

# Driving Business Transformation in BFSI with AI

## Abstract

Artificial intelligence (AI) is gaining traction across all industries including the banking, financial services and insurance (BFSI) industry. Although AI adoption is at a nascent stage in financial services, its potential to positively impact the BFSI industry is tremendous. This white paper examines the use of AI in the BFSI industry and presents an approach for an AI-enabled business transformation.

## BFSI Landscape

Evolving regulations, technological advancements and increasing competition from new entrants are rapidly altering the BFSI landscape. Traditional offerings and the ways customers use financial services has witnessed a sea change. To keep pace with these changes, BFSI organizations have adopted technologies like big data, cloud, application programming interfaces (APIs) and so on. This has laid a solid foundation for BFSI organizations to take the digital journey to the next level through AI adoption, which has the potential to reimagine financial services as we know it.

AI adoption can help BFSI firms meet strategic objectives such as improving customer experience, enhancing operational efficiency, driving personalization, and improving speed-to-market for the offerings. The availability of technologies to tap abundant internal and external data (ecosystems), democratization of compute power and storage, and easy access to AI platforms and machine learning (ML) algorithms are also driving adoption. Add to this, the rising maturity of AI technologies and abundantly available capabilities and solutions from partner ecosystems, and we have all the ingredients for an AI-backed transformation in the BFSI industry.

## AI Usage in BFSI

AI has tremendous potential to transform the BFSI landscape. It has wide-ranging applications across the front, middle and back office; corporate functions like finance, human resources and procurement; IT operations; data centers; and application maintenance (see Figure 1).

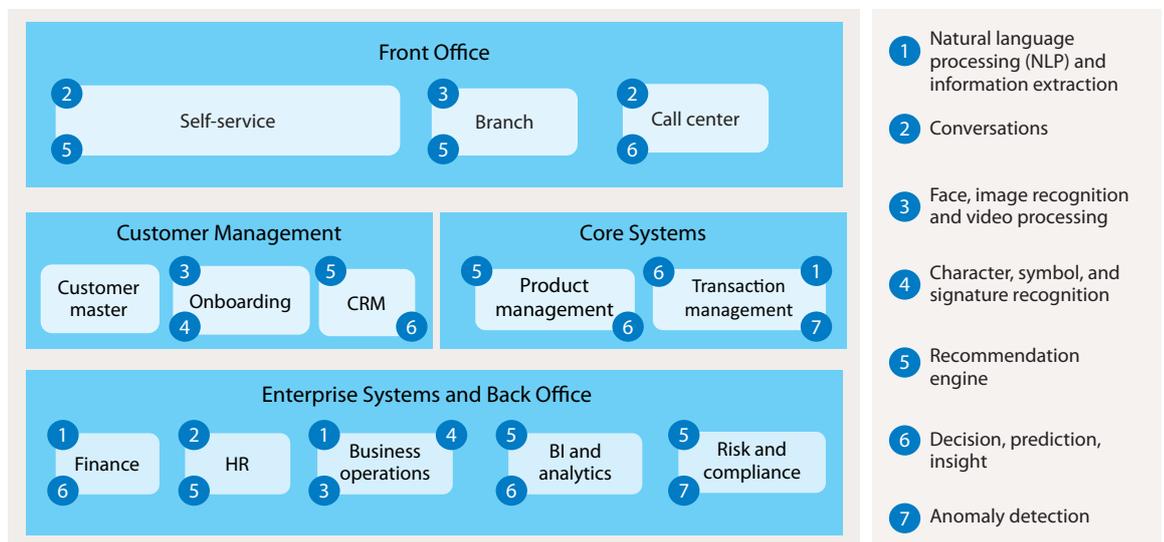


Figure 1: Potential for AI Adoption in BFSI

While many BFSI organizations have started their AI journey (see Figure 2), there is still a long way to go to realize its full potential across different lines of business (LoBs).

