MANAGING RISK AND EFFICIENCY THROUGH TECHNOLOGY

Intelligent Automation in Banking

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Today's speakers

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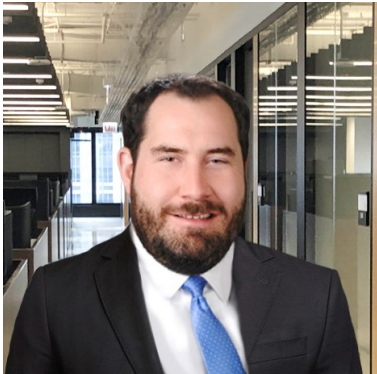+1 312 634 5905

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Agenda

- Embracing technological changes

- Digital transformation strategy

- Intelligent Automation overview

- Use cases for automation in financial institutions

- Q&A

EMBRACING TECHNOLOGICAL CHANGES

FinTech as the driver for automation

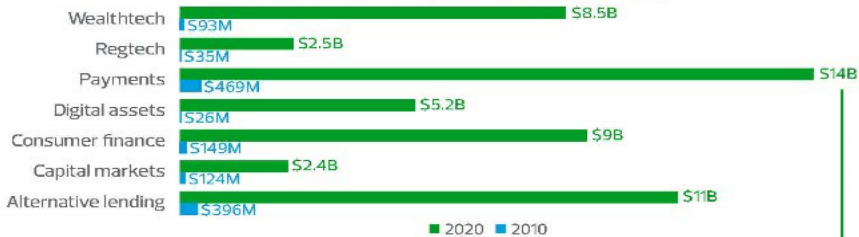## FINTECH COMPANIES ARE TRANSFORMING THE FINANCIAL SERVICES INDUSTRY

Fintech disruption

$100B is invested globally in fintech today compared to **$12.6 billion** in 2010.
(Source: PitchBook)

Fintech investments across U.S. financial services sectors continue to rise significantly

Sector	2010	2020
Wealthtech	$93M	$8.5B
Regtech	$35M	$2.5B
Payments	$469M	$14B
Digital assets	$26M	$5.2B
Consumer finance	$149M	$9B
Capital markets	$124M	$2.4B
Alternative lending	$396M	$11B

■ 2020 ■ 2010

(Source: PitchBook, as of June 30, 2021)

The payments sector is leading fintech disruption

88% of U.S. consumers use fintech in 2021 compared with only **58% in 2020**. More Americans now use fintech than they do video-streaming subscriptions (**78%**) and social media (**72%**).
(Source: Fortune, according to Plaid Annual Report)

Traditional players

Market share for conventional banks continues to decrease

In October 2020, conventional banks accounted for **72%** of the **total market value of the global banking and payments industry**, down from **82%** in Jan. 2020 and down from **96%** in 2010.
(Source: The Economist)

Only **43%** of banks believe they **effectively serve millennial customers** between **25** and **40** years old.
(Source: Bank Director)

Banks have **increased** their technology spending by a median **10%** **but** **50%** are concerned they **aren't effectively using** and/or aggregating data.
(Source: Bank Director)

FINTECH AS A MOVEMENT

And how to build a road map for the path forward

- Does the company have a digital agenda and/or strategy?
- Are there segments of the business that the company wants to heavily digitize?
- Does the company have a chief digital officer or customer experience officer who can address the long-term sustainability of the business?
- Build, buy or rent? Assess options for responding to disruption, whether through building fintech solutions internally, making strategic acquisitions or partnering with fintech companies.
- How is the company evolving to meet customer demands and stakeholder needs more broadly?

" "When most people think about fintech, they think about startup companies disrupting the landscape of financial services," says Peter Brady, RSM US national financial services leader. "And while that's true, the bigger story is in how the landscape is responding to the fintech companies."

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Mega trends facing the industry

Fintech as a Movement

Disruption caused by customer expectations for new technologies, innovative business models, crypto and block chain and new nimble market entrants

Regulatory and Policy Changes

Changes in current and future policy, increased focus on customer protection, fairness, and disclosure, changes in taxation and regulation

Governance and Risk

Protecting the enterprise from the effects of systemic, operational, financial and market risks, including fraud and cyber specific risks

