

# Agile Mortgages Solution

## The Complete RPA Enhanced Digital Mortgage Solution



Tech-savvy customers expect financial organizations to provide streamlined, automated and real-time interactions regardless of the product or service. And it's no secret that banks and lending institutions must digitally transform their businesses to provide these types of interactions. The customer experience must be top-of-mind in this transformation, as well as improving the speed and convenience in delivery models and service offerings. AI Foundry helps transform organizations by accelerating internal processes and providing a fantastic customer experience that will foster loyalty and repeat business.

### The Challenge

As banks and lending institutions embark on the digital transformation path, they must constantly keep the customer experience in mind. Trying to approve more loans with the same number of people while transitioning to a digital process can tax any organization. Ideally, the process of applying for and originating a mortgage should be easy, predictable and straightforward. In reality, there are a whole host of issues that make the process cumbersome and laborious. Some issues include:

*"The need for increased—and improved—automation has never been greater, as the cost to originate a new loan has remained stubbornly high at \$7,762."*

— Source: Mortgage Bankers Association 2017 Study

Issues	Results
1. Manual internal processes	1. Stare and compare validation, high cost per loan
2. Loan file documents do not arrive in a timely manner or are missing signatures	2. Long processing times, missed SLAs
3. Systems are not integrated	3. Rework and rekeying of information into multiple systems
4. Paper-based correspondence between originator, customers and 3 <sup>rd</sup> parties delay the process	4. Missed SLAs and elongation of entire process

## Optimizing Mortgage Origination and Onboarding Processes

The goal for any banking or financial institution should be to streamline the way the organization originates a mortgage. Existing core systems must be augmented to provide enhanced capabilities to meet customer expectations including:

- **Advanced capture of loan files:** The ability to accept loan file documents and client information from a variety of devices and locations.
- **Online banking capabilities for customers:** An online, self-service website and mobile app to provide both operational insights and customer engagement.
- **Document management:** Automated work flows, document capture, classification, and data extraction.
- **Integration framework:** The ability to connect to internal LOS, ECM, CRM systems as well as other legacy systems.
- **Reporting and Analytics:** Gain business intelligence insight with internal views of customer data and dashboards.

## The Solution

Banks and lending institutions must have an automated mortgage solution, which includes the ability to accept loan file documents from a variety of sources including mobile devices, interactive websites for both the customers and operations, and an automated document classification and data extraction capability. With this type of automated solution, organizations can streamline manual back office loan origination processes, while connecting the front and back office operations and creating a great customer onboarding experience.

AI Foundry has the technology and experience to deliver an Agile Mortgages Solution and integrate it with a bank's existing systems. Our configurable mobile app allows customers to submit documents right from their phone or tablet. AI Foundry can create a customized online application component to your existing online banking site where customers can supply information and upload documents and even check their loan status with a virtual assistant, like the Amazon Echo. Our Actionable Intelligence technology keeps track of customer's important information and documents while providing straightforward reports to enable quick decisions. In the Internet age, speed, information and customer experience is the Holy Grail.

## The Solution Process

### Document Capture

The beginning of the process is the capture of data, which may require converting paper documents into digital form, extracting attachments from emails, capturing images of documents using mobile devices such as phones, laptops and tablets and/or utilizing web forms on web portals and mobile devices. The digital documents are then cleaned-up to enable data to be extracted accurately. Our capture software de-skews images, adjusts contrast, turns grayscale images to black and white with adaptive threshold processing, removes the outlines of holes, removes lines, performs Optical Character Recognition (OCR), Intelligent Character Recognition (ICR), and more.

