HUB TECH IA

AI and IAGEN Application Use Case

Generative Artificial Intelligence (IAGEN) for construction and installation - Logistics support - Report and response generation frequent

Executive Summary – IAGEN Application for Logistics, Reporting, and Response Frequent in Vaca Muerta

This executive summary presents a strategic application of generative artificial intelligence (IAGEN) in the energy sector, specifically in the areas of construction and installation, logistics support, reporting and customer service.
Frequently asked questions about the Vaca Muerta deposit. This application represents a concrete opportunity to transform operations at one of the largest reserves
of unconventional hydrocarbons in the world, improving their efficiency, safety and sustainability.

Use case classification

The report classifies this IAGEN application according to four axes:

1. By primary resource: oil and gas, with water and energy as secondary resources.
2. By activity: information management and decision-making.
3. By AI technology: generative AI models, machine learning algorithms, natural language processing (NLP) and platforms
   data integration.
4. By strategic impact: strategic decision-making and data analysis.

1. Opportunities for using AI and IAGEN in the sector

The main opportunities identified include the optimization of logistics routes,
Demand and inventory prediction, predictive vehicle maintenance and
Critical infrastructure, storage automation, reporting
operational, environmental and financial, and the creation of intelligent systems for
answer frequently asked questions using chatbots and advanced search engines. These
Applications allow you to face your own geographical, operational and environmental challenges
from Vaca Muerta.

2. Expected benefits

The benefits include improved operational efficiency, reduced
errors and risks, access to real-time information for decision-making
more informed, environmental sustainability through optimized use of water and
monitoring of pollutants, and attracting foreign investment through
adoption of cutting-edge technologies. Furthermore, the application of IAGEN promotes the
digital transformation of the Argentine energy sector.

3. Application of AI

The approach combines advanced IAGEN techniques with predictive analytics and integration
real-time data. An implementation flow is proposed that includes:
collection and preprocessing of data from sensors and operating systems;
Training and validation of locally adapted GPT-4 Turbo models; implementation of intelligent
chatbots connected to existing platforms; and
Report automation with deep analysis and anticipation capabilities
critical trends.

4. Proposed artificial intelligence agent

The report proposes the implementation of an intelligent agent based on the model
GPT-4 Turbo, designed specifically for the Vaca Muerta operating ecosystem.
This agent is trained with information collected in real time from IoT sensors,

ERP systems and historical reports, and is optimized to answer queries
frequent logistics and generate automated operational reports. It operates within a
Integrated workflow including advanced data cleansing, scenario validation
real and continuous adaptation to the conditions of the deposit.

Its main function is to provide immediate support to supervisors and operational staff.
through an intelligent chatbot, capable of delivering updated answers about
Availability of supplies, location of equipment, replacement times and alternatives
operational. In addition, it can produce detailed daily reports, anticipate trends
critical through predictive analysis and recommend proactive actions. This agent does not
not only improves efficiency and reduces response times, but also enhances
security and strategic planning of operations in Vaca Muerta.

5. Conclusion

The application of IAGEN in the Vaca Muerta Technology Park constitutes a
disruptive opportunity to modernize the energy sector. This technology allows
Address logistical, environmental and information management challenges through
automated, intelligent and sustainable solutions. The implementation of agents
Generative AI strengthens the efficiency and competitiveness of Vaca Muerta, positioning it
the region as a global benchmark in responsible energy innovation.