

# HUMAN INTELLIGENCE AUTOMATION ®



Instaknow technology is protected by U.S. patents 6732102,  
7073126, 7437342, 7979377, 9443005 and pending patents

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## I. Overview

Global competition is forcing many organizations to do more with fewer resources. One well known approach to increased productivity and cost reductions is automation of repetitive business processing to eliminate manual touch points. Automation reduces the need for hiring and training staff, resulting in operational cost reductions and an “Agile Enterprise” with rapid and accurate responses to problems and opportunities. The Instaknow technology can facilitate a more flexible and reliable automation scenario than current or standard technologies, especially in dealing with exponentially growing data volumes.

### CURRENT PROCESS AUTOMATION TECHNOLOGIES: BPA AND RPA

With technologies like “Business Process Automation (BPA)”, a new, integrated “collaborative” layer of composite business rules can be deployed across multiple systems to automatically control each system’s actions. Another technology “Robotic Process Automation (RPA)” allows software “bots” to repeat pre-taught actions across user interfaces of diverse systems, doing the same work as a user does.

However, in reality, BPA is expensive and time-consuming because it requires every system to be reengineered to make it XML-enabled. RPA is not useful for high-volume complex processing because it BLINDLY repeats pre-taught actions, and is unable to handle even minor variations in data layout/formats in user-interfaces or documents, making it error-prone and unreliable. Lastly, both BPA and RPA lack the “fuzzy” intelligence that people can apply to solve the business problem.

### A NEW APPROACH: HUMAN INTELLIGENCE AUTOMATION®

Instaknow.com, Inc. has developed a real-time process automation platform, the Instaknow-ACE® (Active Collaboration Engine), that “overlays” integrated business processing on top of current systems and data sources, while retaining much of “Human-like” data awareness and flexibility. This is a far more cost and time effective way of deploying the benefits of process automation than BPA or RPA, because it can automate complex workflows with very high accuracy, without changes to systems, procedures, policies or documents; and can quickly and RELIABLY displace cost of manual work being done by hundreds of people.

Instaknow-ACE ® is powered by patented Artificial Intelligence to learn business case examples shown by an authorized user via a point-and-click graphical “design” interface. All system/data interactions used in these initial examples are automatically saved by Instaknow-ACE for future automated execution of similar business transactions; with the unique ability of automatically adapting to variations in data-of-interest, which might exist between the examples and the actual transactions.

After learning, it can interact in real-time with any number of hard-to-integrate data sources like Web sites, portals, SaaS solutions, Screens, documents, e-mails, attachments, just like a user would. Using friendly “point-and-click” graphical interfaces, any level of business intelligence (rules and decisions) can be added across the multi-system reads/updates to intelligently execute the automation based on run-time conditions. It automatically detects, reports on and handles all processing exceptions as per desired rules.

Working like many automated, expert users, Instaknow-ACE processes thousands of complex business transactions in minutes, rather than days taken by people, while following every rule and policy you ask it to follow. Built-in “fuzzy matching” capabilities allow for correlation of multiple, non-exact information across systems in a highly reliable manner. Audit trails are kept as desired and all existing security policies of all systems (digital certificates, passwords, LDAP based roles etc.) are honored automatically. The processing can happen as desired - triggered by users, invoked by other authorized system on demand, according to schedules or in a continuous mode till stopped by an authorized user.

## INSTAKNOW MAKES IT SIMPLE

# Instaknow Automates Complex Processing with Human Vision-like Scans of All Data



**ANALYZE  
PROCESS  
CONCLUDE**



System agnostic - No changes to internal or external systems!  
Processing can run on-demand by users, systems, schedules or continually.  
**Real-time Processing, Reduced Cost, Increased Productivity.**



**UPDATE  
PUBLISH  
ALERT**



Update Systems  
Public, Remote



Publish Web Pages,  
Reports, Twitter



Send Alerts,  
Email, IVR, SMS

**Automated processing WITHOUT cost of re-programming every system \* Rapid I2B**

## UNIQUENESS

Combining all capabilities of an advanced programming language AND those of many well-trained, expert business users, Instaknow's "Human Intelligence Automation" is distinctive because it is

