Deliverable report 52

AI and IAGEN Application Use Case

Real-time monitoring of water sources in Vaca Muerta

Classification of deliverable report 52: "Real-time monitoring of sources" water in Vaca Muerta":

ÿ Classification 1: By Main Resource

Water + energy

- The report is dedicated exclusively to the management, monitoring and control of Real-time water quality. AI is applied to reduce risks water environments and optimize water use in industrial activities.

Classification 2: By Activity within Vaca Muerta

Energy Efficiency and Sustainability

- The focus of the report is environmental and operational sustainability through intelligent monitoring of water resources. It aims to prevent pollution, reduce water consumption and improve reuse and disposal practices.

Classification 3: Type of AI Technology Used

- 2ÿÿMachine Learning Algorithms (anomaly detection, event correlation with external factors)

- 4ÿÿArtificial Vision Systems and Image Analysis (use of satellites, drones, optical sensors)

- 5ÿÿAI Systems Based on Intelligent Agents (automatic monitoring and alert platforms)

- 6ÿÿAI Platforms for Data Integration and Big Data (IoT sensors, data environmental, real-time analysis platforms)

Classification 4: By Strategic Impact on the Industry

AI for Sustainability and Environmental Impact Reduction

- The proposed system improves the response to polluting events, It allows to prevent failures, reinforces the social license to operate and optimizes the use of a vital resource. The transition from reactive management to a predictive and proactive environmental management in Vaca Muerta.