purchases. Whether a consumer has an immediate need and shops instantly or researches a lot before making the purchase, businesses are focused on making their application or website visually appealing to keep the consumers engaged and deliver better shopping experiences. However, in the current scenario, apart from user interface and experience, businesses need to understand consumer purchasing behavior to offer personalized experiences.

To provide customized offerings to the consumers, businesses must be able to leverage and understand the data. A small local store might be able to identify the needs and preferences of a consumer without data, technology solutions, or analytics. However, when millions of consumers are shopping, leveraging ML helps make informed decisions and offer products based on each consumer’s preference.
For example, if two consumers are buying a hair product, suggesting the same product for both might not work. Understanding the need of both the consumers and suggesting products that will meet each consumer’s need is impactful. Similarly, in the banking and financial services industry, when we have various products such as personal loans, home loans, low-interest loans, mutual funds, zero balance accounts, etc., businesses can position the products differently for different consumers. While one consumer would want a low-interest loan, the other would want to make their dream of owning a house come true. When businesses understand the consumer in a deeper sense, they can position their products the right way to the right consumer. That brings us to the question, “How can we understand each consumer and offer personalized products?” This is where the data-driven approach comes into the picture. By understanding the entire consumer journey, businesses can identify the right use cases.

**Use case dependencies**

Once a good strategy is in place, and best use cases are identified, implementing the strategy is not a walk in the park. There are many challenges during implementation. Some of the challenges are: the business might not be completely ready for implementation, lack of accurate real-time data, incomplete data, lack of required licenses, unavailability of the required technology stack, complexity of the use cases, and lack of well-trained professionals who can understand the process and implement/adapt it. One crucial question needs to be answered after addressing the above challenges: “Will pursuing this use case increase ROI?” All use case dependencies must be addressed for seamless implementation.

**Data orchestration: Making quality data available for consumption**

The second stride in the data-driven experience journey is data orchestration. Having the right data strategy and data management in place is critical. Data is important throughout the consumer journey. The below questions should be addressed:

1. What is the source of the data?
2. What type of data should be captured?
3. Where will the data be stored?
Data can come from many sources such as mobile applications, websites, social media, emails, third-party websites, etc. As data is collected from various platforms, the size and format of the data will vary drastically. All data should be converted into one consolidated format. After data is in the same format, combining the data from multiple systems into one centralized system is another crucial step. During this process, data will be enriched, and all missing fields will be completed to have one integrated data. Data source identification, data discovery and diagnostics, and data governance are three important parts of data orchestration.

**Data source identification**

- Connect with identified data sources, extract data to the platform, and create a data pool with various data types, including text and images in the scope of the RFP
- Gather all external data source options that the organization requires to generate potential insights
- Identify the subscription model for external data sources and analyze how relevant and beneficial it is
- Provide all the technical specifications on how to integrate with external data sources
- Identify the licensing model for such subscriptions
- Identify all possible opportunities to integrate with data sources that assist in forecasting the market and economic situation
- Identify all possible opportunities to integrate with government data sources that will help the organization’s use case objectives to add a competitive edge
- Identify all the internal data sources required to achieve the objective of the organization's scope
- Conduct deep analysis of the data (structured/unstructured) and assure data cleaning and quality

**Data discovery and diagnostics**

- Identify baseline data sources, flows, and quality
- Identify the data sources that will fulfill the use case objectives
- Determine optimal data size for test and production runs
- Identify data gaps, perform data cleaning, and prepare data for statistical analysis
- Understand current state, brand assets, infrastructure, knowledge levels, processes, consumer insights, and other relevant details
- Audit search footprint across all applicable products and services
Governance

- Develop a key policy for data governance
- Develop a key procedure for data quality across all systems
- Provide detailed recommendations on enhancing the quality of the customer record across all inputs, ensuring the quality
- Identify all existing processes that require enhancement/amendment/redesigning across multiple systems and recommend the right data enhancement plan. This is not limited to the system screen field, template, practice, process, etc.

Experience orchestration: Monetization data with insights and ML-powered activation

The third stride in the data-driven experience journey is experience orchestration. When unlocking the power of data, it can be an in-moment real-time experience or triggered/planned/deferred experience. A good example of in-moment real-time experience is when a customer is browsing a website, and a pop-up offers a discount and a coupon code which they can avail in the next 15 minutes.

On the contrary, experience orchestration is when customers have taken the experience but bounced in between without completing the transaction, and the business runs an email campaign for all these customers, offering a discount on their next purchase. The core goal is to bring the customers who discontinued their journey back into the journey. Let us read more on the three parts of experience orchestration:

1. Platform identification, implementation, integration, and Ops.
2. Data science work bench
3. Decision engine and activation

Platform identification, implementation, integration, and Ops.

- Choose a data architecture design that is flexible, scalable, and compliant with data law
- Add an ingestion layer (input of data sources)
- Model a layer of Machine Learning, data lake, artificial intelligence, Robotic Process Automation, etc.
- Visualization and end-user data availability layer handshake
Data science work bench

- Algorithms: Selection of right algorithms for the use case, tuning hyper parameters, and performing iterations.

- Metrics and measures: Define metrics and measures to determine the efficacy of the implementation.

- Training citizen data scientists: Training on data science models used by citizen data scientists.

- Model deployment: Deploy data science models to perform predictive and perspective outcome analysis.

