



Manufacturing operations solution

CapitalAi



NexAI optimises manufacturing operations for improved efficiency and consistency

In the complex world of industrial manufacturing, operational efficiency and process control are critical to success. When a leading manufacturing company faced challenges with their aging automation systems, they turned to CapitalAI for an innovative solution. This success story demonstrates how our advanced NexAI platform transformed their operations, setting a new benchmark in the industry.

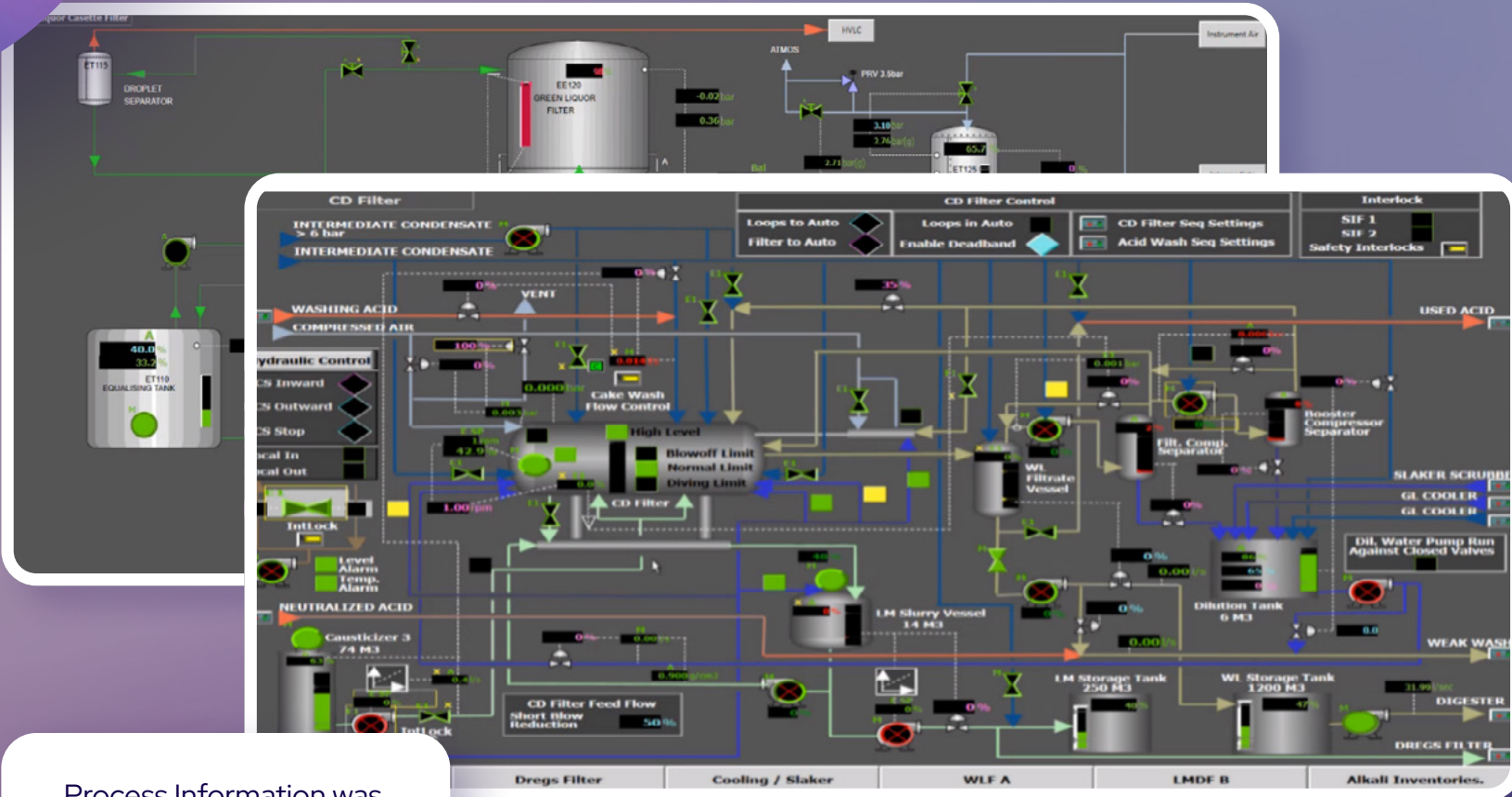


Challenge

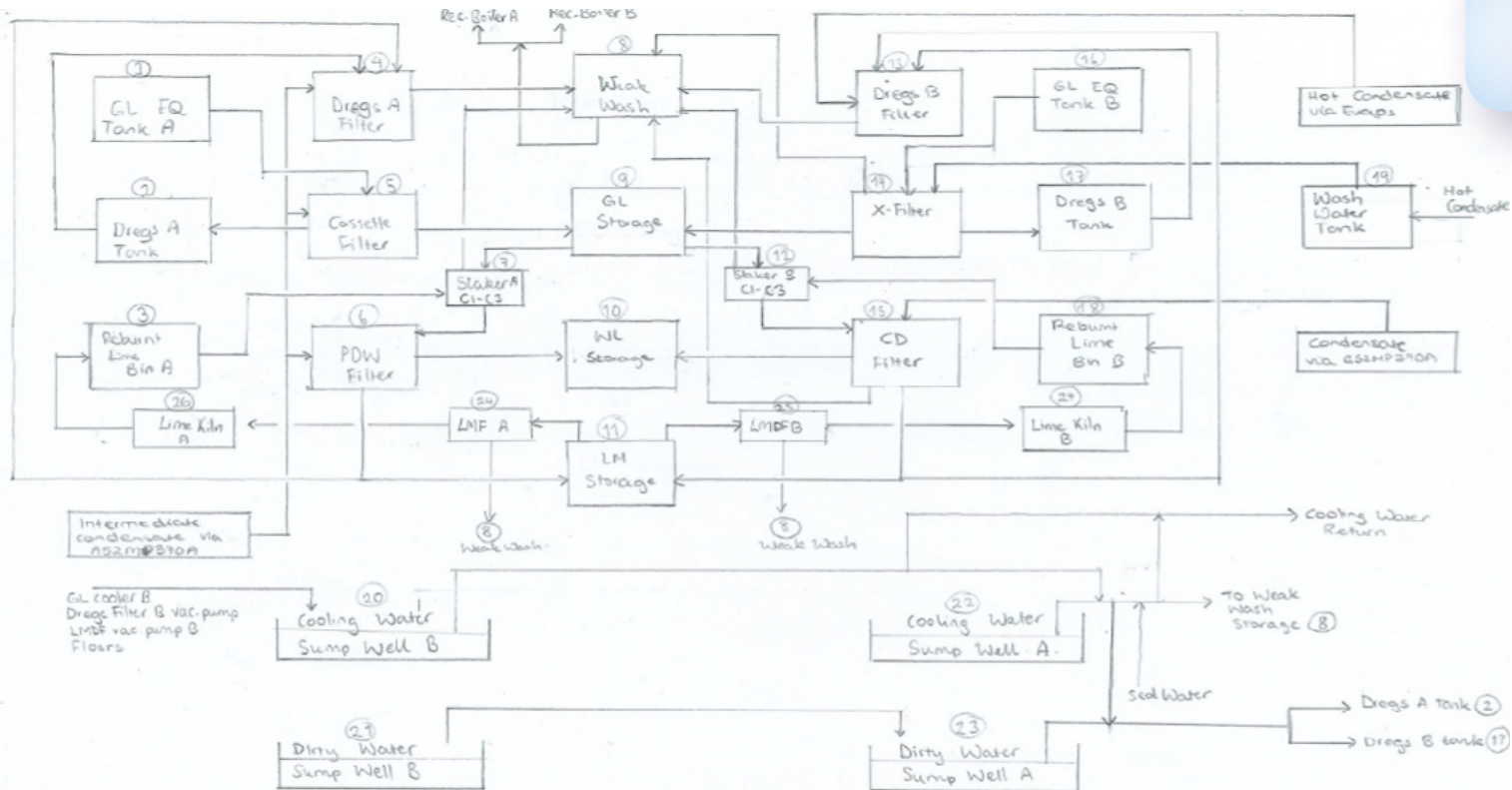
Our client, a global manufacturing company, was grappling with persistent process control issues that were creating inefficiencies and increasing production costs. Operators struggled with the complex process which requires manual intervention, leading to production inefficiencies.

