Intelligent Process Automation Playbook

Accelerate Data Availability | Accelerate Your Business

The Artsyl Intelligent Process Automation Platform.

Accelerating the availability and accuracy of transactional data is essential to realize the full benefits of invested business platforms. Businesses expect that the data presented is accurate, timely and actionable.

In the world of automation, businesses still struggle with processes that are document-based yet essential to business operations.

This Playbook reviews how ARTSYL can provide essential automation for any document-based process.

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Intelligent Process Automation

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This Playbook provides companies a primer for initiating Intelligent Process Automation - IPA, as well as guidance for how to evolve existing processes to achieve increased performance and maturity. This primer does not hold all the answers for all the challenges that arise on the IPA journey, however this playbook provides some major decision points and steps based on best practices and lessons learned.

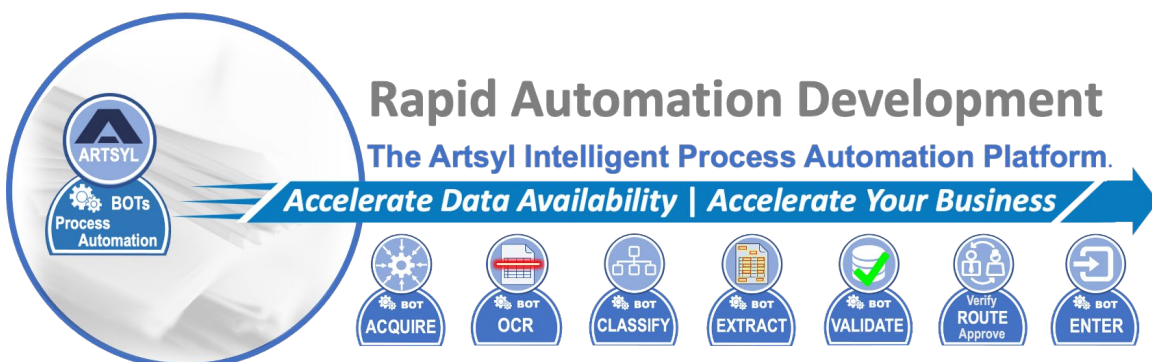**ARTSYL**
Intelligent Process Automation

Introduction

Artsyl is a publisher of an Intelligent Process Automation (IPA) platform focused on automating manual document-based processes which are critical to business transactions.

Business runs on data. For businesses to be successful, transactional data must be readily available and accurate. However, there are many business transactions that relay on information **embedded in documents**, which is **not data yet**. Weather it be PDF files, paper, emails, fax's etc., obtaining document-based data can be difficult to automate - and therefor a manual process is dictated which can be slow, error prone and costly. These manual processes must be performed <u>before</u> data is available which delays business transactions.

Extracting data is one thing, doing it in the context of its use and ensuring the data is accurate . . . is another. The Artsyl IPA Platform is uniquely designed to automate manual document-based processes from end-to-end through the utilization **task specific bots**. These automation bots perform tasks such as ; collecting documents, classifying them, applying the correct process, extracting the relevant data in the context of its use, validating the data with internal systems and entering the data in ERPs or other business platforms. And because it is a platform, it can be applied to multiple processes and document types by utilizing the platform in its entirety, or specific bots based on specific process requirements. This no-code platform enables **Rapid Automation Development** with the ability to rapidly design, implement and deploy automation for any document-based business process.

Based on the IPA Platform, Artsyl's has pre-packaged **Action Solutions** with <u>**process specific** bots.</u> These bots have intelligence for specific applications such as AP and Customer Sales Order processing. Because theses *action* solutions are prepackaged and come with out-of-box process and data extraction intelligence - along with all the required system components, they further enhance the **rapidity of implementations and deployments**.

This Playbook reviews the capabilities of the Artsyl Intelligent Process Automation platform, Action Solutions and the implementation process for Rapid Automation Development.

Introduction – Why Intelligent Process Automation?

87% Competitive Requirement

65% Control Costs

74% Avoid Commercial Failure

2019 Market Survey

Automation – its everywhere – and it's in demand. In fact, by 2023 it's expected to be a $14 Billion dollar market. It is the focus of investments by companies to make their businesses more efficient, competitive and sustainable. Companies are looking to take cost out wherever they can by automating repetitive and resource intensive transaction-critical processes.