- Outcome assessment: Assess prediction accuracy, sample data effectiveness, and outcome analysis.

- Predictive analysis: Analyze data patterns, predict business outcomes, and evaluate actionable outcomes.

- Continuous improvement: Generate and refine insights with continuous enrichment of data and data science algorithms.

Decision engine and activation

- Advanced analytics through AI and ML
  - Unknown to known profile identification
  - Customer journey analytics: Advanced segmentation, NBA intervention, lead scoring & qualification, churn prediction, etc.
  - Campaign insights: Acquisition impact, conversion rate, A/B/X testing, bounce rate, channel performance, etc.
  - Product insights: Market share, sentiment analytics, wants and concerns, usage analytics, etc.
  - Geo insights: Product performance, demand-supply optimization, marketing mix, etc.

- Business intelligence through visualization
  - Management dashboard for executives to take effective decisions
  - Operational reporting: Campaign performance, channel effectiveness, passenger journey performance, product usage intelligence, etc.
  - Unorganized and Adhoc reporting
• Self-service analytics
  o Slice and dice by dimensions and metrics
  o Data pattern recognition
  o What-if simulations
  o Predictive analytics to make effective decisions

Success criteria for the three strides

Each of these strides has success criteria such as:
• Value of customer/account/professional profile
• Churn KPIs
• Cost or retention
• Cost of acquisition
• Lifetime value
• Average order value

(I will discuss the above criteria in detail in a different POV.)

How can LTIMindtree help?

Next, we’ll discuss how they can implement them at speed and scale while ensuring ROI. The answer to this is to leverage a CDP purpose-built for the banking and financial industry.

Below, we have a functional decomposition of what the data-driven experience platform should look like for financial institutions.
Figure 2: Functional decomposition of the data-driven experience platform for financial institutions
## Use Case Play

- Cross Sell Products
- Proximity-based Marketing
- Single View of the Customer
- Product Bundling/Cross Sell
- Integrated Marketing Dashboard
- Convert online visitors to purchase
- Measure CLTV
- Sell Ancillary Services
- Cross-brand Fishing and Activation
- Marketing Mix Modelling
- Other New Use Cases

## Activation Channels

### Touchpoints

<table>
<thead>
<tr>
<th>Email</th>
<th>Social Ads</th>
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<tbody>
<tr>
<td>SME</td>
<td>Digital Ads</td>
</tr>
<tr>
<td>PSS Agent UI</td>
<td>Inside Sales UI</td>
</tr>
<tr>
<td>Google Ads</td>
<td>Push Notifications</td>
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<tr>
<td>Online Banking</td>
<td>Chatbot</td>
</tr>
<tr>
<td>Teller</td>
<td>Mobile Apps</td>
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<tr>
<td>Customer Care</td>
<td>Reconciliation</td>
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<tr>
<td>ATM</td>
<td>Agents/Brokers</td>
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### Dashboard and Reporting

<table>
<thead>
<tr>
<th>Customer 360 View</th>
<th>Self-Service Analytics</th>
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<tbody>
<tr>
<td>Customer Care Insights</td>
<td>Geo/Brand/Product Insights</td>
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<tr>
<td>Loyalty Insights</td>
<td>Campaign Insights</td>
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<tr>
<td>Sales Insights</td>
<td>Channel Insights</td>
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### Other Downstream Systems

<table>
<thead>
<tr>
<th>Loyalty Management</th>
<th>Documentation Management</th>
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<tbody>
<tr>
<td>Process Management</td>
<td>Others</td>
</tr>
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## Other Downstream Systems

- Loyalty Management
- Process Management
- Documentation Management
- Others
LTIMindtree recommends leveraging a hybrid CDP approach. With LTIMindtree's thought leadership, system integration services, industry reputed CDP, and financial institutes can engage with leisure clients and customers during the research, during pre, in, and post-purchase experience, and continuously engage with prospects and contacts. Leveraging the power of the CDP ecosystem, we help you enable a seamless customer journey. Engage customers continuously and provide a consistent experience on any turf. Add value to every customer interaction across channels by a series of enablers. LTIMindtree has partnered with CDP players specifically for the Financial Services industry, also built a healthy set of frameworks and accelerators that are helping our clients in their journey-faster time to market, reducing risk, and better ROI on their customer insights program.

Get in touch with us at info@ltimindtree.com for your customer data platform needs.

LTIMindtree accelerators for financial services CDP:

1. Design thinking workshops: use case identification and prioritization

2. AI and ML-based segmentation accelerator to sift through online and offline footprints, segment them based on preferences and needs, purchase behavior, etc.

3. Set of propensity Models: Propensity for different products: Propensity for churn, propensity to respond, etc., plus decision apparatus to deliver data-driven experiences
Meet the author

Raman Suprajarama
GM and Practice Head, Marketing and Sales Analytics
https://www.linkedin.com/in/raman-suprajarama/

With 20+ years of industry experience, Raman Suprajarama is the practice head for the marketing and sales analytics group at LTIMindtree. He oversees thought leadership, delivery, and IP creation and has worked with global 2000 clients to help them transform their marketing and sales function by leveraging data, AI, ML, analytics, and automation. He has deep experience in designing and implementing large-scale customer data platforms, AI programs in marketing, multi-country/multi-brand/multi-language web portals and e-commerce stores, and Martech Automation for the BFSI, Retail, CPG, Manufacturing, and Hi-tech spaces.