

The Contract Management Process with NTT DATA's Cognitive Automation Engine

A Case to Revolutionize Onboarding

The healthcare industry is still being plagued with onboarding challenges. So why is a frictionless onboarding process so important, and what does it really cost the business?

According to the 2016 CAQH Index report on healthcare's adoption of electronic transactions, the administrative cost of closing the accompanying data gaps consumes nearly US\$300 billion annually, which is about 15% of all healthcare expenditures.

In an increasingly competitive and consumer-centric healthcare environment, customer and client satisfaction are more important than ever. Delays in onboarding can be damaging to both new and existing customer and client relationships. Even today, health plans struggle to onboard practice groups and third-party administrators

struggle to onboard payers. Vendors not only struggle to get client data into inflexible templates and to acquire physician practices, but they also struggle with complex credentialing requirements.

Traditional manual client onboarding processes are time consuming and resource-intensive. They result in large number of basic yet critical errors, and those errors multiply with time. And when compounded by the dizzying array of compliance requirements, all of which are critical to basic care or business functions, onboarding processes can drain vital funds from the organization.

Read on to learn how NTT DATA Services has transformed the contract management process with its cognitive automation engine, the NTT DATA Robotic Context Processor.

NTT DATA Robotic Context Processor: A cognitive automation engine that utilizes built-in optical character recognition (OCR) and natural language processing (NLP) technology, along with self-learning capabilities for comprehending complex legal documents, such as contracts, and executing appropriate actions based on its directives.

Enter the NTT DATA Robotic Context Processor

When on-boarding a provider, the Health Plan reviewed all documentation received from the healthcare providers, physicians and hospitals and then sent the contract information back to the provider for sign-off. Providers reviewed and signed the contract, and then send it back. The Health Plan's agents, manually apply state- and market-specific rules as well as any other required contract information, and loaded it into the system for the provider. The contracts typically were a few hundred pages long with multiple amendments like date-, as well as state-specific. This was a time-consuming process as the agents read and reviewed all documents and attachments to pull out the relevant information that were merely a couple of paragraphs long. Often it took as much as three weeks to on-board a provider so that they can start seeing patients; all the while losing significant revenue. Furthermore, because of the tedious nature of the work, the agents were tired and stressed, which affected the quality of data entered. This resulted in additional cost of quality — from increased audits to reworks — compounding administrative and operational expense.

The Health Plan turned to NTT DATA for help redefining its contract management process. To do so, NTT DATA's solution architects broke down each task to the most granular level. They reconstructed the process by first analyzing the relevance of each action and the time it required to separate human tasks from machine-based tasks, and then logically grouped these tasks and introduced process-specific automation tools. And most importantly, the architects deployed

Predictable outcomes, increased efficiency, and minimal disruption and risk via bots that can read, think and make decisions