### Classification

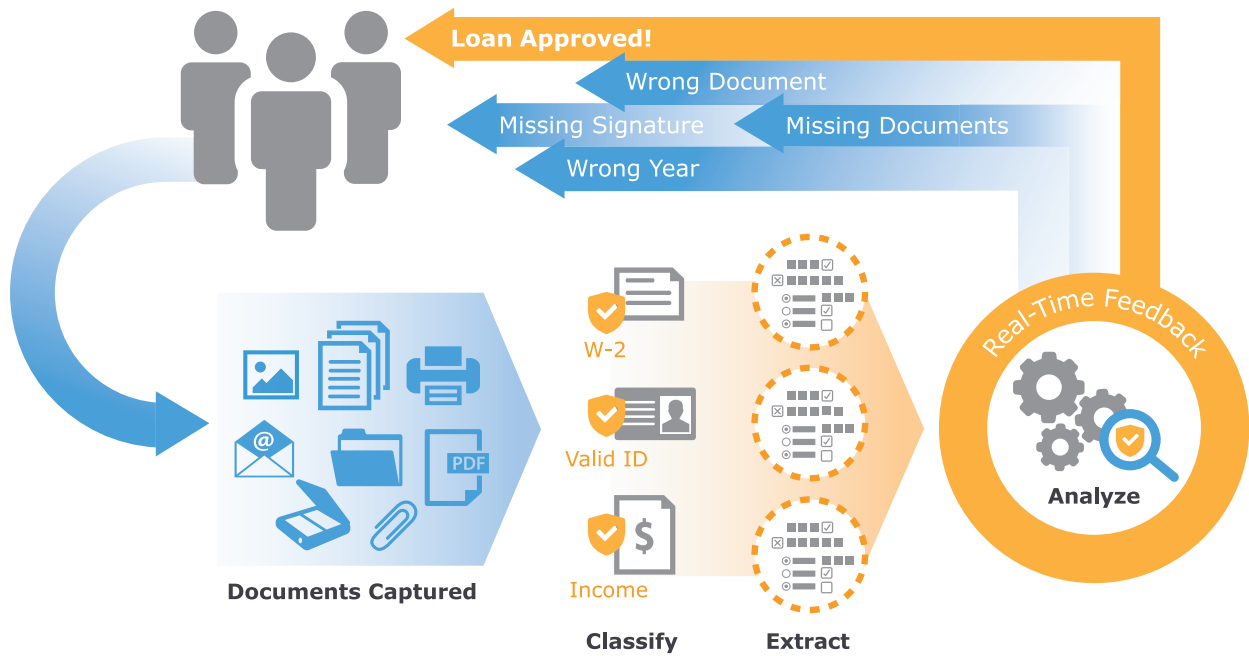
Is the document a driver's license, a passport, W-2, or something else? AI Foundry has unique technology that can electronically and automatically analyze documents and categorize them according to their type, while utilizing user-guided machine learning to continually improve document classification rates.

### Extraction

Key data is extracted from specified fields across all documents to automatically populate a variety of internal systems or to use in the loan data validation process. In addition, metadata (data about the document) is also associated with the document ("tagging") for intelligent search and fast retrieval. This step replaces manual data entry and helps eliminate many human errors.



## Agile Mortgages RPA



Capture > Documents Classified > Data Extracted > Analysis > Real-time Feedback

### Agile Analytics

The extracted data is validated against a database or other back-end system, or even against an external data source. Our Agile Analytics component offers tremendous functionality including the ability to validate multiple documents that contain common data and raises alerts if inconsistencies are found. Misspelled names, missing signatures, out-of-date addresses are all too commonplace and can be proactively identified for remediation.

For the internal bank team, data can be displayed in a dashboard that exposes KPIs to draw insights from and make informed decisions.

### Exception Handling

There are always new forms, small fonts, or grayscale images that will stress the best automated solutions, but AI Foundry's solutions work to fix these types of problems automatically, including:

- **The Capture Process:** Scans aren't always perfect, but using Kodak Alaris image science and combinations of technologies, the Agile Mortgages Solution can overcome a whole host of difficulties.
- **The Classification Process:** From time-to-time a new document type or variation may be inserted into a loan package. Our solution will flag the new document so that it can be properly classified and updates the machine learning model, so the new document will be automatically classified going forward.

