


**ASTRAZENECA AUTOMATES AND  
CUTS COSTS FOR COMPLIANCE  
CONSULTING BY 50%**





Well known for being involved with developing the Oxford AstraZeneca COVID-19 vaccine, AstraZeneca constantly pushes the boundaries of science with the goal of delivering life-changing medicines. As a global, science-led biopharmaceutical business, its innovative medicines are used by millions of patients worldwide. This British-Swedish multinational company has a portfolio of products for major diseases in the areas of oncology and biopharmaceuticals, including cardiovascular, renal and metabolism, and respiratory and immunology.

# CHALLENGES

While AstraZeneca focuses on innovative science and delivering life-changing medicines, the company wants to be more patient-centric and do more with technology, digital and data, for its operational processes.

In the area of compliance consulting, AstraZeneca used to rely on a team of 12 employees to ensure compliance with regulatory requirements — a process that was manual, tedious, and repetitive. The team had to fulfil online consultations for more than 8,000 medical representatives and handle a large volume of repetitive reimbursements, meetings, and customer reception questions. Some 80% of the medical representatives will ask a repetitive question 20% of the time. After consulting, medical representatives will often request a second response from compliance officers online to collect relevant documents.

At the end of the month or on event promotion days, the number of online queries received by the department would rise significantly to hit peaks. At this time, the compliance department members would be very busy and may not have time for meals.

For the business, having a dedicated team to manually answer queries night and day is undoubtedly a waste of talent. The repetitive and monotonous work would negatively affect employees' job satisfaction. Such a scenario causes the employee turnover rate to rise, and recruiting suitable employees to fill these roles also becomes an issue for the human resources department.



# INTELLIGENT AUTOMATION TECHNOLOGY

AstraZeneca realized that this issue needed to be urgently addressed. The company decided that the sophistication of artificial intelligence (AI) technology would allow for smart information consultation and strategically revitalize the AstraZeneca compliance team.

The principles of professionalism within the medical field are vital, especially for a department like AstraZeneca's compliance department. The proper use of professional terms is critical and directly affects the accuracy of the responses. A key requirement is that AstraZeneca's compliance robots need to ensure accurate input language for AI devices and guarantee sufficiently professional terminology.

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



# INTELLIGENT AUTOMATION TECHNOLOGY

In less than a month, Laiye's team extracted 70 corpus databases of frequently asked questions and answers, and three standard protocols of business from AstraZeneca. After comprehending and learning the relevant medical laws and regulations, the team used AI technology to rapidly organize the information. Then it established a preliminary knowledge base of over 100 knowledge points.

At this first stage of the work, a primary AI conversational robot was completed. The robot was then launched internally in AstraZeneca and "clinical trials" were run with relevant sales personnel. During the two-month testing phase, the conversational robot gathered the new data and questions for its knowledge base.

The AI conversational robot's core knowledge base increased without any interruption, and when the device had "matured", its knowledge base had already accommodated almost 374 knowledge points. It had recorded 5,232 questions and could cover 82.3% of the questions raised by staff and medical representatives. Moreover, the volume of data is still increasing.



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# IMPLEMENTATION BENEFITS

With the help of Laiye, AstraZeneca has successfully completed the coordination of the three modules within the AI conversational robot: robot Q&A, tabulation, and task cluster. Now the robot can handle queries with an accuracy rate of over 90% and a trigger rate of 98% for intelligent recommendations.

As a result, the dozen or so members of AstraZeneca's compliance team now have more time and energy to allow them to do more valuable work.

The AI product's entire set-up and polishing process took only three months and yielded over 50% reduction in costs. This clearly demonstrates that it is highly cost-effective for medical and pharmaceutical businesses to optimize manpower through conversational robots, and achieve the twin benefits of cost reduction and successful digital management.

Costs reduced by  
**50%**

Intelligent responses  
exceeded **90%**  
accuracy rate

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# FUTURE OUTLOOK

In the collaboration process, Laiye discovered further opportunities for cooperation with AstraZeneca. Han Rui, Laiye's chief business officer and project leader for AstraZeneca's assignment, revealed that medical representatives regularly try to minimize the number of times they go to remote areas due to the long travel time and distance involved.

Thus, when local doctors have queries or demands, it is impossible to contact medical representatives in time to resolve the question. For pharmaceutical enterprises, this undoubtedly causes a loss in sales.

"As a result, Laiye is currently planning to build an AI conversational robot, which will provide professional technical support through mobile interfaces to doctors in hospitals covered by the pharmaceutical company," said Han.

For example, when a doctor needs to prescribe medication, they can first consult the robot. The AI robot can answer the doctor's more straightforward questions, inform the medical representative in charge of that region, and remind him to visit the area in due course. This model can significantly increase the area covered by the doctors and encourage greater use of AstraZeneca's platform, thus providing more engagement opportunities.

To find out more about Laiye's solutions, visit [www.laiye.com/en](http://www.laiye.com/en)