- Designed for enterprise-class, high-volume parallel processing and multi-machine-load-balancing, to deploy mission-critical, high-volume operations, capable of processing millions of complex business transactions per month using only 2-3 standard machines, with built-in redundancy and fail-over.
- Does not require programming – Instaknow programs itself automatically from the external system interaction examples you choose to show, adapting to each system's unique data content, format and navigation. You can also add cross-system business decisions (business rules) via a point-and-click graphical interface to make the automation as intelligent as your expert business users, including exception handling.
- Easily links to all data - Reads-updates normal enterprise data sources (Databases, SOA, EDI, APIs etc.) as well as hard-to-integrate, unpredictable-layout sources (Web sites, portals, SaaS, Excel, Word, PDF, e-mails, attachments, mainframes, AS400 and other legacy systems). All natural languages are supported.
- Automatically adjusts to infinite variations of data-of-interest, e.g. data location/format changes, like an electronic "eyeball", making it radically more reliable than blind RPA bots. E.g. it can accurately isolate and read specific required data from complex web pages and documents, regardless of unknown Web page layouts, document page order, unpredictable paragraph sequence, varying data location within a page etc. It is also color/font sensitive and can apply color-based business rules like "Purchase Orders in bold text with yellow background need cross-verification with ERP invoices".
- Processes complex business transactions with broad awareness, e.g. in a single transaction, data from three emails, five browsers, three Excels and two PDFs – can be correlated (and updated, if required) in real-time, just like a trained user would do. And multiple of such multi-source transactions can process at the same time from a single machine, drastically reducing the number of machines required for automation.
- Applies multi-parameter "fuzzy matching" intelligence to find same or similar information with reliability of an expert user.

## BUSINESS BENEFITS OF INSTAKNOW-POWERED HYPER-CONNECTED SOLUTIONS

- Faster business processing at reduced operating costs. Millions of business transactions can reliably be automated per month.
- Leverage value of and investment made in existing systems without costly technical changes.
- Provide straight-through processing with internal and external partner, customer and supplier systems.
- Reduce manual data lookups / research / data entry / errors / corrections / re-do's / customer complaints; resulting in higher quality and performance. Free staff for higher-value tasks.
- Drastically reduce system integration costs and traditional delivery times.
- Bring enhanced product/service offerings to market faster than before.
- Provide solutions to business problems previously considered too costly, time prohibitive, unrealistic or impossible to achieve.

## SCENARIOS WHERE INSTAKNOW-ACE PROVIDES RAPID PAYBACK

- High transaction volumes spanning fragmented systems, requiring manual intervention
- Inability of responding to market demands due to costly and slow manual workflows
- Must demonstrate innovative business solutions to gain competitive distinction

## Case Study – Optimized Legal Processing

### CLIENT

Law department of a large city on U.S. east coast

### BUSINESS PROBLEM DESCRIPTION

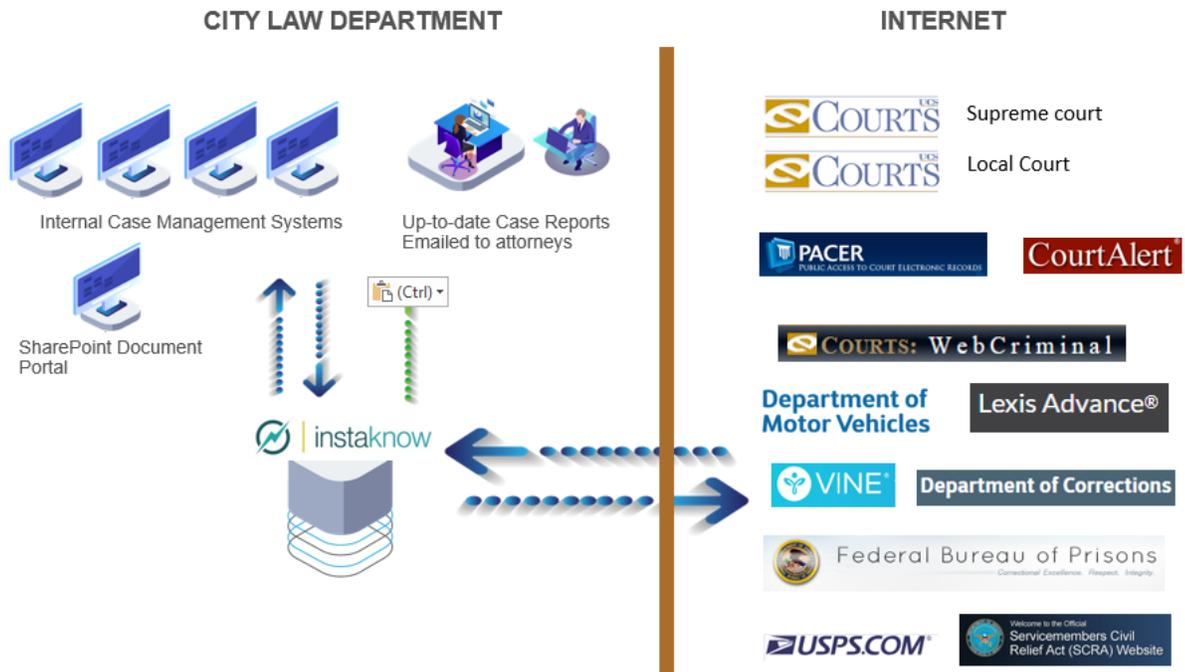
The City Law Department has a legal staff of 700 attorneys and a similar number of support personnel. It represents the City, Mayor, other elected officials and other City agencies in all affirmative and defensive civil litigation. It represents the same entities in juvenile delinquency prosecutions brought in Family Court and Administrative Code enforcement proceedings. It also drafts and reviews local and State legislation, real estate leases, procurement contracts, and financial instruments for the sale of municipal bonds.