Automation Challenges

Document-based data is at the core of a business's operations. Critical data embedded in documents throttle the velocity of sales and revenue management. Too much time is spent on manual error prone and costly processes to extract, validate and enter this document-based data into ERPs underline before it can be utilized.
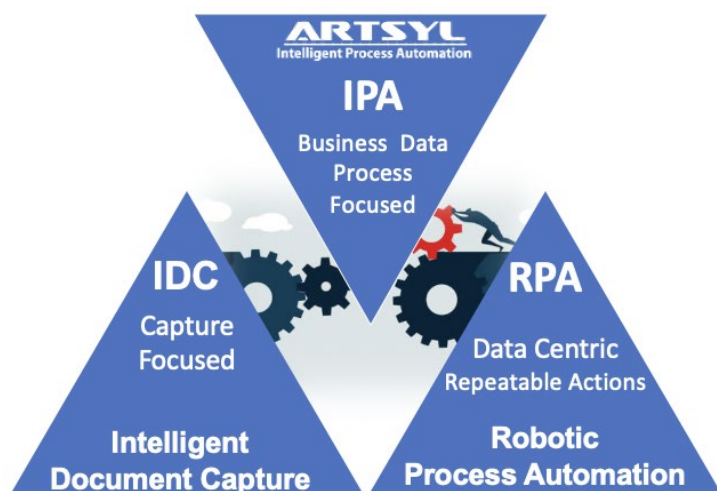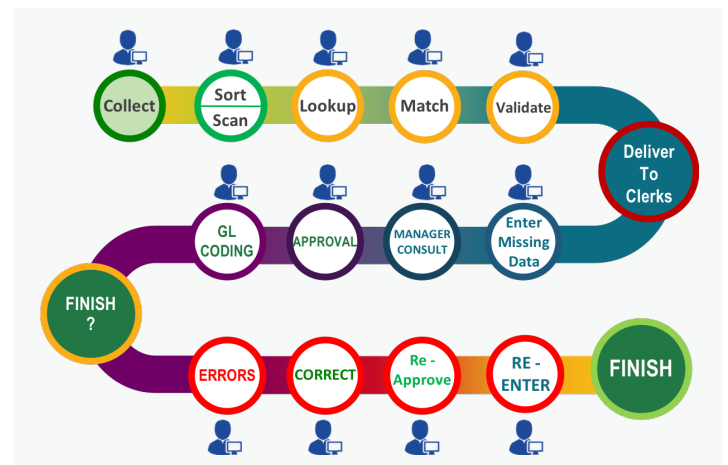
Document-based Processing

While RPA and AI are at the focus of attention – there is a gap for automation of document-based business processes. Traditional document capture, and now RPA, do not meet the market automation requirements for processes where there are many variables and decisions to be made based on the type of document and data extracted.

Artsyl IPA fills that gap. Being able to handle many variables, make decisions and interact with system resources and other processes.

Introduction – Why Intelligent Process Automation?

Artsyl - Intelligent Process Automation

The IPA platform underpins automation for any document-based process. Unifying technology and people creates a workforce with standardized processes, high productivity and data accuracy. Integrating with ERPs, RPA and BPM platforms, accelerates the availability of data and business transactions.

Automation Benefits

Process Documents as they come in — Eliminate Manual Tasks and sorting — Consistent User Process — Reduced Exception Handling — Accelerated Approval process — Process Transparency — Eliminate double | Late transactions — Enhanced Cash Management — Improve Data Entry Accuracy — Accelerated Data Availability
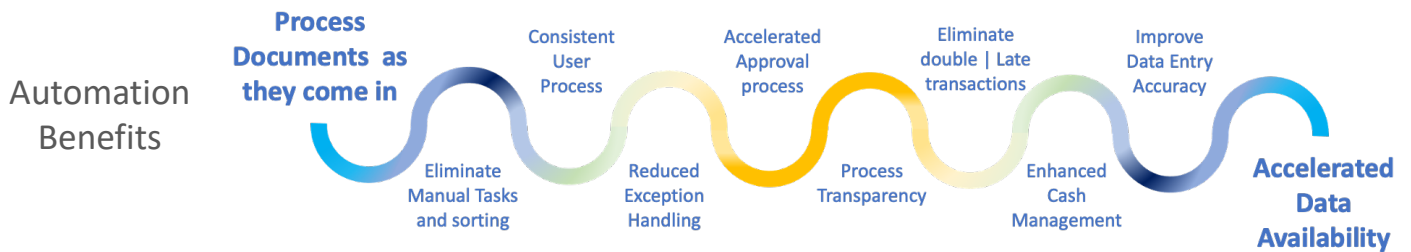
Benefits of Rapid IPA

At a time when automation is a priority– IPA should be a priority for all business managers.