Changing Workforce Dynamic

Organizations will find it harder to maintain services as the pool of skilled labor lags the demand and work practices shift post pandemic
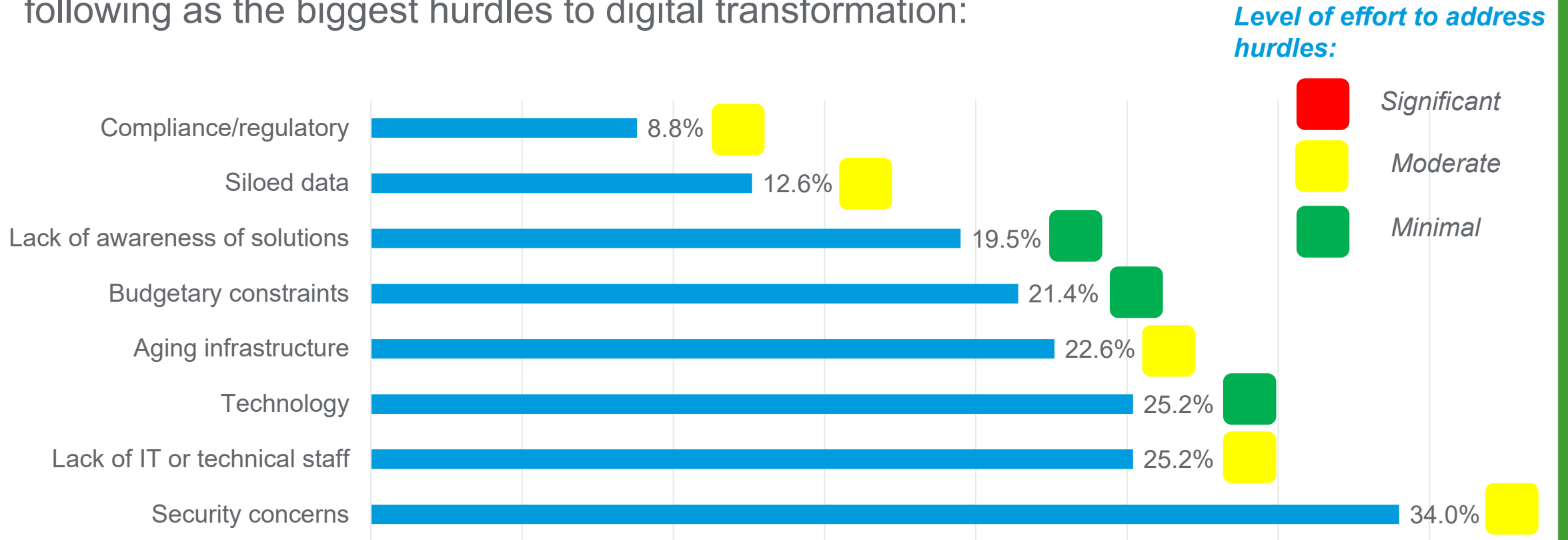
Enterprise Agility

How to take advantage of Automation, Artificial Intelligence, Big Data and other tools to reduce costs and improve service

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Digital transformation hurdles

According to a report by Genesys and BankingDive, bank respondents indicated the following as the biggest hurdles to digital transformation:

Level of effort to address hurdles:

■ *Significant*

■ *Moderate*

■ *Minimal*

Hurdle	Percentage
Compliance/regulatory	8.8%
Siloed data	12.6%
Lack of awareness of solutions	19.5%
Budgetary constraints	21.4%
Aging infrastructure	22.6%
Technology	25.2%
Lack of IT or technical staff	25.2%
Security concerns	34.0%

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DIGITAL TRANSFORMATION STRATEGY

Automation and digital transformation strategy

Digital Transformation

__What is the business need__ and will technology help achieve goals.

What are we trying to accomplish?
- Does automation reduce friction resulting in improved customer/user experience?
- What is the associated market opportunity or efficiency gain we capture?
- Are we automating a bad process?

ROI?
- New business or increased profitability? Do our customers want this?
- Improved efficiencies and risk mitigation
- Higher level of customer/user satisfaction

Requires

Enables

Effective Strategy

Do we have the __underlying people, process and technology__ to manage, support and maintain.

Can we handle?
- Will our people use this?
- Is it too much change at once?
- How does this fit into our current process/workflow/culture?
- Can we manage the change?
- Can we govern post-transformation?

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Common operational issues with digital transformation

People

- Mismatched skill sets
- Unclear objectives
- Corporate culture

Process

- Limited process documentation and structure
- Capacity issues
- Inefficient organizational structure
- Significant manual efforts
- Ineffective internal controls

Technology

- Under-utilized or poorly architected systems
- Lack of integration across systems
- Weak data governance
- Limited performance reporting

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Key questions to consider when evaluating process automation

- Does the process require a high volume of manual tasks or multiple parties to execute the tasks?

- Require use of spreadsheets or documents?

- How does task hand-off occur between parties?

- Is the current process prone to errors?

- Does the process require a complete and accurate audit trail for record keeping and compliance?

- Are tasks associated with the process time-sensitive or have an impact on other processes/systems?

- Does the process lack standardization and transparency?
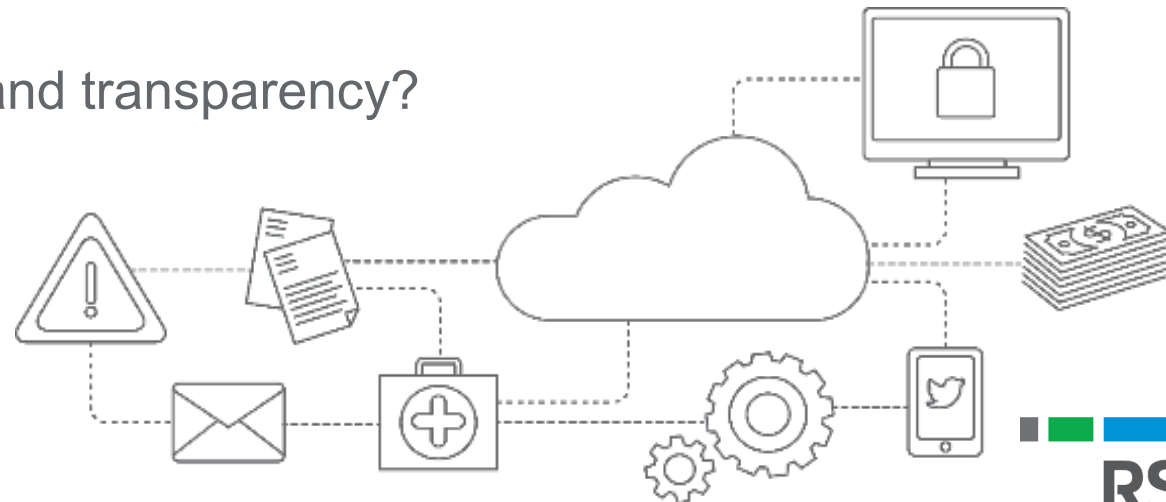
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INTELLIGENT
AUTOMATION
OVERVIEW

