

HUMAN INTELLIGENCE AUTOMATION ®



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 when 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 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



INSTAKNOW PROVIDES SMART AUTOMATION ACROSS ALL SYSTEMS



**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 SOLUTION

- 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.

TYPICAL SCENARIOS WHERE INSTAKNOW-ACE PROVIDES RAPID PAYBACK

- High transaction volumes spanning fragmented systems with heavy manual intervention in business flow
- The market demands faster responses, but the current manual business process is too slow
- Must offer new, innovative business solutions to gain competitive distinction and market share

Case Study – Global Logistics Synchronization

CLIENT

\$23 Billion Swiss Global Logistics and Transport Company

BUSINESS PROBLEM DESCRIPTION

The company has complex world-wide operations, accounting for nearly 15% of the world's air and sea freight business by revenue. It has more than 1,336 offices in 109 countries, with around 76,000 employees.

The company has to track global movements of hundreds of thousands of cargo containers every day, across a global network operated by tens of shipping companies, major ports and transit hubs. It is imperative that the latest status of each container, load and vessel, which changes dynamically, is used for downstream planning to increase asset utilization, reduce cycle times, reduce costs, and timely compliance with customs procedures.

This requires tight data integration between tens of different systems.



This solution uses Instaknow's distinctive capability of "discovering" required information within complex Web pages and multi-page documents. Information can be at pre-known or not-pre-known locations inside the documents. Instaknow's patented "electronic eyeball" artificial intelligence scans the screen/page layout at run-time to dynamically locate the information. Instaknow converts the latest Web data into an XML format and uploads it to the client's SCM system six times a day, for instant use. Thanks to Instaknow's built-in high-volume parallel processing capability, only four virtual machines are needed to automate this massive amount of manual work.

The solution was deployed in agile sprints of 4-6 weeks each, over a total elapsed timeline of twelve months.

BUSINESS BENEFITS OF THE INSTAKNOW POWERED HUMAN INTELLIGENCE AUTOMATION SOLUTION

ACTUAL (CLIENT-MEASURED) BUSINESS BENEFITS

- 70% reduction in data gathering work and costs
- 130 staff world-wide re-purposed for more value-added work
- Hundreds of thousands of complex Web pages checked every day (approximately 3 million web checks per month).
- More than 1,000 Arrival Notice PDFs checked and re-checked every day.
- Estimated 1-2% increase in asset utilization world-wide.
- Ability of keeping pace with growing trade volumes without the need to invest in additional capital-intensive equipment or projects; or needing to hire new operations staff.

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 world-wide Air delivery business. An additional project to automatically validate Customs Document Compliance is in design stage.

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.

For more information, contact solutions@instaknow.com



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