LAIYE

# CHINA NATIONAL BIOTEC GROUP A VACCINE-MAKING UNIT OF SINOPHARM, MAKES RPA+AI A KEY PART OF ITS DIGITALIZATION STRATEGY

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# BACKGROUND //////////////

As the biological product arm of Sinopharm, China's largest pharmaceutical and healthcare group, CNBG is recognized as the largest biotech company in China, with a strong R&D focus, a complete product portfolio, large manufacturing capacity, and efficient Operation & Maintenance (O&M) supply management. CNBG currently has over 10,000 employees, of which over 4,000 are scientists and technicians.

CNBG is aware that Covid-19 pandemic and the advent of the digital economy has accelerated the pace of change in the pharmaceutical industry. IT technologies such as cloud computing, big data and artificial intelligence (AI) are increasingly changing the pharmaceutical industry's production modes, business processes and business models.

The industry is also starting to adopt more rapid, simple and effective digital methods for drug research and development, as well as for drug production and commercialization.
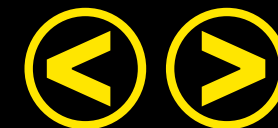
# INTELLIGENT AUTOMATION TECHNOLOGY /////////////////////

In order to further improve business efficiency, strengthen data security, reduce repetitive work and expedite business responses, CNBG launched a RPA+AI robot process automation and AI technology pilot program.

The program deploys eight Laiye software robots, combining universal text recognition, universal form recognition, universal card recognition, optical character recognition (OCR) custom template recognition, verification code recognition, standard address, text information extraction, and seal recognition, etc. changing the company's production modes, business processes and business.

CNBG has implemented hyper automation intelligent technology for four key business processes: order processing, customer file audit and data entry, material master data maintenance, and price master data audit and maintenance.

# CHALLENGES /////////////////////////////////////////////////////////////////

**Manual order process creates a backlog of orders**

The manual order process required staff to review and approve the OA orders manually, which will trigger the ERP system to generate orders. A proficient employee could handle about 200 orders per day, but the order volumes grew as the Group's business grew. This would result in a backlog of orders during peak order periods such as the flu season and the situation worsened with the Covid-19 pandemic, when the demand for new vaccines skyrocketed.

**Conducting customer qualification audits are manual and tedious**

Conducting customer qualification audits usually mean the manual checking and confirming of numerous qualifications and information provided by customers. This involved a large amount of unstructured data such as handwriting. The templates attached to the information were also not completely unified. In addition, after passing the audit, staff needed to enter the information into the SAP system, which involves filling multiple customer information forms.

# IMPLEMENTATION BENEFITS ////////////////////////////////

## AUTOMATED DATA FLOW BIDS FAREWELL TO ORDER BACKLOGS

The implementation of RPA software robots has completely automated the whole process, greatly improved the order processing speed, and reduced the order backlog. The RPA tools operate 24 hours a day, automatically logs into the OA and SAP systems, and operates on orders to be processed by obtaining the corresponding data from the relevant forms, comparing prices and addresses. Then it generates and processes delivery orders based on the delivery rules, and automatically generates the order process reports.

During the trial run, CNBG has executed 30,102 non-COVID-19 orders, of which 41.94% or 12,624 orders were processed by the software robots. With the gradual improvement of the software robots, the proportion will increase, and the automated process will eventually replace the whole manual process.

**30,102**
non-COVID-19 orders executed

**12,624**
orders processed by software robots

# IMPLEMENTATION BENEFITS ///////////////////////////////////

## AI-ENABLED, SMART AUDITS REDUCE MANUAL ERRORS

The RPA software robots have automated the logging in to the OA system and transform unstructured data into structured data by processing texts such as authorization letters and agreements. The technology automatically operates on customer master data tables and identifies form categories such as new customers, customer changes, and qualification updates. It can also maintain key information such as licenses, saleable lists, and purchasing contacts, while avoiding human error and ensuring 100% data accuracy.

Laiye's hyper intelligent automation technology has automated the customer audit process for CNBG, of enabling smart manufacturing. The combination of RPA and AI technology enables capabilities such as universal text recognition, universal form recognition, universal card recognition, OCR custom template recognition, verification code recognition, standard address, text information extraction, seal recognition, etc. This has allowed the conversion of unstructured data to structured data and further streamlined business processes by enabling end-to-end automation.