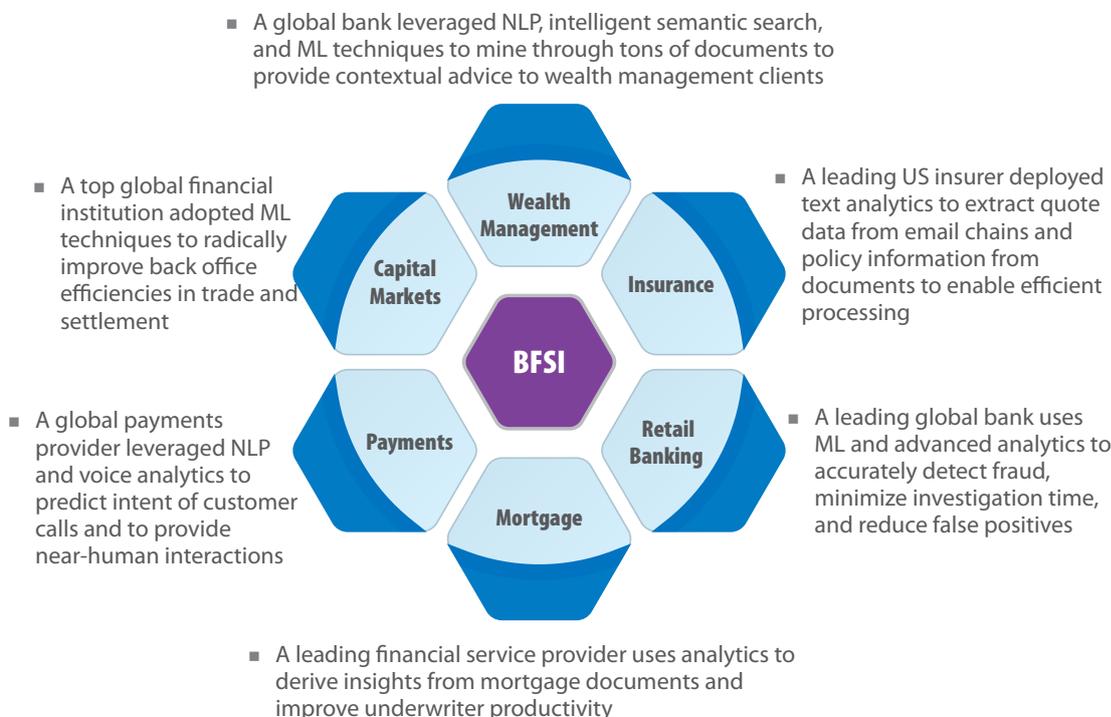


Figure 2: AI Initiatives in the BFSI Industry

## AI-enabled Business Transformation Approach

We observe that BFSI firms are increasingly focusing on transforming functions like payments, contact centers, onboarding, claims processing, collections, commercial lending, mortgage, fraud, anti-money laundering, and so on. In our view, incorporating AI technologies into transformation strategies will help BFSI firms unlock exponential value.

For a smooth transformation, BFSI firms must adopt a meticulous step-by-step approach that traverses the three crucial dimensions of analyzing the existing state of the business area, reimagining the business area, and delivering business value.

### Analyzing the existing state of the business area

- Understand the existing state of the business area
- Identify bottlenecks, pain-points and existing issues
- Understand the key transformation objectives
- Understand the future aspirations

### Reimagining the business area

- Reimagine the business value chain through the right human-machine interplay

- Identify fit-to-purpose AI technologies to achieve the new human-machine interplay
- Analyze the business value and ease of implementation for different AI interventions
- Create a transformation roadmap with intermediate milestones

### **Delivering business value**

- Run proofs of concept to ensure technology proofing
- Establish business case for transformation
- Implement the AI interventions to deliver business value

## **Key Considerations for a Smooth AI-enabled Transformation**

For a successful AI-enabled transformation, it is crucial to ensure the right balance of human-machine interplay as well as the capability to reconfigure the interplay as needed.

### **The right human-machine interplay**

Ensuring the right human-machine interplay is one of the most critical aspects of an AI-led business transformation. Humans and machines should complement each other to create a perfect blend of their respective strengths. There are three types of scenarios that can unfold during a human-machine interplay:

- **Machine-driven:** For activities that are repetitive, structured, rule-based and need to be performed in bulk; minimal human intervention limited to exception management
- **Machine-assisted human-driven:** For activities where machines augment humans with relevant insights to facilitate intelligent business decisions
- **Human-driven:** For activities that need higher order skills like creative thinking, innovation, problem solving and understanding human behavior

Maintaining the right balance of human-machine interplay is vital and the two main factors critical to achieving it are:

### **Human touch versus efficiency**

Organizations must first determine whether the activities or processes to be automated require the human touch or can be handled by machines. In some areas, human interaction stands out (for instance, in handling upset customers, closing sales and so on) while in others, machines are better as they are more efficient (for example, traversing through multiple documents to extract the relevant information).

There are instances where the human touch is crucial to meaningful engagement with customers. For instance, while the AI assistant can provide multiple property recommendations, it takes the mortgage specialist's judgment and experience to suggest the property that best matches the customer context. On the other hand, there are processes or activities where machines enhance or augment human efficiency. For instance, a compliance auditor, who typically performs four to five audits a day can increase it to 20 by leveraging AI techniques.

Ensuring effective human-machine interplay will thus require BFSI firms to evaluate processes identified for automation in terms of the degree of human intervention needed and tasks that can be handled by machines.

