

CAS CUSTOM SERVICES<sup>SM</sup>

# AI SUCCESS INCREASES EXAMINER EFFICIENCY

Solution success story

## The challenge: A backlog of nearly 150,000 applications

In 2019, the Brazilian National Institute of Industrial Property (INPI Brazil) faced a backlog of nearly 150,000 applications, averaging more than 10 years. This significantly delayed innovation in Latin America's largest economy.

Hoping to positively impact innovation investment across the nation's industries, the office adopted measures to reduce the total backlog by more than 80% over the next two years. However, they faced challenges regarding prior-art searches for chemistry patent applications. These searches were far more complex and took longer to perform than other categories because searchers needed to review both patent and non-patent publications and include full-text and structure queries. INPI Brazil sought a partner who could help them streamline processes in their office.

## The solution: A cloud-based solution that dramatically improves examiner efficiency

INPI Brazil partnered with CAS to develop a custom solution that improves examiner productivity and reduces the application backlog. This novel solution from CAS combined new AI-enabled similarity searches, re-engineered workflow, and CAS search support for validating algorithm models and augmenting office search capabilities. The specialized AI technology was expertly tuned with CAS' scientist-curated content and feedback from INPI Brazil examiners. An in-house team of CAS search professionals reviewed and validated search results, providing inputs to refine and customize algorithms. Enhancements to the prior-art search workflow were based on input from examiners and integration of the patent office's Internal Search Report formats. All search results were then centralized in a single custom, cloud-based interface.

The workflow was customized with different weights applied to patent attributes within the CAS AI algorithms. Several steps were eliminated from the workflow to make it more efficient, allowing examiners to spend more time performing highly complex searches and other activities. Now, when an examiner picks up an application through the system's cloud-based examiner workflow solution, they can access both the application and the set of supporting documents showing prior-art search results. This allows them to make their decisions faster and with greater confidence.

INPI Brazil has achieved significant success with its overall backlog reduction program and the transformation of its chemical application examination process. Workloads are efficiently managed without adding staff and examiners can focus on other priorities. These productivity improvements contributed to a reduction of 80% in the office's backlog.

### INPI's partnership with CAS led to\*:

- Up to 50% reduction in examination times.
- Less examiner search time for 77% of all applications.
- 29% of all applications required little or no additional research.
- Backlog reduced by 80%.

\*INPI Brazil estimates

Find out how CAS Custom Services can help you transform scientific data into actionable, evidence-based insights that maximize investment and fuel success. Learn more at [cas.org](https://cas.org).