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Case Study Pharmaceutical API

# Sartan Block API Pharma Plant: Implementing an Automated DCS Control System from Concept to Commissioning

DCS Controlled Pharma-API

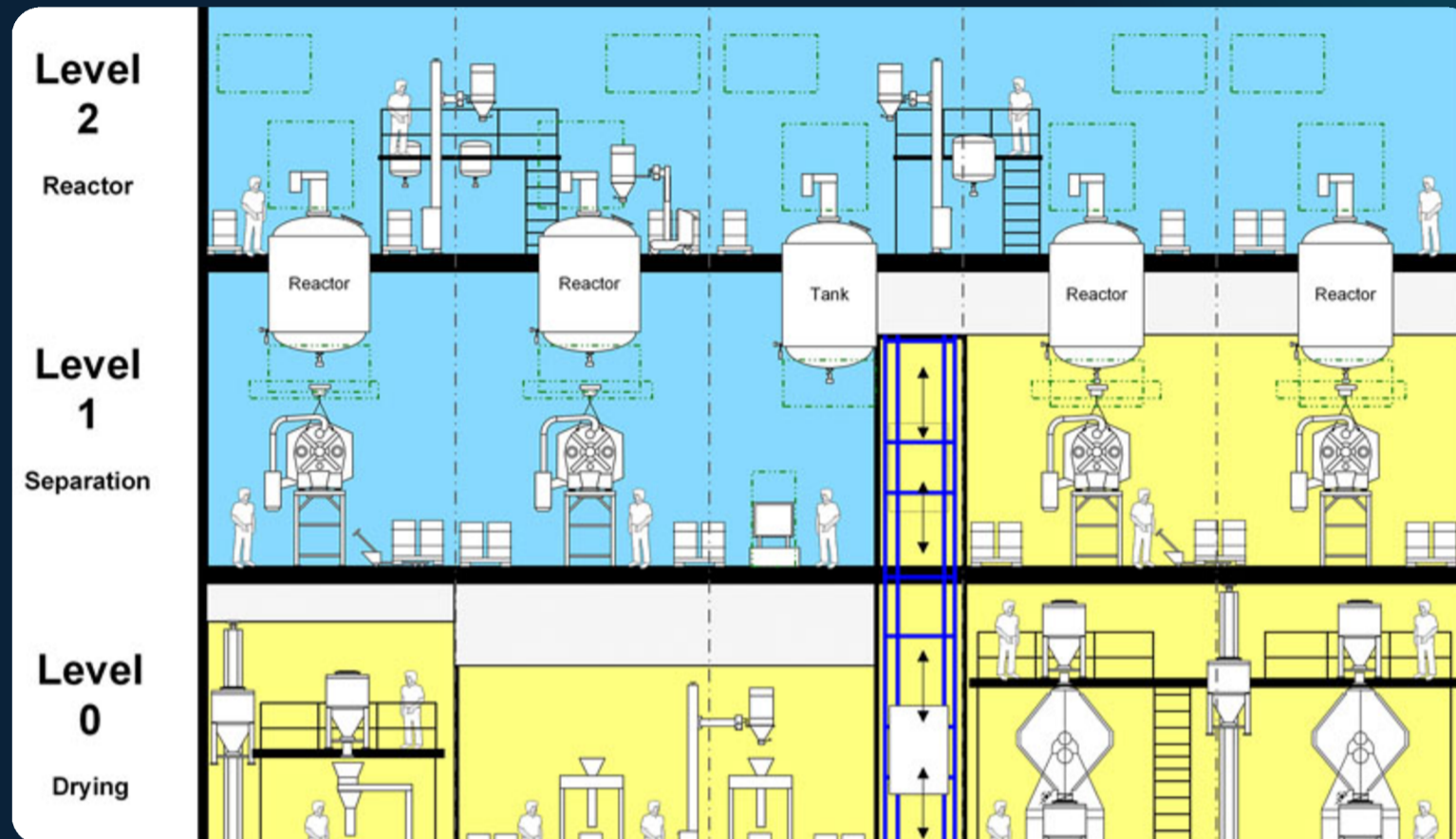


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# Challenge

Cadila Pharmaceuticals aimed to establish a state-of-the-art Automated Active Pharmaceutical Ingredients (API) manufacturing plant at Dahej with an investment of Rs. 200 crore over 12 months. They sought to automate all unit operations for reactors and SRP, including heating/cooling, inertization, solvent addition, and pH control to enhance manufacturing capabilities, ensure high purity and consistency in API production, and reduce environmental impact. The goal was to implement a DCS Control System compatible with MES, SAP, and Industry 4.0 technologies.

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# Our Solution

Sierra deployed the advanced PlantPax DCS control system from Rockwell Automation for API plant, featuring 3,000 I/Os, enabling automated heating/cooling, solvent addition, pH control, and utility controls. Timely delivery was ensured through simulated testing (HWFAT, SWFAT), pre-commissioning, and startup activities. GAMP-5 methodology was followed for DQ-IQ-OQ documentation, guaranteeing a right-first-time solution with regulatory compliance.

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# Results

The implementation of the automated DCS Control System at Cadila Pharmaceuticals resulted in significant achievements: cost and efficiency gains, including a 50% reduction in total investment costs and lower manpower requirements; consistent quality, ensuring high-quality batch production while optimizing energy use and reducing cycle times. Sierra received a prestigious trophy for exceptional engineering standards and the successful delivery of a world-class automation solution.

# Client Testimonial



"Sierra is more than just an automation company; it's about the people behind it. When seeking an automation partner, you can rely on Sierra for world-class results. Their expertise in instrument selection, DCS engineering, and validation documentation was invaluable. Thanks to their exceptional support, we successfully commissioned our API plant at Dahej on time with a fully automated DCS control system. "

**- Mr. Biswajit Mitra | Chief Mentoring  
Officer, Cadila Pharmaceuticals**



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Your Automation Partner  
from Concept to Commissioning

Contact us today to discuss your automation needs!

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