### **Trust in machine outcomes**

Implicitly relying on the outcomes produced by machines is not always possible. This can be understood through an example in the mortgage process that is document-intensive and requires extensive information to be extracted from multiple documents. The standard optical character recognition and AI techniques fail when the content is unstructured or there is considerable variance in the documents. In such cases, the machine outcomes may not be fully reliable necessitating human judgment to check if the extracted content can be partially used or must be completely ignored.

### **Reconfiguration of human-machine interplay**

Incorporating the capability to re-configure human-machine interplay as needed is equally important to successful AI adoption. For instance, in customer servicing, the intelligent multimodal switch from humans to machines or vice-versa based on the customer context represents true, dynamic re-configuration.

High-net-worth individuals and customers with a negative disposition toward servicing or a positive disposition toward marketing can be directly routed to a human agent to manage customer relationships more effectively. In other cases, a customer may be first routed to a machine (virtual agent). Based on an understanding of the customer context gleaned from the initial conversation, the bot may continue servicing on its own and complete the interaction. However, if the bot senses a need to switch to a human agent, the interaction is automatically routed to an agent. The earlier chat gives the human agent a window into the context enabling predictive and efficient service.

Table 1 shows some use cases of human-machine interplay.

Area	Human-machine interplay
Customer servicing (front office)	<p><b>Machine-driven</b></p> <ul style="list-style-type: none"> <li>■ Handling customer queries and requests through chatbots; interactions are passed on to human agents based on need</li> </ul> <p><b>Machine-assisted human-driven</b></p> <ul style="list-style-type: none"> <li>■ Predicting the intent of the call and providing information upfront to the human agent to resolve the customer issue</li> <li>■ Providing insights to human agents for potential up-sell, cross-sell opportunities</li> </ul> <p><b>Human-driven</b></p> <ul style="list-style-type: none"> <li>■ Managing customer relationships and resolving complex issues or queries</li> </ul>
Fraud detection (mid office)	<p><b>Machine-driven</b></p> <ul style="list-style-type: none"> <li>■ Monitoring and scoring millions of transactions using data like transaction amount, transaction location and so on to uncover patterns that may signal fraud</li> </ul> <p><b>Machine-assisted human-driven</b></p> <ul style="list-style-type: none"> <li>■ Using machines to flag potentially fraudulent transactions and provide relevant insights for humans to take specific action</li> </ul> <p><b>Human-driven</b></p> <ul style="list-style-type: none"> <li>■ Providing feedback for the wrongly tagged transactions so that the model can continually learn</li> </ul>
Trade settlement (back office)	<p><b>Machine-driven</b></p> <ul style="list-style-type: none"> <li>■ Straight-through processing of trade settlements</li> </ul> <p><b>Machine-assisted human-driven</b></p> <ul style="list-style-type: none"> <li>■ Analyzing failed trade, providing reasons for failure and suggesting recommended action to be taken</li> <li>■ Predicting trades unlikely to settle before the settlement day and providing insights to facilitate settlement</li> </ul> <p><b>Human-driven</b></p> <ul style="list-style-type: none"> <li>■ Handling exceptional scenarios for trade settlement</li> </ul>
Recruitment (enterprise function)	<p><b>Machine-driven</b></p> <ul style="list-style-type: none"> <li>■ Building a pipeline of high-quality candidates</li> <li>■ Engaging with candidates through personalized messages</li> <li>■ Preparing the initial short list of candidates</li> </ul> <p><b>Machine-assisted human-driven</b></p> <ul style="list-style-type: none"> <li>■ Evaluating the quality of the candidate's answer, voice quality, pace of speech, voice energy, facial expressions, body language and providing insights about the responses</li> <li>■ Assessing information beyond the candidates' resume and providing critical insights about the candidates</li> </ul> <p><b>Human-driven</b></p> <ul style="list-style-type: none"> <li>■ Screening the candidates through final interview and making the final decision</li> </ul>

## In a Nutshell

AI is here to stay, grow, and change the BFSI landscape forever. In fact, AI has already started disrupting the BFSI industry. Early adopters are gaining competitive advantage and widening the gap with laggards. However, considering AI adoption as a mere technology upgrade exercise would be myopic. To fully reap the benefits, BFSI firms must leverage AI to reimagine the business value chain through the right human-machine interplay. In our view, driving future growth and creating exponential business value will require BFSI firms to incorporate AI into their transformation strategies. Firms that take steps to adopt an enterprise-wide AI strategy, gain leadership buy-in, establish strong governance processes, and ensure a culture conducive to AI integration will gain an edge over the competition.

### About The Authors

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