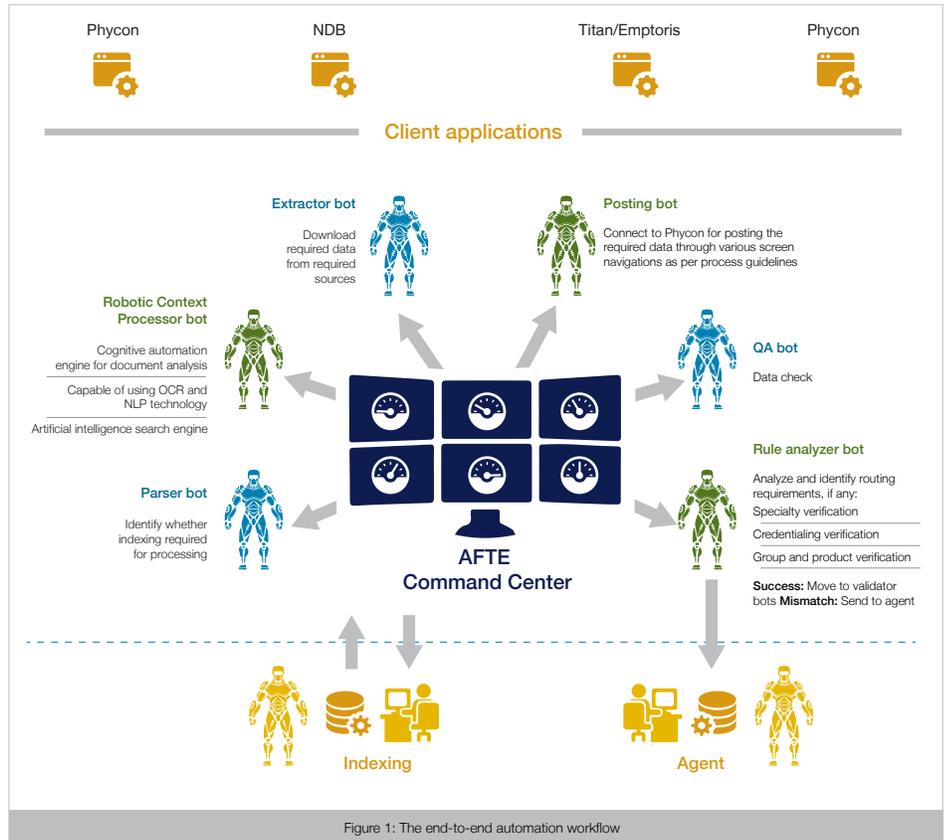


Figure 1: The end-to-end automation workflow

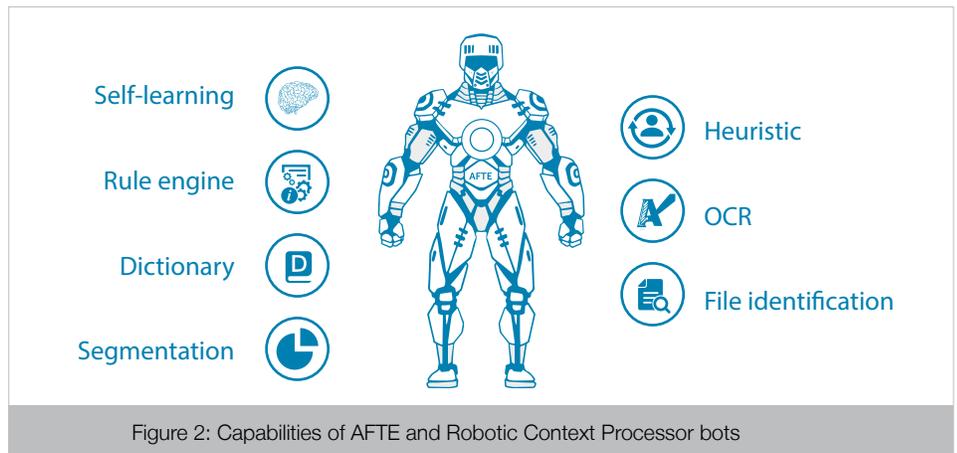


Figure 2: Capabilities of AFTE and Robotic Context Processor bots

the Robotic Context Processor and NTT DATA Automated Full-Time Equivalent (AFTE) Command Center.

Robotic Context Processor can identify and extract relevant information from a number of unstructured documents in any file format, even complex contract and legal documents, and then provide instructions based on the extracted information and an intelligent algorithm to perform the appropriate action. The Robotic Context Processor bots use the following steps to process contracts:

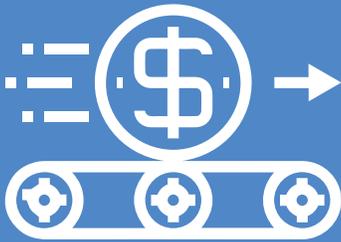
- Identify and recognize required files based on multiple file attributes
- Read information from any file format using data extraction and OCR-based image processing (the built-in capability reads several document types, including Microsoft Word docs, images and PDFs, using proprietary techniques)
- Extract the required part from the input files using heuristic analysis
- Understand the meaning of the text using an NLP engine
- Recommend appropriate action using a built-in intelligent algorithm

The AFTE Command Center enabled the client to monitor all man-machine interactions in the process. Command Center also provides insights into the end-to-end automation initiatives in the process using in-depth analytics and reports, helping the client:

- Manage all the bots from one dashboard
- Identify errors at the server level and easily alert critical stakeholders when issues occur
- Track bot usage in real time and ensure process improvements and continuity
- Utilize robotic fault tolerance to quickly resolve any application issues
- Ensure compliance with regulatory guidelines