Reduces Implementation Time:

IPA differs from traditional IT solutions in its ability to be rapidly designed and implemented. IPA automations are targeted solutions to eliminate manual processes with varying complexity. Because IPA is "low code" or "no code" solutions, they require few IT resources. Business and program managers can *obtain significant results in a matter of a few weeks or months*.
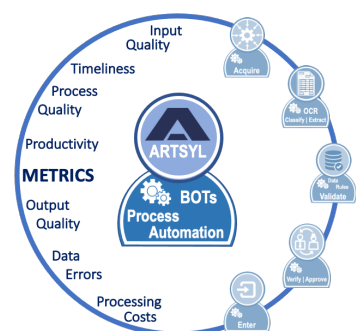
Business Productivity

Employees will be able to spend more time working on the business and less time working in it. IPA is an inexpensive means to increase throughput and overall productivity for critical business processes, allowing an organization to *do more for customers and partners*

Enterprise-wide applicability across all business functions.

IPA technology can have almost universal applicability across your organization. An automation "platform" is a useful tool rather than myopic solutions with a singular focus.

Qualitative benefits

Accelerated data availability | Enhanced cash management | Accelerated velocity of sales | Eliminate manual steps | Higher data Accuracy | Lower operational costs

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METRICS — Input Quality, Timeliness, Process Quality, Productivity, Output Quality, Data Errors, Processing Costs — ARTSYL BOTs Process Automation — Acquire, OCR Classify | Extract, Data Rules | Validate, Verify | Approve, Enter

65% Reduction
Days to Process
13 → 4

Automation Efficiencies
Time to process:	45 Sec
Validation:	60 Sec
User Verification:	90 Sec
Throughput Increase:	80%

60% Average overall reduction in processing costs with AP automation

78% Savings
Cost per Document
$13.00 → $2.85

59% Reduction
Exception Rate
18.2% → 7.4%

Source:
1. APQC 2015 - The Payoff of Electronic Payables Processing
2. PayStream Advisors 2017 - Seven Accounts Payable Metrics to Drive Process Improvement

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WHAT IS THE PLAY?

Accelerating the availability and accuracy of transactional data is essential to realize the full benefits of invested systems. Businesses expect that the data presented is accurate, timely and actionable. In the world of automation, businesses still struggle with processes that are document-based yet essential to business operations. Following is a suggested play to get started to implement Intelligent Process Automation throughout the enter business.

1. **Getting Started** - If you have not already, participate in an Artsyl IPA Platform Overview to gain a better understanding of the capabilities of the IPA platform .

2. **Collaborate with all business stakeholders for each step of a process.**
    A close, working collaboration between business process owners, business unit stakeholders, the CIO and IPA program leadership and representatives should perform as an agile management team to mitigate ongoing challenges.

3. **Fill out the "IPA Worksheet"** provided in this playbook.
    Don't just think about the primary document and business process you wish to automate, but also think about supporting documents that also enable a transaction that might have documents involved with data that is crucial to accurate data validations.

4. **Establish automation success goals - and execute.**
    With a clear understanding and documented critical success factors, we can better work with you to get it right the first time. Form a team to document critical success factors for every step, document types, and what data sources need to be available for validation.

5. **Balance Priorities of Transparency, Compliance and Productivity** - Establishing an IPA Quality team or other management mechanisms to centralize and standardize IPA is key to the ability to efficiently expand IPA throughout your entire business. However, IPA program and business leadership need to carefully balance the benefits of governance and control (whether it be IT or management), with ensuring high productivity and the deployment of impactful automations.