Intelligent automation overview

Intelligent Automation Solutions

Robotic Process Automation (RPA)	Digital Process Automation (DPA)	Intelligent Document Processing (IDP)
• *Task based automation* focused on accomplishing targeted components of business *processes* without the need for significant human intervention • Capable of handling high volume, *repetitive manual tasks* on behalf of human process owners • *Fills the gaps* where systems do not have integration capabilities	• *Workflow / Case Management* driven process automation to orchestrate collaborative work • Highly auditable data flows to improve compliance with relevant *regulatory requirements* • Flexible *automation that scales* and grows with your organization to adapt to the evolving needs of your business	• The extraction of semi-structured data from digital documents *(images, PDF's, etc.)* • Transforms data from paragraphs, sentences, words into *discrete data elements* to derive decisions and action • *Enhance scope of RPA & DPA* solutions to provide end to end processing of semi-structured data

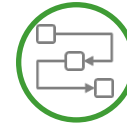## Key Benefits of Intelligent Automation Implementations

Reduce Costs
Efficiencies in process execution requires less resources to complete tasks

Rapid Development Cycle
Low-code development decreases time to value on investment in solutions

Seamless Integration
Out of the box or custom integrations work with any current applications

Increased Productivity
Develop efficiencies within processes across teams to remove low value activities

Improved Accuracy
Defined rules and data validation removes errors and rework in processes

Powerful Insights
Real time data empowers leadership to make informed decisions and continuously improve operations
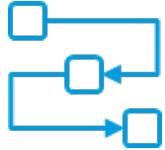
Scalable Solutions
Build applications for future growth that will not face issues with increases in volume

Prevalent Technologies

AUTOMATION ANYWHERE · appian · UiPath

appian · PowerApps

ABBYY · AUTOMATION ANYWHERE · appian · Microsoft · RSM

Robotics Process Automation (RPA) overview

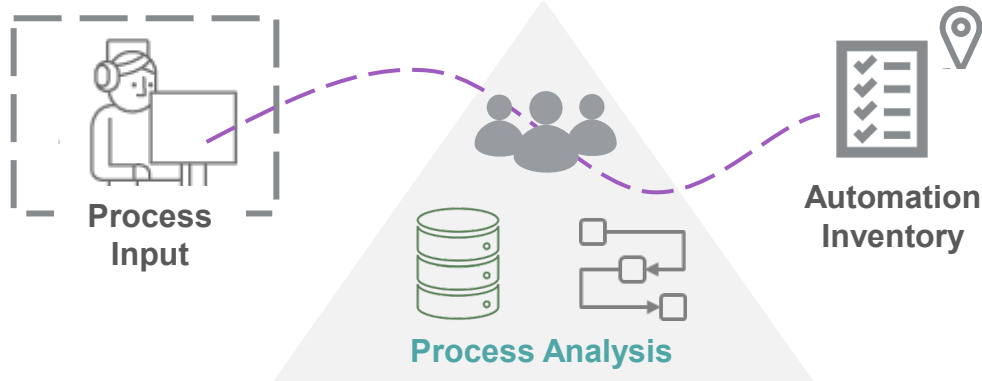## Robotic Process Automation Mechanics

Process Discovery

- *Install software to **monitor transaction data** produced when users interact with systems and processes to **collect important data points**, and process steps*
- *Analyze data generated from captured process steps to **determine processes paths deviations** from standard operating procedures*
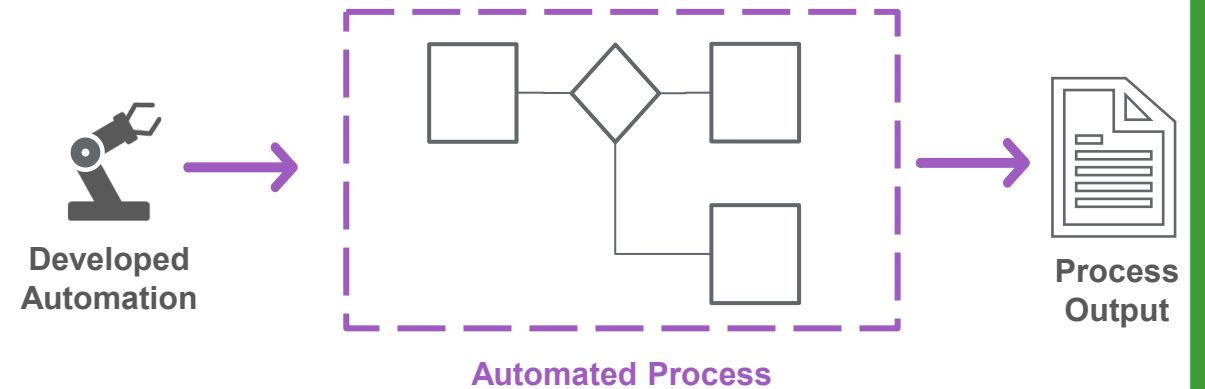- *Inventory automation opportunities and **develop pipeline for Task Automation***