- **The Extraction Process:** The font may be too small or the text may be smudged, but in many cases, fuzzy logic-based automatic correction can be used.

As a last resort, exceptions can be flagged and routed for human processing, which can then be added to the systems known data set for performance improvements.

### Configurable Solution Modules

- Loan Document Collection**
  - Branded Mobile App enables customers the ability to upload images directly to an online banking site. Users can also check the status of their loan and what is required to complete the process.
  - Connections to a broad variety of devices including virtual assistants, scanners, MPFs, fax, phone, email
  - Electronic forms — web forms in app, browser or tablet quickly enable end users to complete the necessary information and since it is already in structured electronic format, rekeying of data by bank staff is eliminated.
  - Document capture supports all document types and formats—ensures that the bank can capture and extract data from a variety of documents, including PDFs, JPEGs and all Microsoft Office document types.
- Customer and Internal Online Access**
  - Customized website for loan application, document input and status checking
  - Operational view of website data for process automation and management
  - Agile Analytics for management provides up the minute status and system of truth
- Automated Loan Document Processing**
  - Image processing and enhancement
  - The ability to improve the image quality and related loan document classification and data extraction rates
  - Document classification with advanced, user-guided machine learning
  - Best in class data extraction from documents
- Integration Points with Internal and External Systems**
  - Provides the ability to validate customer data with internal and external sources
  - Save documents to local storage for active use, or to archive and/or disaster recovery to meet compliance regulations
- Flexible Licensing Model**
  - Agile Mortgages is delivered from the Cloud or on-premises based on customer requirements
  - Both perpetual and subscription licensing is supported
  - Our modular pricing structure provides the components you need today while providing future-proofing as you grow

Results	Benefits
<ul style="list-style-type: none"> <li>• Achieve digital transformation and greater end-to-end automation</li> </ul>	<ul style="list-style-type: none"> <li>• Automate complex and demanding business processes largely eliminate human-based loan issue remediation</li> </ul>
<ul style="list-style-type: none"> <li>• Mobile App and website supported for submitting applications, documents and checking the status of loans</li> </ul>	<ul style="list-style-type: none"> <li>• Improved customer experience and customer onboarding</li> </ul>
<ul style="list-style-type: none"> <li>• Greatly decrease loan processing time</li> </ul>	<ul style="list-style-type: none"> <li>• Faster response time and faster time to money</li> </ul>
<ul style="list-style-type: none"> <li>• Increased accuracy for classification, separation, and extraction of data from loan file documents automatically</li> </ul>	<ul style="list-style-type: none"> <li>• Fewer errors and less human intervention</li> </ul>
<ul style="list-style-type: none"> <li>• Decreased manual labor costs</li> </ul>	<ul style="list-style-type: none"> <li>• Handle business growth with the same number of people</li> </ul>
<ul style="list-style-type: none"> <li>• Integrate with your existing systems</li> </ul>	<ul style="list-style-type: none"> <li>• No need to replace expensive computer systems</li> </ul>
<ul style="list-style-type: none"> <li>• Quickly recognize ROI</li> </ul>	<ul style="list-style-type: none"> <li>• Achieve digital transformation initiatives quickly and provide great customer experience</li> </ul>
<ul style="list-style-type: none"> <li>• User-guided machine learning improves the system over time</li> </ul>	<ul style="list-style-type: none"> <li>• Improved accuracy and reduced exception handling</li> </ul>

### About AI Foundry

AI Foundry, a Kodak Alaris business unit, transforms enterprise operations by integrating information, people and processes to enable increased insight and improved decision-making. Our Actionable Intelligence Management solutions help organizations streamline and automate manual processes, seize new business opportunities and manage compliance, all while driving bottom-line performance. For more information please visit [AIFoundry.com](http://AIFoundry.com). © 2017 AI Foundry, a Kodak Alaris business unit