6. **Think strategically about IPA**. IPA provides many business efficiencies, seen and unseen. It would be beneficial to spend the time and effort to assess IPA processes throughout your entire business, centralized and remote operations, and map it to overall business strategies and growth goals, such that IPA in not a collective of "one-offs". Applying IPA in such a manor that is tied to business strategies adds a new dimension to IPA expansion analysis and policies
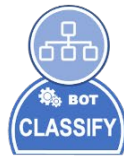
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The Artsyl IPA Platform

Accelerate Data Availability | Accelerate Your Business

Rapid Automation for any document-based process

Intelligent Document Capture | OCR | RPA | Machine Learning | Cognitive AI |State-Based Processes | Web-APIs

The Artsyl **Intelligent Process Automation (IPA)** platform is a no code collective of **Task Specific BOTs** which utilize transformation technologies, are used to automate manual steps in a business process. Because this a platform, these bots can be used in their entirety or singularly as required and are highly customizable to meet specific customer requirements for _any_ document-based business process.

Acquire: Monitors or searches various input sources, including email servers, and imports documents or data. Registers the documents with the IPA platform.

| **Collect documents**	**Considerations.**	**Automation Benefits**
Documents come into - or are created within - your business, from many sources. Someone needs to be aware of where and when they arrive.	What supporting documents are involved in this process? Are all the sources local or remote? How many people are involved? How frequently are documents collected? Is the process documented?	Less touch points = less errors and loss Process documents as they come into your business Consistent process with best practices. Eliminate manual sorting.

OCR | Classify | Extract:
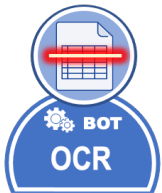
Converts printed (PDFs, Scanned docs, fax . . . .) documents to machine readable data. Using best in class OCR technology. (Nuance | OpenText | A2ia | MS Cognitive AI | Tesseract)

Determines what the document is and applies the proper process and business rules.

Extracts relevant data which is derived from:

- Generic ACTION intelligence for process type (invoices, Orders, Payments, Claims.
- Machine Learning intelligence from prior user actions.
- Dedicated definitions based on customer customization requirements
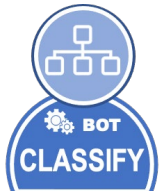
Transformation	**Considerations.**	**Automation Benefits**
This is a key step in the automation process. The following steps in an automation process relies on high quality transformation and machine learning to enable maximum cost reductions and scalability.	Are your documents Structured, Semi-Structured or unstructured? What type of data needs to be extracted?(Text, signatures" marks, barcode data. How many "documents" and which "pages" requires data extraction?	Eliminate manual sorting. Eliminate manual reading and data entry errors. Accelerates transactions and customer responsiveness.

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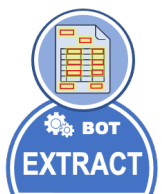
The Artsyl IPA Platform

Validate: Perform 2-Way or 3-Way matching to detect and ensure that the data is the most current and accurate and returns most current information or sends for User validation prior to data entry.

Validation
Could be the single most important step for time and resource savings. Also ensures the proper process is followed and the data entered is highly accurate and most current.
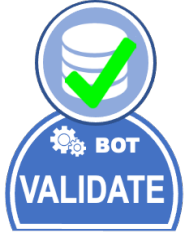
Considerations.
Which databases are required to validate all the various document-types data.

What are the access requirements?

How often are source dB's updated?

Automation Benefits
Less touch points = less errors and loss.

Process documents as they come into your business

Consistent process with best practices.

Eliminate manual sorting.

Route: Should there be any exceptions that need addressing, or approvals required, a notification is sent to the appropriate personnel and routes the document and data such that the necessary action can be taken

Verify | Approve
Presents document image and data to Users to Address any data extraction concerns and business rules violations.

Considerations.
Who are the appropriate primary and secondary verification and approval resources?

Are all business rules documented and agreed to?

Is there a documented escalation process for exceptions?

Automation Benefits
Ensures data accuracy and mitigates reprocessing after data entry or transaction failures.

Provides transparency and compliance to rules.

Eliminates delays to complete transactions.
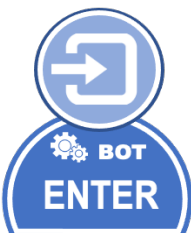
Enter: Automates the entry of data and/or Images to appropriate ERP modules and ledgers. Optionally, data and/or images can be simultaneously entered into other ECM, collaboration or business platforms

Data & Image Entry
Data entry is a tenuous process and the biggest failure point in a document-based data process.