Task Automation

- ***Develop automations** that fulfil specific, manual and repeatable tasks*
- *Tasks can be **broken down into modules** to automation portions of processes that meet ideal process conditions*
- *Modular task automation enables organizations to achieve value with a blend of **touchless and human in the loop process automation***

Process Discovery

Process Input

Process Analysis

Automation Inventory

Task Automation

Developed Automation

Automated Process

Process Output

Key Benefits of RPA

Minimal Impact to Operations
Continuous, automatic discovery rapidly uncovers processes and variations with minimal disruption employee workflows

Enable Automation at Scale
Maps enterprise processes to develop a long-term opportunity pipeline and recognize the value of automation at scale

Reduction in Manual Labor
Reduces effort expended by skilled human labor on manual, low-value tasks and enable experienced individuals to refocus effort on higher value activities

Improved Process Efficiency
Reduce errors in critical process steps and expedite process execution to optimize operational performance

Simplify Operations
Consolidate automations in a centralized location to simplify operations and streamline the management of digital workers

Increase Transparency
Provide consistent visibility into the health of core business processes to measure performance and value of investment

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Digital Process Automation (DPA) overview

Digital Process Automation Components

Workflow Orchestration
- **Track** the status of work items, **monitor** process performance, and **identify areas for improvement** via robust reporting and analytics tools
- **Orchestrate workflows** across entire enterprises by integrating with other systems and services
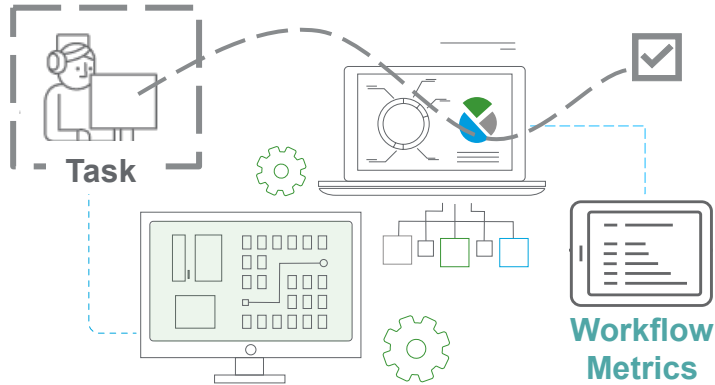- **Manage tasks and SLAs** through task assignment, delegation, escalations, and reminders

Data Fabric
- Utilize pre-built connectors to **enable seamless integration** with external data sources
- **Define and manage data** entities, relationships, and business logic with features including versioning, security, and audit trails
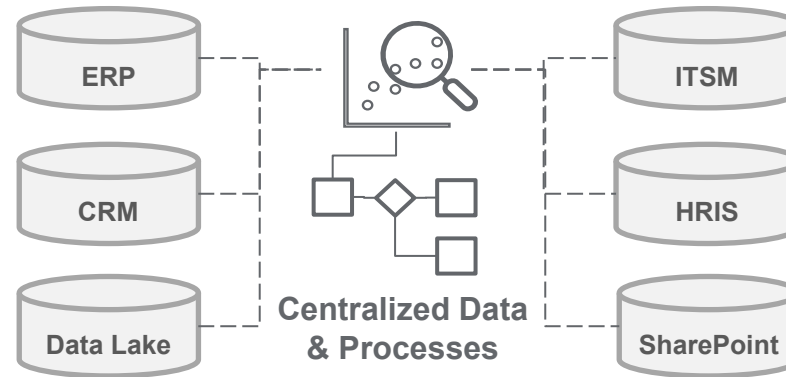- **Transform, clean, and map data** from various sources into a common format

Rapid Application Development
- Use drag-and-drop interfaces and pre-built templates to **build enterprise applications** with minimal coding required and without sacrificing quality
- Lower the barrier to entry for building custom applications by making it **accessible to business users**
- **Quickly modify features** in response to changing business requirements and customer needs
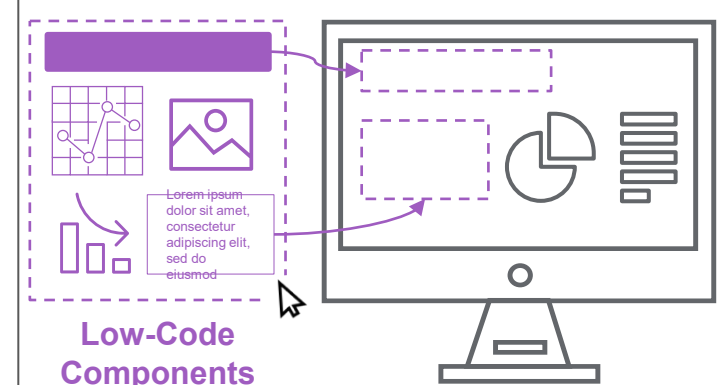
Workflow Orchestration