The department deals with a huge number of cases. 8,800 new cases involving the city were commenced in various legal jurisdictions in fiscal year 2018. At any given time, out of approximately 30,000 pending cases involving the city, about 3,000 cases have current court appearances on various trial calendars in multiple state and federal courts, accessible via court Web-sites. The case details on the Web-sites are updated constantly by the court clerk's office.

The department uses multiple internal case tracking systems to track cases details like calendars, venues, involved parties (litigants, plaintiffs, defendants, judges, representing attorneys, witnesses etc.), dispositions of appearances/conferences/motions, locations of incidents, expert witness opinions, liability assessments, negotiations; and settlements. This requires a major data tracking and data entry effort on part of the attorneys and support staff simply to keep the information current on a day-to-day basis. Additionally, other Web-based data sources are searched for prior criminal records, address checks to serve summonses, and to print documents from historical cases as part of court-mandated discovery in current cases.

This giant data lookup and entry effort left little time for the attorneys to prepare well for each appearance in court. This caused multiple detrimental effects, including increase in adjournments, denied motions, adverse judgments against the city; leading to a 10 percent/year increase in payouts by the city to settle cases.

## INSTAKNOW'S SOLUTION



**Five internal systems kept synchronized every day with 12 Web data sources for 3,000 current-appearance cases. 45,000 new details (appearances, conferences, motions, dispositions, address checks, prior lawsuit documents etc.) updated daily.**

When mandated by the court, Instaknow also searches for prior lawsuits involving city employees that are defendants in current cases (as part of discovery) on CourtAlert, PACER, county courts and state court Web sites. Each prior case search is complex, requiring correct elimination of false positives and false negatives. When a match is found, Instaknow downloads PDF files of Complaints, Dismissals, Verdicts, Judgments, Settlements, and Appeals; and uploads them to an internal SharePoint document portal.

This solution uses Instaknow's distinctive capability of "discovering" required information within complex Web pages and multi-page PDF documents. Information of interest can be at unknown locations in unknown pages inside the documents. Instaknow's patented "Human-like" artificial intelligence scans the screen/page layout at run-time to dynamically locate the required information every time from each document. Thanks to Instaknow's built-in high-volume parallel processing capability, only two standard virtual machines are needed to automate this massive amount of manual work, equivalent of 80 legal FTEs.

Regulatory compliance is mandatory and is assured by keeping detailed audit trails, e.g. DMV records are considered sensitive information and cannot be searched without a valid case event requiring the search; and firewalling Tort and Family Court division data.

The various parts of this complete automation were deployed in agile sprints of 4-8 weeks each. Detailed statistics on the system's processing volumes are tracked and shared with senior Law and IT decision-makers.

## BUSINESS BENEFITS OF THE INSTAKNOW POWERED HUMAN INTELLIGENCE AUTOMATION SOLUTION

### ACTUAL (CLIENT-MEASURED) BUSINESS BENEFITS

- Average saving of two hours per day for every Tort and Family Court attorney and support staff, by avoiding them doing complex Web searches and data entry. That is a 25% increase in productivity of these divisions, equivalent to an avoidance of \$6 million in FTE costs.
- Hundreds of thousands of complex data points searched, correlated and kept current every day, across 17 internal and external systems, with better-than-human accuracy.
- Triple digit ROI, from highly intelligent, reliable, straight-through automation of millions of detailed processing steps every month.
- Stabilization of payouts by the city to settle cases, amounting to savings of tens of millions of dollars.

The solution has been a major success thanks to the Client's vision and Instaknow's unique capabilities.

The solution is being expanded for the Client's Tax and Bankruptcy division for different but equally useful, high-volume automation.

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### About Instaknow

Instaknow is a fast-growing B2B Artificial Intelligence software company. Our "Human Intelligence Automation ®" AI software helps Fortune 1000 organizations and large government agencies become more efficient and productive by rapidly cutting time, effort and costs of data intensive manual operations. Our software has been granted five U.S. patents and more are pending.

Our current customers include global giants in banking, pharmaceuticals, logistics, legal, telecom, federal/state/city agencies and many more. Exciting new AI breakthroughs in our latest software release (think "dramatic advances beyond Robotic Process Automation") are about to revolutionize how corporations rapidly achieve "Digital Transformation" at mass scale.

Our AI software is used in many industries and in hundreds of different ways, providing multiple avenues to succeed, a rich learning experience; and a chance to solve high-value business problems in never-before-possible ways.

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