The client identified several critical issues:

- Difficult-to-modify Distributed Control Systems (DCS) with cumbersome mimics
- Over-reliance on operator skill and attention, resulting in inconsistent plant operation and reduced throughput
- Inability to forecast and monitor remaining running times for each sequence or be alerted to potential clashes
- No appetite for process downtime, re-commissioning, or large capital expenditures
- Incredibly complicated process that has many components and sequences that run asynchronously but share the same process streams with less than desirable observability.



Process Information was buried across multiple screens and pop-ups




Convolved, interconnected process, with multiple related sequences running asynchronously



Solution

CapitalAI was approached by the client due to our unique understanding of industrial systems and processes as well as our experience in utilising operational data. CapitalAI deployed its state-of-the-art NexAI platform to address the client's operational challenges. This big data platform leverages operational data from connected IoT devices, machines, vehicles, and DCS systems to provide comprehensive insights and optimise processes.



How NexAI tackled the problem

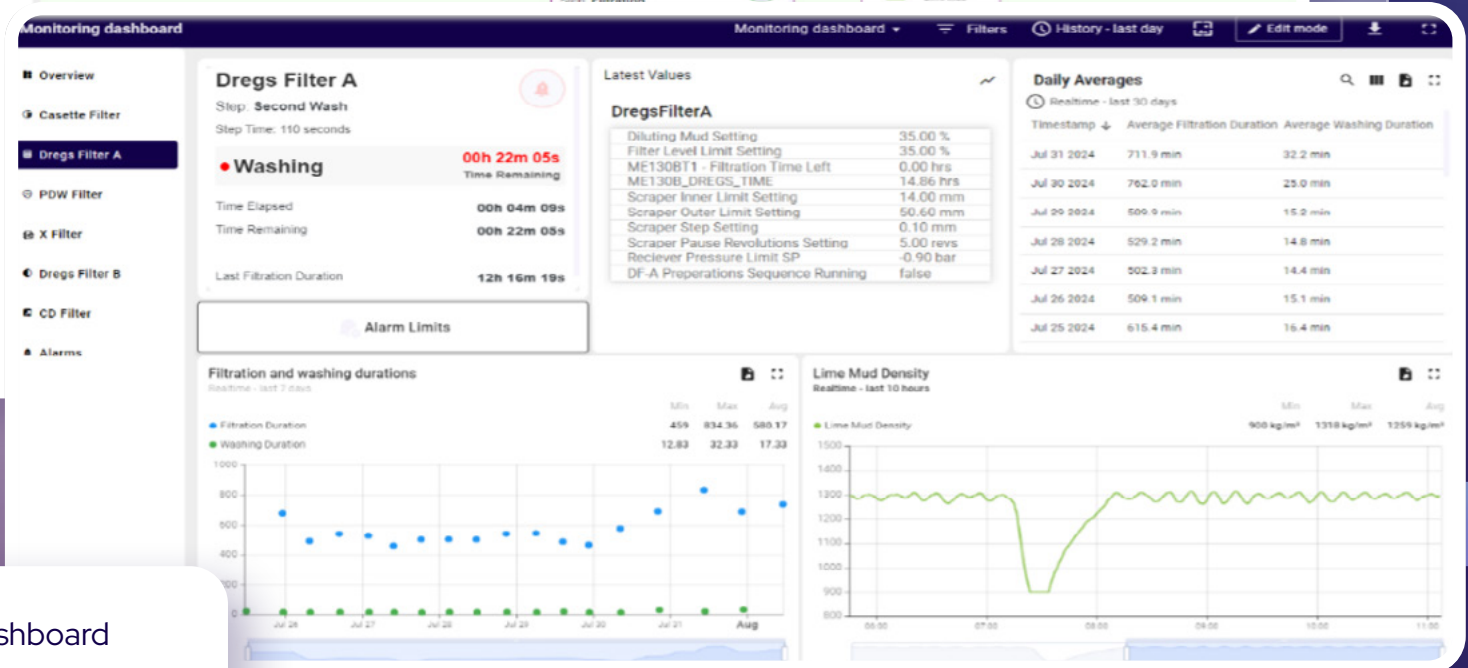
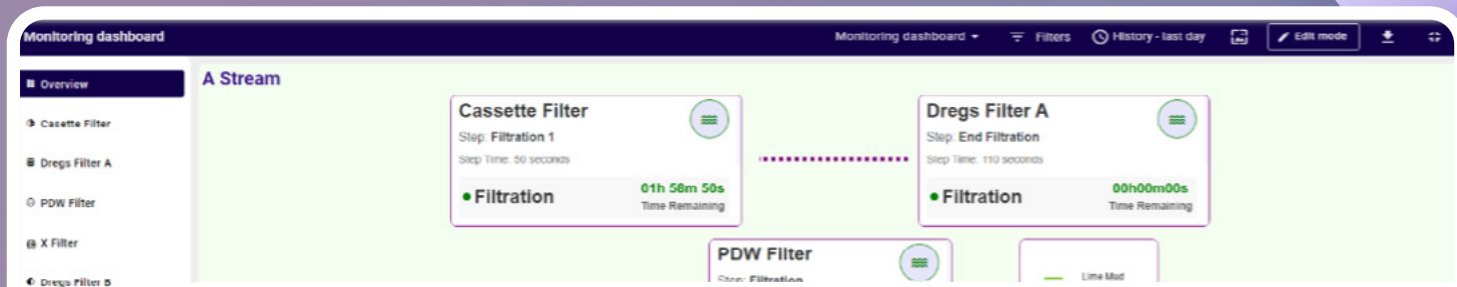
Root cause analysis: The CapitalAI team worked closely with the client to understand the underlying causes of the plant's operability issues, identifying a lack of observability and forecasting capabilities as key factors.