Task

Workflow Metrics

Data Fabric

ERP

CRM

Data Lake

Centralized Data & Processes

ITSM

HRIS

SharePoint

Rapid Application Development

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Low-Code Components

Key Benefits of DPA

Streamlined Processes
Automate complex business processes, reducing manual errors and improving the efficiency of business operations

Improved Data Quality
Consolidate data from multiple sources into a single, centralized repository, improving data consistency and enabling actionable insights

Increased Productivity
Reduce the time and resources required to build custom applications, freeing up development teams to focus on more strategic projects

Enriched Customer Experience
Provide an enriched customer experience by reducing wait times, improving response times, and providing request tracking methods

Enhanced Decision-Making
Access needed information to make informed decisions, reducing the risk of errors and improving the quality of outcomes

Enterprise Scale Deployment
Drive DPA at scale to efficiently meet the growing demands of employees and customers, while reducing cost and improving user experience

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Intelligent Document Processing (IDP) overview

Intelligent Document Processing Components

Document Digitization

- Optical Character Recognition (OCR) creates **digital versions of paper documents**, extracting document text (including handwriting), images, and document structure
- Documents are **transformed into referenceable versions** of the original scanned version
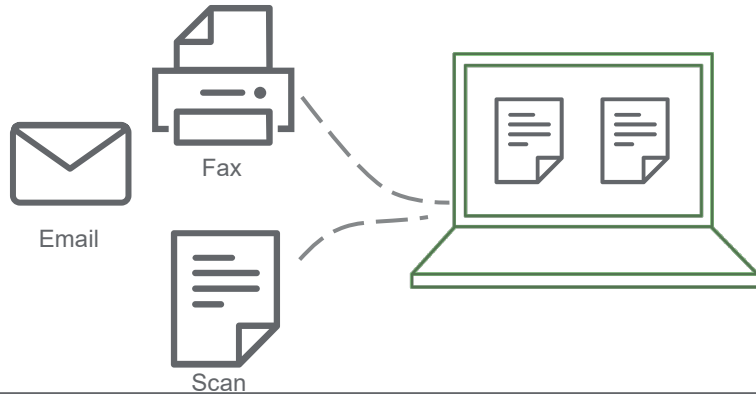
Document Classification

- Computer vision **recognizes** documents, **classifies**, and **groups** by document type automatically
- Groupings of **documents can be separated** into separately classified documents automatically
- Classified and separated documents are **routed through established models** to be intelligently extracted
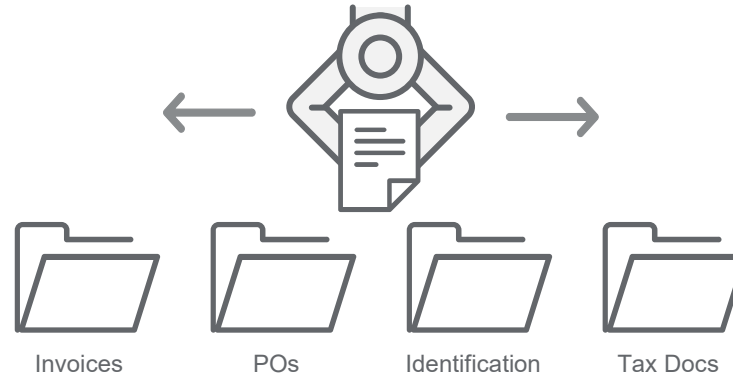
Intelligent Extraction

- Artificial intelligence technology processes **structured, semi-structured**, and **unstructured documents** into structured data sets and actionable information
- Extracted information/documents are **automatically pushed to core systems** and/or centralized folders, and is available to enable processes via API functionality
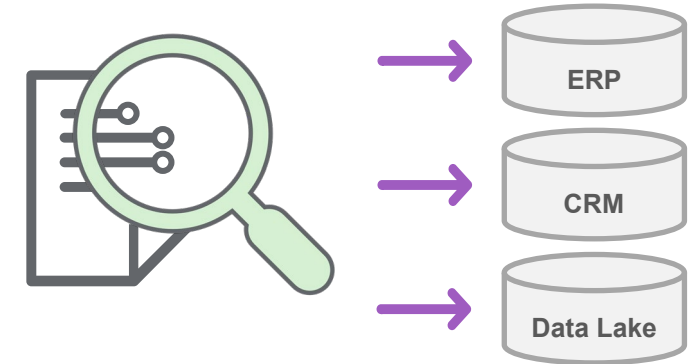
Document Digitization

Email · Fax · Scan

Document Classification

Invoices · POs · Identification · Tax Docs

Intelligent Extraction

ERP · CRM · Data Lake

Key Benefits of IDP

Improved Efficiency & Throughput
Documents are automatically classified and with pertinent document data extracted, reducing processing queues and manual efforts

Rapid Deployment
Pre-trained document skills (invoices, purchase orders, receipts, W-2 forms, etc.) save development time and improve ROI

Straight Through Processing
Extracted document data enables straight through processing when incorporated into logic-driven processes, like invoice or purchase order processing

Cost Savings
IDP solutions often reduce manual labor resources by 80% as efforts change from keying in data to guided validation activities

Integrate With Core Applications
Extracted document information is automatically integrated into core systems and processes, providing a seamless end-user experience

Error Reduction
Errors introduced into the process through manual efforts are significantly reduced through computer vision and automated validation

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Proven automation technologies

Robotic Process Automation

- A set of modular software programs (or "bots") to complete structured, repeatable, and logic-based tasks by mimicking the actions taken by existing human staff.