Considerations.
What systems or endpoints will the data and images reside?

Is the data and image entered into the same system?

What integration methodology and process required?

Automation Benefits
Accelerates the data entry process

Mitigates data entry errors and associated additional costs.

ARTSYL BOTs Process Automation — ACQUIRE — OCR — CLASSIFY — EXTRACT — VALIDATE — Verify ROUTE Approve — ENTER

Accelerate Data Availability | Accelerate Your Business

Rapid Automation for any document-based process

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IPA – Use Cases

The Artsyl Intelligent Process Automation Platform.

IDC | OCR | ICR | RPA | Machine Learning | Cognitive AI | State-Based Processor | iPaaS | Web-APIs
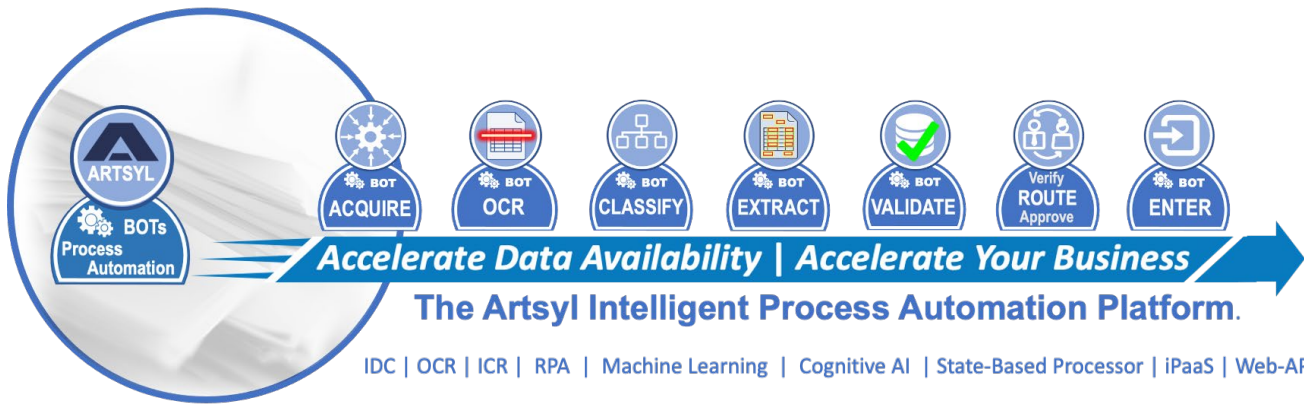
There are many opportunities for IPA throughout an organization. Many business functions can benefit from some sort of IPA, which leads into the overall greater return on investment of an IPA platform. The IPA team must think horizontally when implementing IPA guideline and practices. Starting with critical transactional document processes, the entire organization should be involved to consider where IPA can automate and help accelerate the overall business.

IPA Use Cases
Primary document-based data | **Supporting documents** | **Sources for extracted data validations**

Finance & Accounting	Supply Chain	Operations	Human Resources	Customer Service	Sales & Marketing	Payroll	Medical
Invoice Processing	Order Processing	Remittance Payments	Employee Applications	Customer PO Processing	Quotes and correspondence	Employee Set-up	EOBs
Bill of Ladings	Vendor Management	Customer PO Processing	Employee Onboarding	Update Accounts	Proof of Deliveries	Time Records	HCFA Claims
Credit Memos	Inventory Management	Sub-contractor PO Processing	Resume Screening	Support Tickets	Invoice creation & Distribution	Data Validation	Covid Compliance
Vendor Onboarding	Credits and debits	Material Test Reports	Employee offboarding	Correspondence	Update CRM	Benefits Administration	Transcripts
Statement Matching	Refunds and Returns	Work Orders	Offer letter administration	Inventory Management	Update Inventory	Payroll Audits	
Expense Management - Receipts	Contract Administration	Inventory Management	Recruitment administration	Vendor communications	Customer Management		
Accounting Journal Entries	Vendor onboarding	Maintenance Logs	HR Compliance	Damaged goods report	Competitor Price Monitoring		
Collections Payments	Shipment communications	Compliance Reporting	Background Checks	Proof of Deliveries	Product Administration		
Credit checks & Debt recovery	External Portal validations	Facilities Management	Job Posting	Customer Records Management	Data mining files		

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ACTION SOLUTIONS

Based on the IPA platform – *Action* solutions are preconfigured **Process Specific bots** with intelligence for specific business functions . In addition all the system components are included to make implementations easy.

