INDICO DATA | **Cognizant**

Intelligent Intake™ delivers millions in savings for mortgage title & deed data provider

40M
documents processed yearly

40%
reduction in processing costs

One of Cognizant's clients presented the company with a vexing intake challenge: automating the process of identifying and extracting relevant data from unstructured mortgage title and deed documents published across the US by local municipalities – some 40 million of them per year. Cognizant selected its strategic partner Indico Data and its Intelligent Intake™ solution, helping the client achieve a remarkable 40% annual savings in processing costs.

Cognizant is a multinational IT systems integrator and consulting company. Its client, a large U.S. real estate data provider, provides comprehensive data about real estate transactions across the US and licenses this unique data asset to key players in the residential real estate market. Competition in this segment is fierce, as these documents are all publicly available. Key differentiators are the speed at which the data becomes available in an actionable format and the accuracy of that data. Historically, this intake problem was addressed with inefficient, error-prone, brute-force manual data entry; Cognizant had deployed thousands of offshore resources to process this massive volume of documents. Cognizant sought to reliably automate the intake process, meeting stringent accuracy requirements while decreasing the resources required and accelerating the turnaround time for processing.

The Indico advantage

1 | ### Indico is easy

Indico Data is built for your business, not just for data scientists

Unlike traditional automation challenges which generally involve structured data, this use case involved a huge amount of complexity in the form of unstructured documents. Across the US, there are over 3,300 counties, and each county publishes its own variation of the approximately 50 document types representing mortgage titles and deeds.

"If you do the math, it easily gets to more than 15,000 possible permutations in terms of where each of the fields could be on a document," says Abhinav Kolhe, Senior Director, Digital Strategy and Automation Solutions with Cognizant. "Configuring a traditional OCR tool that uses the position of the data on the documents or the syntax of the fields would've been impossible."

Goal-setting and a fresh look at STP

Given the complexity of the problem, Cognizant knew from the start that full end-to-end automation for all documents – or 100% straight-through processing (STP) – was not a realistic goal.

"One of the fallacies of how people look at STP is they look at the document level. That's a trap," Kolhe says. "Achieving that level of automation is really not possible, especially in the unstructured data extraction space, so people should look at it differently."

Cognizant's approach was to look at the problem from the data-field level. In this case, a human had to look at more than 100 fields on each document. If automation could significantly reduce the number of fields requiring human review, it would yield huge potential savings and acceleration of processing times per document.

> "That was the most important parameter, so we chose field-level accuracy and achieving STP at the field level to capture the value" he says. 99

Looking at it from that perspective, the goal was finding an intake tool that could augment humans, helping them reduce the amount of time they spend processing documents, thus enhancing their productivity.

The Indico advantage

To find such a solution, Cognizant assessed multiple tools and platforms. It was looking for several critical features and functions, beginning with a solution oriented towards the subject matter expert rather than the data scientist or software developer.

Indico's Intelligent Intake solution is based on its proprietary Transfer Learning approach, which allows non-technical users to quickly build custom machine learning models tailored precisely to the customer's needs. Using a point-and-click interface, SME's

The Indico advantage

2 | Indico is powerful

Indico Data is built for the enterprise, and capable of handling even the most unruly, unstructured intake data

can upload their training samples, create custom attributes for extraction, classification, etc, and quickly build models with Indico's proprietary AI-assisted labeling.

"Given the scale of this challenge, we were looking for a citizen-led way of building machine learning models, so we weren't dependent on data scientists," Kohle says.

Lastly, the solution had to have enterprise-scale capabilities. Indico's cloud-native microservices architecture enables continuous optimization of the compute footprint and can scale up to any throughput or processing volumes.

"The most important criteria was auto-scaling. We are talking 45 million to 50 million documents per year, or about 4 million per month," Kolhe says. "We had to make sure the solution was really in auto-scale mode and shuts down when we don't need the [virtual machines]."

The Indico Intelligent Intake solution checked all those boxes, he says.

From POC to production

As part of Cognizant's evaluation, Indico

conducted a proof-of-concept project with Cognizant and its client. In just a few hours, and using only 200 sample documents, Indico trained a model to extract data from over 100 fields. The model proved to be better than 90% accurate across all fields and with examples from multiple counties.

But that's just the beginning. Part of the beauty of the Indico solution is that the models gain accuracy over time. As noted earlier, Cognizant's goal was to augment the humans who were experienced in the titles and deeds process, not completely replace them. Indico enables these process experts to review results, with a pane that shows the level of confidence for each field as to whether the model is producing accurate results.

For fields with, say, 70% confidence level, process experts can help teach the model how to increase accuracy. Eventually, those fields with high confidence ratings may be hidden from the review pane, thus speeding the process further while boosting accuracy ratings.

The fact that process experts can use the tool to build models themselves was also crucial not just for the real estate client, but many

"The ability to give feedback to the [Intelligent Intake] model, the learnability part of the tool, is one of the most important things," Kolhe says. "Otherwise, we are back to the old template-based approach because you have to go back and retrain the model.." 99

The Indico advantage

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Indico works

Where other solutions fail the majority of the time, Indico Data achieves a 97% success rate in production

others, he says. Any company that deals with complex documents can't expect IT to decipher what data needs to be extracted.

"You need the ability for business people to use the tool to tag and annotate data to create models," he says. "That and learnability are the two most critical things for me."

Multiple paths to ROI

While the return-on-investment (ROI) for the Cognizant real estate client is clear – a 40% reduction in human resources required – Kolhe has some advice for how others can cost-justify automation projects.

"Tie the complex automation business case to what kind of outcome you can get," he says. "Perhaps the outcome is linked to a corporate strategy you're trying to achieve, meeting customer SLAs, or freeing up people to do other work. If you can make the case that automation will help achieve those outcomes, that's ROI."

Additionally, automations that involve unstructured data should be viewed not just in the context of a single project, but as a larger technology investment.

"That one problem you're solving may solve many other similar problems in the enterprise," Kolhe says. "That's the big picture people should look at. Not just that particular problem, but what else can we solve if that initial problem gets solved?"

About Indico Data

Indico Data automates critical workflows for enterprises in document-intensives industries, including insurance, financial services and commercial real estate. With the Indico Intelligent Intake™ Solution, organizations of all sizes can free their experts from tedious, manual tasks, and allow them to deliver more business value. Now, better intake yields better outcomes. Visit **indicodata.ai** to learn more.