Procure to Pay / AP Automation
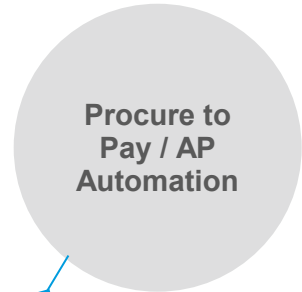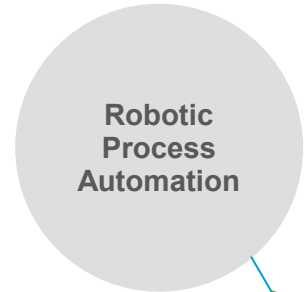
- AP automation automates the process from invoice receipt to payment processing with supporting workflows
- P2P automation focuses on PO through requisitioning processing
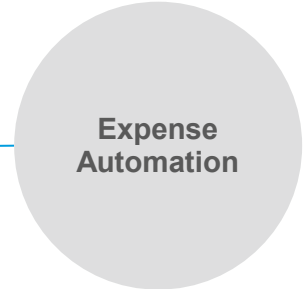
Data Blending

- Software that easily preps, blends, and analyze all of their data using a repeatable workflow, then deploy and share analytics at scale for deeper insights

Expense Automation

- Software to streamline and automate employees turning in expense reports and how you approve, review, archive, and manage them.

Document Extraction Automation
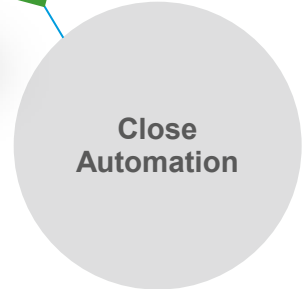
- Software that combines OCR & Computer vision to extract data from structured and semi structured documents.
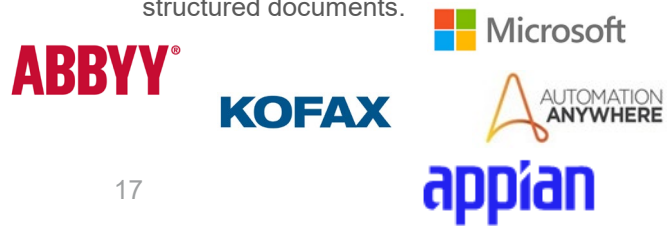
Close Automation

- Software designed to automate and control the entire financial close process.

INTELLIGENT AUTOMATION IN BANKING

Where to begin your digital transformation journey

Building an effective digital transformation strategy

Many institutions struggle with digital transformation due to the lack of an effective strategy. A common struggle is due to a lack of governance over the transformation process. A solution to this common challenge is to establish a digital transformation strategy that governs the institution's process for evaluating, prioritizing and executing digital transformation projects.

The use of a model transformation framework, as outlined below, provides an excellent starting point for identifying and evaluating digital transformation opportunities, wholistically, across the enterprise.

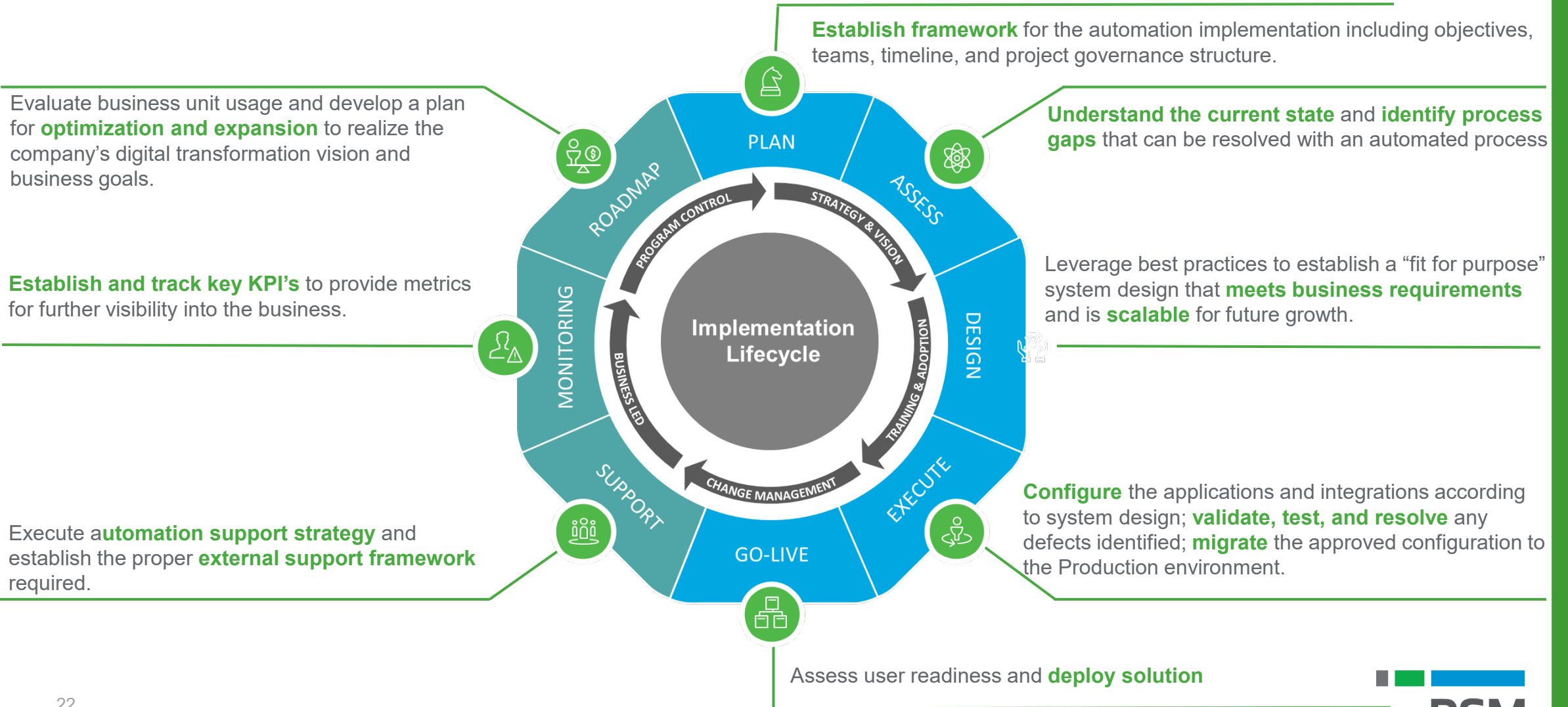| Customer Experience	Financial Reporting	Compliance	Credit and Loan Ops	Retail
• Self-service • Account updates • Mobile banking • Call center • Fraud prevention	• Reconciliations • Journal entries • Regulatory reporting • Payables • Expense reimbursement	• BSA/AML • Lending compliance • Deposit compliance • Fair lending • CRA	• Loan approval • Application status • Servicing • Underwriting • Loan monitoring	• Online account opening • Wealth management and trust • Digital assets • Business banking