Invoice*Action*
AP – Invoice Processing
- ✓ **Accelerate P2P efficiency (DPO)**
- ✓ **Cash Management**
- ✓ **Avoid Penalties | Duplicate payments**
- ✓ **Enhance Vendor Management**

Order*Action*
AR – Order Processing
- ✓ **Reduce Days Sales Outstanding (DSO)**
- ✓ **Accelerate Order Fulfillment**
- ✓ **Balanced Supply Chain**
- ✓ **Customer Insights**

Remittance*Action*
AR – Order Processing
- ✓ **Accelerate revenue recognition**
- ✓ **Validate payments and credits**
- ✓ **Reduce disputes**
- ✓ **Accurate receivables**

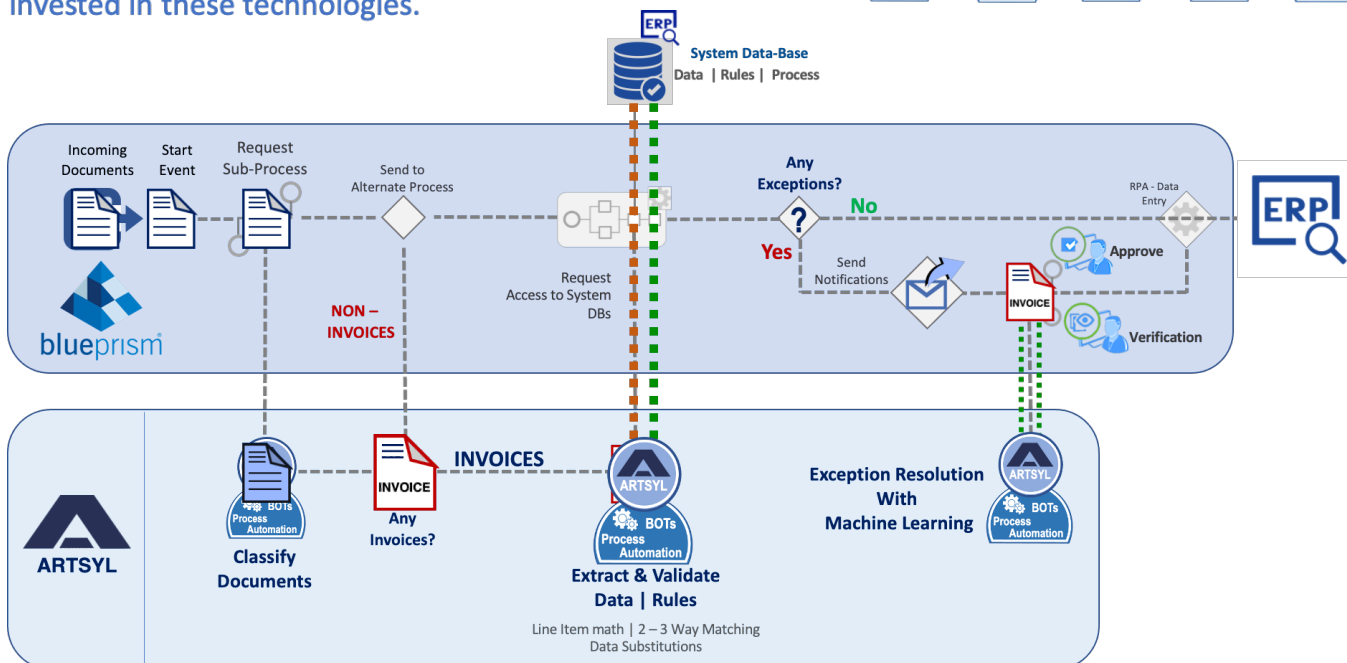## Claims*Action*
Claims Processing
- ✓ **Validate claims with providers**
- ✓ **Capture every field from** HCFA-1500/CMS-500 and UB-04/UB-92 forms
- ✓ **Accurate reimbursements**
- ✓ **HIPAA-compliant 837 data format**