**100%**
**end to end automation achieved**

**100%**
**data accuracy**

# IMPLEMENTATION BENEFITS ///////////////////////////////////
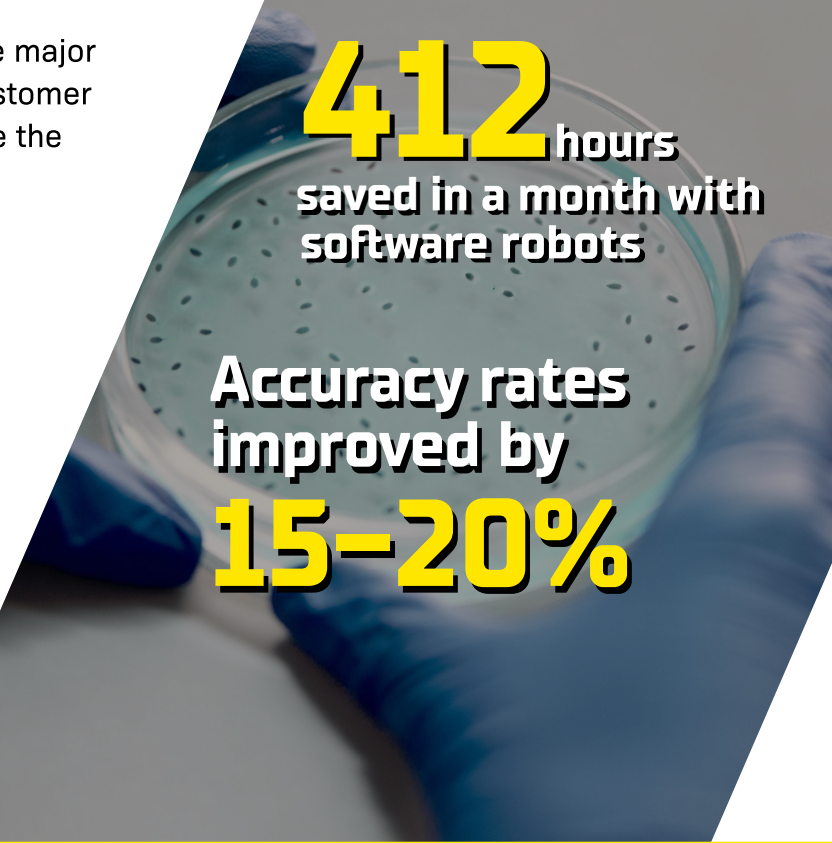
## 24/7 OPERATIONS WITH RAPID TURNAROUND ACROSS TIME ZONES

During the six-month trial run, CNBG experienced the 24/7 automated processing of three major types of business processes, namely order processing, master data maintenance, and customer file audits and data entry in the marketing operation center. The fast turnaround has made the business operation smoother and more efficient, and better serves the needs of a global business that requires interactions across multiple time-zones.

Automating the entire process has taken away the burden of manual, repetitive and mundane work. If the manual processing time is 4 minutes per order, the software robots saved 412 hours monthly. Most importantly, the RPA software robots have improved the accuracy rate by 15-20% compared to manual work, ensuring the stable operation of business processes.

**412** hours saved in a month with software robots

**Accuracy rates improved by 15-20%**

BACKGROUND | AUTOMATION TECHNOLOGY | CHALLENGES | IMPLEMENTATION BENEFITS | FUTURE OUTLOOK

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# FUTURE OUTLOOK /////////////////////////

With the successful Marketing Operation Center RPA+AI trial project, CNBG has achieved marked process improvements and many positive reviews.

In the expansion phase, CNBG plans to deploy the RPA+AI software robots in more departments to gradually complete its digital transformation and upgrade through automation to achieve smart processes. This will improve the response efficiency, realize 24/7 service, and ensure the stable and accurate operation of business processes, to be ready for the fight against future pathogens and pandemics, and for the global expansion of the business!

To find out more about Laiye's solutions, visit **www.laiye.com/en**