Five key areas – Automation readiness

Area	Current State	Automation Benefits
1 **Customer Experience** >>	• If a customer wanted to open a deposit account at a bank one month and take out a loan the next month, the bank might require two interactions with two different employees to gather data from that customer.	• Streamline the intake and digital cataloging of customer information, pulling that data together into a single place and data set that employees from various functions of the bank can query and use.
2 **Financial Reporting** >>	• Disparate systems with numerous data sets (e.g. commercial loan systems, retail loan systems, and credit card systems) • Challenges analyzing data and having a holistic and meaningful view of the relationship profitability and risk profile of the customer	• Explore how automation solutions may improve their existing infrastructure and make their data more relevant and useful, enable real-time reporting, and build a more complete snapshot of the customer profile.
3 **Compliance** >>	• Manual process with customer onboarding and ongoing monitoring and verification • Challenges keeping up with regulations specifically related to know your customer (*KYC*)	• Automation tools can vastly improve the process for intake and maintenance of data required for compliance with know your customer (KYC) regulations.. • Creates a uniform process and data set that the bank can use over the duration of the customer life cycle

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Five key areas – Automation readiness (cont.)

Area	Current State	Automation Benefits
4 **Credit and Loan Operations** »	• Customers submits a significant number of documentation items and pieces of information to the bank • Manual processes to take the information and data in entered loan approval systems • Loan documents are submitted manually and tracked via email	• Using an automated tool to gather, process and organize that information can significantly cut the cycle time for the loan application, approval, and origination process. • With an automated process on the front end, the loan operations process on the back end of a transaction is more efficient and seamless as employees have access to all information obtained electronically and in an organized format
5 **Retail** »	• Manual time-consuming data gathering and validation • Challenges identifying gaps, pain points and inconsistencies in how risk is quantified during the audit planning process	• Incorporate data sources like consumer complaints, regulatory standards and application risk assessments • Enable faster planning

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Automation development and implementation framework

Establish framework for the automation implementation including objectives, teams, timeline, and project governance structure.

Evaluate business unit usage and develop a plan for **optimization and expansion** to realize the company's digital transformation vision and business goals.

Understand the current state and **identify process gaps** that can be resolved with an automated process

Establish and track key KPI's to provide metrics for further visibility into the business.

Leverage best practices to establish a "fit for purpose" system design that **meets business requirements** and is **scalable** for future growth.

Execute a**utomation support strategy** and establish the proper **external support framework** required.

Configure the applications and integrations according to system design; **validate, test, and resolve** any defects identified; **migrate** the approved configuration to the Production environment.

Assess user readiness and **deploy solution**

Implementation Lifecycle

ROADMAP
PLAN
ASSESS
DESIGN
EXECUTE
GO-LIVE
SUPPORT
MONITORING

PROGRAM CONTROL
STRATEGY & VISION
TRAINING & ADOPTION
CHANGE MANAGEMENT
BUSINESS LED

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USE CASES FOR AUTOMATION IN FINANCIAL INSTITUTIONS

Automation use cases in banks

Lending

- Loan Origination
- Loan Servicing
- Application Tracking
- Underwriting
- Documentation
- Compliance Monitoring

Customer Experience

- Account Opening & Closure
- Address Verification
- Customer Updates & Data Consolidation
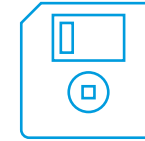- Account Statements
- Call Center Support

Risk & Audit

- Testing Automation
- Population Testing
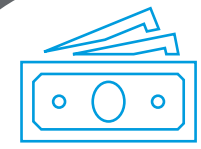- Workpaper and Reporting Information
- Notifications

Regulatory Compliance

- Know Your Customer (KYC) Process
- Anti-Money Laundering (AML)
- OFAC Sanctions Verification
- Flood Zone Tracking
- Regulatory Reporting

Data Management

- Data Mining
- Data Validation
- Legacy System Data Migration
- Compliance & Internal Audit Data Testing

Finance & Accounting

- Reconciliations
- Manual Journal Entries
- Asset Liability Management
- Tax Compliance
- Accounts Payable and Expense Processing
- Financial Reporting

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Equipment Finance Loan Origination Application

Industry	Financial Services / Specialty Lending

Organization Overview

Company is a specialty lender focused on originating and servicing equipment loans for medical and commercial manufacturers and distributors within the United States.