*Action*Solutions Include:
- ▪ **Process Specific**
- ▪ Data Extraction Intelligence
- ▪ Business Rules Intelligence
- ▪ Verification clients   (Power User)
- ▪ Approver Clients   (User)
- ▪ Acquisition BOTs
- ▪ Validation BOTs
- ▪ Work-flow BOTs
- ▪ Data Entry BOTS
- ▪ Configured for Transactional Volumes

IPA Platform – Integration with RPA | Workflow Platforms

The IPA Platform can easily integrate with RPA platforms (such as Blue Prism) and Workflow platforms (such as Appian). Using WEB APIs IPA Bots can be called singularly or collectively. A great benefit for companies which have invested in these technologies.

blueprism

Integrated Task-Specific BOTs
Automating Document Processing

Blueprism – RPA Workforce Environment

ARTSYL BOTs Process Automation | {REST API} | Acquire | OCR Classify | Extract | Data Rules Validate | Verify | Approve | Enter

ERP — System Data-Base — Data | Rules | Process

Incoming Documents | Start Event | Request Sub-Process | Send to Alternate Process | Request Access to System DBs | Any Exceptions? | No | Send Notifications | Yes | Approve | Verification | RPA - Data Entry | ERP

NON – INVOICES

blueprism

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Classify Documents | INVOICE — Any Invoices? | INVOICES | Extract & Validate Data | Rules | Exception Resolution With Machine Learning | INVOICE

Line Item math | 2 – 3 Way Matching Data Substitutions

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DEPLOYMENTS and IMPLIMENTATION

IPA BOTs
Capacity based processing Bots

| BOT 5K | BOT 10K | BOT 20K | BOT 35K | BOT 50K |

Based on combined annual volume of all document types

On-Prem

On-Prem 2 Cloud

Cloud 2 Cloud

Cloud 2 On-Prem

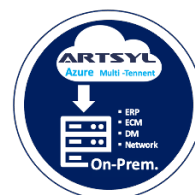**On-Prem**

On-Prem 2 Cloud

Subscription
- 36 Months
- Annual Payments
- Private Cloud > 100K
- Private Cloud Available <100k

Perpetual
- SW Purchase
- Annual MUA

Two-Phase Implementation Approach

1
Install Early
Team | Train
Use | Learn

2
Team Feedback
Customize | SOW
Deliver | Deploy

Test-Drive / UAT Testing
The goal of phase 1 is to get ActionSolutions installed and train users so they can start processing documents quickly.

Customization
Phase 2 is to gain feedback based on user experience with out-of-the-box solution & intelligence, providing a chance for further automation and user-required customization.

Implementation Fees:
All Implementation Services are provided via a Statement of Work (SOW). Quotes for implementation fees prior to Phase 1 and are **ESTIMATES** only - for budgeting purposes only. After completion of Phase 2 SOW discovery call, this estimate may increase or decrease.

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IPA Phases of Rapid Automation Development

Startup	Stabilization	Expansion	Full Maturity
Pilot IPA for a primary document of a transactional process	Assess outcomes and make further adjustments and customizations.	Ramp up automation volume to 100% + IPA capacity Bot as required	+ IPA capacity to total annual volume of all documents in IPA process
Automate 25% of total volume. Operate in tandem	Ramp up automation volume to 75%	Initiate IPA projects for other manual processes REMEMBER the IPA capacity Bot can be shared with ALL automation processes	Monitor performance KPIs and adjust process as necessary
Identify sources of supporting document	Add supporting documents to IPA acquisition and validation	Expand automation to all supporting documents. Internal and external	Dedicated (FTE) pro-gram management, process reengineering, and development capabilities.
Establish formal processes for IPA team	Develop program management, re-porting, and process improvement capabilities.	Work with IPA team to identify other process to automate Share process with all busines unit stake holders	Workforce redeployment, capacity planning, and reskilling required.

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IPA Rapid Automation Development Worksheet

Business Unit		
Application		
Process Name		**Annual Volume**
Primary Document Type		

Endpoint App.	Version	Document Sources	
Endpoint 1		Email	
Endpoint 2		Scanned (Paper)	
Endpoint 3		Portal	
		<other>	

Validation Sources	Data Type	System Database
Source 1		
Source 2		
Source 3		
Source 4		
Source 5		

Supporting Documents	Annual Volume	System Database
Doc type 1		
Doc type 2		
Doc type 3		
Doc type 4		

Total annual Volume	

Fill out one of theses for each manual document-based process.