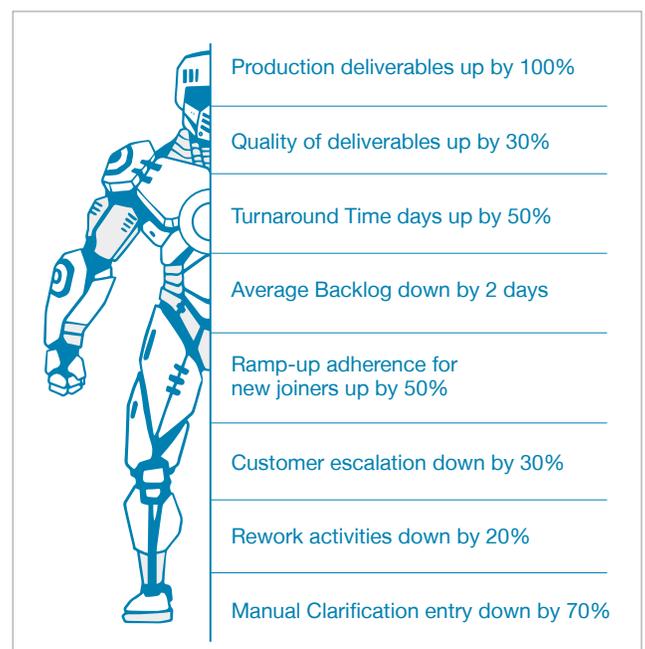
Figure 3: The AFTE Command Center dashboard



The results: Approximately US\$2.2 million in savings with the deployment of Robotic Context Processor

Implementing the cognitive engine transformed the client’s contract management process in terms of labor arbitrage (see the tables below for a breakdown of the business impact/value). It has also helped the client stand apart from the competition. Robotic Context Processor provided the client with the process intelligence and decision-making support it needs to thrive in the digital age.

Key measurement parameter	After automation	Before automation
Quality of deliverables	100%	80%
Production of deliverables	2.6 (volume per hour)	1.3 (volume per hour)
Turnaround time	15 days	30 days
Average backlog	5 days	7 days
Ramp-up adherence for new joiners	6 weeks	12 weeks
Customer escalations per month	175	250
Rework activity	40%	60%
Manual clarification entries per month	1,500	5,000



Key performance indicator	Count
# of contracts	329,000
Time taken for manual process per contract	20 minutes
Total time taken	6,580,000 minutes / 109,666.67 hours
Estimated FTE cost for 1 hour	US\$20
Total cost savings	US\$2,193,333.33
FTEs required (8-hour shift)	13,708
FTEs required to complete the task in a month	623

We not only saved two million dollars on an annual run-rate for the health plan by transforming their contract management process using the Robotic Context Processor, we also provided the client with next-gen process intelligence and decision-making support.

No doubt, automation is the way forward for healthcare organizations that want to keep their customer happy, and of course, healthy.



Higher efficiency

via cycle time reduction, productivity enhancement and the ability to work 24x7.



Higher performance

with bots that gather data, make decisions and act effectively based on analyzed information.



Increased accuracy

and error reduction because our bots work tirelessly and consistently to provide accurate output.



Reduced costs

associated with processing work and errors.

NTT DATA Robotic Context Processor is designed with a futuristic approach and can be applied across industries like;

Manufacturing Industry

- Predictive maintenance or condition monitoring
- Warranty reserve estimation
- Propensity to buy
- Process optimization
- Telematics

Retail Industry

- Predictive inventory planning
- Recommendation engines
- Upsell and cross-channel marketing
- Market segmentation and Targeting
- Customer ROI and lifetime value

Healthcare and Life Sciences

- Alerts and diagnostics from real-time patient data
- Disease identification and risk stratification
- Patient triage optimization
- Proactive health management
- Healthcare provider sentiment analysis

Travel and Hospitality

- Aircraft scheduling
- Dynamic pricing
- Social media - consumer feedback and interaction analysis
- Customer complaint resolution
- Traffic patterns and congestion management

Financial Services

- Risk analytics and regulation
- Customer Segmentation
- Cross-selling and up-selling
- Sales and marketing campaign management
- Credit worthiness evaluation

Energy, Feedstock, and Utilities

- Power usage analytics
- Seismic data processing
- Carbon emissions and trading
- Customer-specific pricing
- Smart grid management
- Energy demand and supply optimization

NTT DATA is committed to innovation. We help organizations across the world effectively implement robotic process automation technologies into their business processes to stay competitive in the changing economic and political landscape. At NTT DATA, robotic process automation is about integrating human direction with technology to efficiently deliver measurable outcomes that impact the core of our clients' businesses.

To know how NTT DATA Robotic Context Processor can help your organization, read the blog (<https://us.nttdata.com/en/blog/2018/january/its-time-healthcare-organizations-rethink-their-contract-management-process>) or email us at bpo@nttdata.com.

Visit nttdataservices.com/bpo or contact bpo@nttdata.com to learn more.

NTT DATA partners with clients to navigate the modern complexities of business and technology, delivering the insights, solutions and outcomes that matter most. We're a top 10 global IT services and consulting provider that wraps deep industry expertise around a comprehensive portfolio of infrastructure, applications and business process services.

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