Impact

2-3x
Ability to handle 2-3x more volume

>50%
Reduction in manual efforts

Increased flexibility to scale beyond future capacity projections

Real time insights to monitor and manage end to end process

appian   EQUIFAX   PayNet

Challenges

- **High Demand, Limited Number of Resources** – Start-up organization that experienced significant growth within the first two years of operations. Unable to manage client demand and volume with existing technologies. Believed that they could scale and grow the business even further if they had technology in place that supported their business processes. Prolonged system implementation activities that did not produce the expected results.

- **Manual Processing and Orchestration** – Highly manual email and excel based processes to manage critical customer related operations, reporting, and activity / task tracking. Manual keying of data into disparate systems that are prone to errors.

Activities & Solutions

- **Current State Assessment** – Assessed and documented current state of loan origination processes, pain points, system architecture. Developed future state design, including details on recommended technology, automation, process improvements, and implementation considerations.

- **Application Development** – Rapidly developed application to support loan origination process, aligned to the organization's current and improved processes. Application includes both internally and externally facing portals to manage, automate, orchestrate, and store process-related data and documents.

- **Service Integration** – Integrated application to external services including Equifax and PayNet for credit report and score retrieval, and DocuSign for document signature activities.
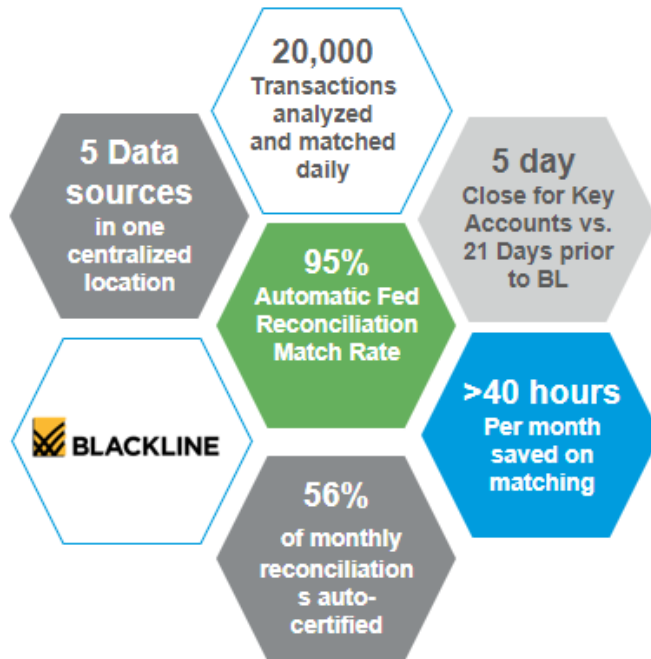
Customer Benefits

- **Improved Throughput** – Loan specialists can handle 2-3x additional loan volume and provide loan decisions to applicants significantly faster.

- **Streamlined Processes** – A robust, central record-keeping system enables cross-team collaboration between Sales, Underwriting, and Operations functions, loan application templates and requirements enhance data quality, and a centralized system manages and tracks orchestration requirements.

- **Significantly Reduced Processing Time and Effort** – Credit decisions are provided within minutes of application, and loan packages are automatically generated through the application and routed to DocuSign for borrower signature.

Success story
Banking industry

5 Data sources in one centralized location

20,000 Transactions analyzed and matched daily

5 day Close for Key Accounts vs. 21 Days prior to BL

95% Automatic Fed Reconciliation Match Rate

BLACKLINE

>40 hours Per month saved on matching

56% of monthly reconciliations auto-certified

Client History & Goals

- Initially pulled in RSM to increase efficiencies around the Federal Reconciliation process, which had been the same for 10 years
- Wanted to significantly decrease the amount of time it took to perform close activities
- Desire to increase visibility and have a centralized location for all month-end processes across multiple teams

Key Activities

- Analyzed balance sheet accounts and close task lists, implementing BlackLine using leading practice design and automation
- Trained users on reconciliation features, template usage, and steps to properly complete quality reconciliations
- Streamlined the Federal Reconciliation process, providing an end-to-end daily reconciliation and visibility to matched and unmatched transactions
- Created reports and dashboards to track reconciliation and close status by department

Results

- 95% Transaction Matching rate for the 20,000 transactions that make up the Federal Reconciliation
- Decreased time spent on daily and monthly reconciliations, including the Federal Reconciliation, which alone has savings of over 40 hours a month
- Enhanced the ability to monitor close processes in one centralized location, and identify opportunities for further improvement and automation

QUESTIONS
AND ANSWERS

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