Collaborate with process owners to identify all supporting documents for each process to ensure high data validation accuracy

Business Unit	Finance & Accounting	
Application	Accounts Payable	
Process Name	Invoice Processing	**Annual Volume**
Primary Document Type	Invoices	**25,000**

Endpoint App.	Version	Document Sources	
MS Dynamics GP	2016	Email	12,000
SharePoint	2010	Scanned (Paper)	7,000
Endpoint 3		Portal	6,000
		<other>	0

Validation Sources		Data Type	System Database
Source 1	CRM | Operations	PO Data	CRM db1
Source 2	CRM | Operations	Vendor Masters	CRM.db2
Source 3	Cust. Service | Finance	Credits / Debits	filed001.db
Source 4	Finance	GL Codes	material.db
Source 5	Receiving | Operations	BOL / Deliveries	SR1.db

Supporting Documents		Annual Volume	System Database
Doc type 1	Bill of ladings	3,500	inv.db3
Doc type 2	Delivery Slips (non PO)	2,000	inv.db3
Doc type 3	Credit Notification	1,500	fo.db1
Doc type 4			

Total annual Volume	**32,000**

This is an example of the AP process for Vendor Invoices

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IPA Platform Factsheet

Architecture

Framework	.NET	SQL Server	SOA	WCF	Open .NET API	Multi-tenant
Core Platform	Auto Registration	Recognition	Batch Manager	docAlpha Server	Statistics Server	Export
User Clients	Thick & Thin Verification	Approver	REST API	Portal	Image Acquisition	Scanning
Admin. Services	Administration Station	Monitoring Station	Design Station	Web Monitoring & Dashboard
Cloud	Azure - Multi-tenant	Artsyl Cloud to Cloud support

Data Extraction	Artsyl utilizes and provides you best-in-class technologies. Hand-print	Text and Checkmark recognition	Signatures |Automatic redactions OCR: Nuance, A2ia, Tesseract , MS AI ICR, IWR: OpenText (RecoStar)	A2ia Check Processing: A2ia Barcode (1D, 2D, patch codes)

OCR Languages	OCR supports over 100 languages
UI Localizations	UI localized for: English	German	French	Spanish	Russian	Chinese
Currencies	Multi-currency processing support Supported extractions: AUD	CAD	USD	GBP	JPY	TWD	CHF	CNY

ERP Integrations	MS Dynamics	SAP B1	Oracle-NetSuite	EPICOR	SAGE-Intacct	ERP	SYSPRO	Harris	IFS	Infor	QAD	QuickBooks	IPaaS	Cloud to Cloud

ECM Integrations	CMIS	Altec	App. Extender	DocStar	DocuWare	FileBound	ImageTag	LaserFiche	MaxxVault	OnBase	PaperVision	Questys	SharePoint	WebDocs

Deployment Options	36 Month Subscriptions	Perpetual Licensing On Premise	On-premise to Cloud	Cloud to Cloud	Cloud to On-Premise

Notable Features

User Wizards	Easy to use wizards' guide users through data verifications	rules validation	escalations
Clients	USER: Approvals - Comments	Portal	Dashboard Power User: Verification	Machine Learning	Monitor	Scan	Image acquisition
Machine Learning Auto-Find	Learns from User actions making it easy to create and/or update profiles Easily defines extraction fields with "Click-capture" Contextual anchors	Self Learning Tables	Cascading Static Text Binding Amends and takes priority over Profile Definitions and can be shared throughout the enterprise
State-Base Process workflow	
Classification	Classifies and provides most current information via cascading database lookups, minimizing OCR extractions and verifications
Validation	InvoiceAction: Performs 2 & 3 way (PO & Non-PO) matching |Duplicates	Terms	GL Coding OrderAction: Quotes	Customer Credit	Price Matching	Item Availability	Terms	Shipping Performs line-item arithmetic checks and line item data against host system databases. Returns the most current information via cascading lookups Validates business rules, applies action and routes documents for Verification and/or Approvals

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