Data integration: NexAI tapped into the existing sea of DCS tags, identifying available information and determining what was missing.

Unified dashboard: NexAI presented the overall system status in a simplified, user-friendly dashboard, providing operators with clear, actionable insights.

AI-powered forecasting: The platform's AI capabilities allowed for runtime issue forecasting, potential conflict detection, and fault identification in the process.

Real-time monitoring: NexAI continuously monitored the plant's operations, providing up-to-date information on sequence statuses and potential clashes.



NexAI's process dashboard providing visibility, interactivity and run-time predictions for operators.

Results

The implementation of NexAI yielded impressive results:

- **Enhanced operational consistency:** By providing operators with clear, actionable insights, NexAI significantly improved the consistency of plant operations.
- **Reduced unplanned downtime:** The ability to forecast runtime issues and detect potential conflicts led to a substantial reduction in unexpected shutdowns.
- **Improved decision-making:** Operators were empowered to make more precise decisions based on the comprehensive information provided by NexAI.
- **Increased efficiency:** The streamlined plant operations resulted in improved overall efficiency and throughput.
- **Cost-effective solution:** NexAI provided these benefits without requiring process downtime, re-commissioning, or large capital expenditures.
- **Enhanced visibility:** The unified dashboard offered a clear overview of the entire process, addressing the limitations of the existing DCS.

Conclusion

CapitalAI's NexAI has proven to be a game-changer in the manufacturing industry. By addressing the critical challenges of process control and operational efficiency, we've helped our client enhance their plant operations, ensure consistency, and improve overall productivity. Our big data platform NexAI met and exceeded the specific expectations for improved observability, forecasting, and decision-making support – all without disrupting existing operations or requiring significant capital investment.

As we continue to innovate and expand our AI-powered solutions, CapitalAI remains committed to driving excellence in industrial operations across the globe. Are you ready to revolutionise your manufacturing processes? Contact CapitalAI today to learn how NexAI can transform your operations and unlock new levels of efficiency and consistency.

Are you ready to revolutionise your label verification process?

Contact CapitalAI today on 1800 668 545 or info@capitalai.ai to learn how NexAI can transform your meat processing operations.



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