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## Digital onboarding for banks & financial services

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### ABSTRACT

*Since the onset of COVID-19 in the year 2020, organizations across the globe have been forced to do business with minimal human contact. Global fin-tech & banking industries are no exception. Fin-techs are leveraging this opportunity to eat into the business that traditional financial organizations, as well as banks, had previously taken. It's becoming essential for banks, and traditional financial services organizations to move onto digital processes, digital customer onboarding being a critical piece of it. Regulatory KYC processes make onboarding a tricky affair. However, today's digital ecosystem and advancements in CV & AI allow financial institutions to onboard customers with zero human interaction in most cases.*

**Keywords:** Digital Onboarding, Machine Learning, Document Verification, Facial Biometric

### 1. INTRODUCTION

The average onboarding duration for large global banks on an average is approx 3.5 weeks. Traditional financial services business, and banks still have siloed systems, manual processes, largely paper driven, people dependent, with manual compliance checks, in-person KYC etc.

High customer dropout is quite common, and this results in poor efficiency. Traditional institutions still believe in in-person KYC, and paper documents. There's a need to quickly adopt to digital processes.

### 2. PITFALLS OF LEGACY ONBOARDING

There are three major challenges with the legacy onboarding.

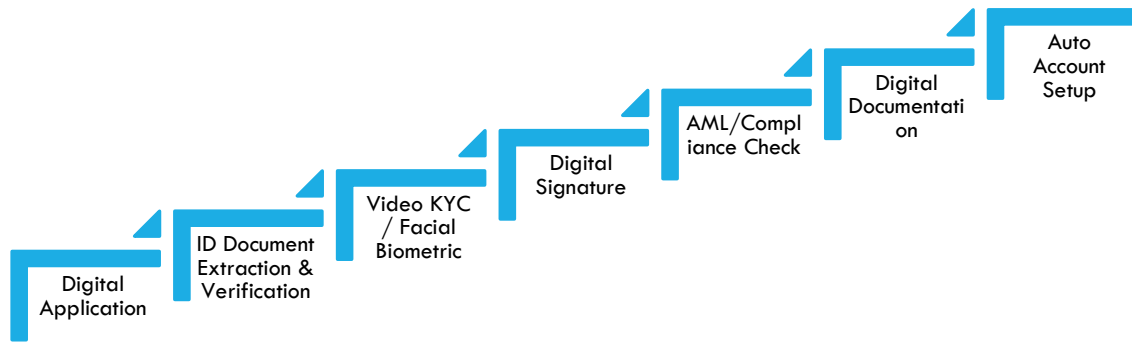
1. Onboarding Time: As mentioned earlier, a Forrester report says that the average time to onboard customers in the traditional process is between 2 to 34 weeks. For institutions with partial digital processes, this time is estimated to be between 2 to 12 weeks.
2. Overall with higher compliance requirements, the average onboarding time has increased by about 22% from 2019 to 2020, as per a Thomson Reuter report.
3. Customer Experience: In banking, it is estimated that 40% customers dropout during the application process. This is due to the poor onboarding processes, those are painfully manual, slow and complicated.
4. Cost: The aggregate customer onboarding cost of global banks is increasing by 15.2%, YOY according to a report. The overall cost of slow & manual onboarding processes is an estimated loss of USD 23 billion per year.

### 3. DIGITAL ONBOARDING – CAPABILITIES

In the recent years, the governments and regulatory bodies across the globe have come up with frameworks to support eKYC and support digital onboarding.

This includes various AI tools like document extraction & verification, liveness & facial biometric verification, digital signature, digital compliance check et al.

This is how a typical digital onboarding look like



The above process can take anywhere between 30-60 minutes for a customer.

This process enables to reduce the onboarding time, improve the user experience and also reduce human independence. This process can be adopted by banks across various geographies in alignment with the Central banks and Regulatory authorities in the respective Geos.

#### **4. 360-DEGREE APPROACH TO DIGITAL ONBOARDING**

The 360-degree approach takes care of all the requirements of an onboarding process. Capturing details related to business, risk, nature of requirement, and importantly regulatory requirements.

- a. Digital Application: This is the first step, where the customer usually fills up the required details via a web or mobile application. Steps include capturing of details, and documents required for the enrollment.
- b. Document Extraction & Verification: This step involves extraction of the document via OCR, or reading of MRZ / codes in the document. AI/ML techniques can be used to validate the document. The validation includes the following sub-steps:
  - i. Verification of security features in the document
  - ii. Verification of document for manipulation
  - iii. Verification of document with Authority

Based on the level of requirement, any or all of the above methods can be adopted in the onboarding process.

- c. Video KYC or Facial Biometric: Some regulators accept video KYC. Facial Biometric is a proven approach used by fin-techs to onboard customers digitally.

In video KYC, the personnel interacts with the customer through a video call. During the call, the personnel verifies the document and the identity of the customer.

Facial Biometric is usually conducted through a AI based face matching solution, or a liveness detection system, again based on the requirement.

A liveness detection system combined with the face matching solution give substantially better results in verifying the individual holding the document.

- d. Digital Signature: Digital Signatures are now accepted in several jurisdictions, and often treated on par with a physical signature.
- e. AML & Compliance Check: This is an important step in the compliance process. FIUs of countries have furnished regulations on the screening processes to be employed during the onboarding process. This, usually involves the screening against the following lists
  - i. Global sanctions & watchlists
  - ii. PEP & RCA
  - iii. Adverse Media

Customers who are identified in any of these watchlists may undergo a subsequent manual verification process.

- f. Digital Documentation: Digital documentation involves secure digital storage of various documents, including the application, identity, verification documents provided by the customer. These should be readily available for future use.
- g. Auto Account Setup: For a majority of customers who are able to go through the above steps, the account can be setup and the user can be enrolled as a customer immediately.

Customers who've either dropped out or failed one or more of the above steps might still have to undergo a manual verification process. However this might be required only for a few customers.

#### **5. IMAGE FORENSIC**

Deep learning techniques have enabled validate genuinity documents, and photo verification. The machine learning models take anywhere between a two to eight weeks.

Considering that the images could be anywhere between to low to high quality, these algorithms are designed in a way to minimize false positives & false negatives. The cutoff for false negatives is more significant, as close to zero as possible.

## **6. LIMITATIONS OF DIGITAL ONBOARDING**

- a. Document & Data Quality: For a smooth digital onboarding, the quality of document & data is important. If the documents are of poor quality, or the data in the system is poor – in either case the efficiency of the solution goes significantly down.
- b. User experience: The user interface and experience play a key role. Many customers may not be digitally savvy. Hence it's important to provide a simple to navigate experience, with enough assistance for users.
- c. Model Training Period: Training models may take few weeks. Hence any changes in business process will need certain time period before they can actually start using automated systems.

## **7. CONCLUSION**

With challenges posed by the pandemic, and subsequent economic depression it becomes important for the financial services & banks to create an impact on clients. It is difficult for clients to avail the services, as well as these institutions to provide services. There can't be a better time for both these stakeholders to change the status-quo, and move to digital onboarding processes.

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