# Case Study: Transforming Hospital Costs and Supply Chain with AI

Challenge

A leading European hospital group faced declining margins due to changes in the Diagnosis-Related Group (DRG) system, rising material and labour costs, and persistent shortages. The group had initiated a digital transformation project, consolidating multiple ERP instances and streamlining EHS data. However, the management team lacked insights into material and overall cost forecasts, as well as a granular understanding of costs at the patient, ward, and procedure levels.
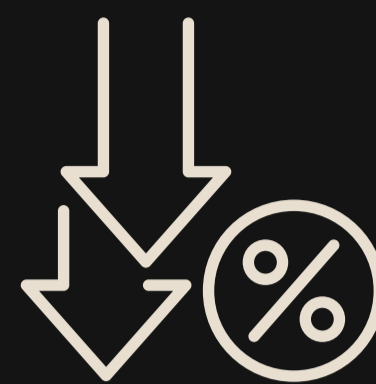
Solution

Vamstar, an AI-powered healthcare analytics company, introduced its Hospital Data Orchestration methodology to the hospital group's C-level team. The methodology combined spend and cost data from ERP with procedure and patient-level data from EHS systems using Vamstar's proprietary Code Matching Algorithms. Vamstar's augmented machine learning technology cleaned, organised, joined, and normalised the large datasets, enabling a stream of analytics.

Implementation

Vamstar's team worked closely with the hospital group to integrate their ERP and EHS data, ensuring a seamless flow of information. The Code Matching Algorithms accurately combined the datasets, while the machine learning technology processed and analysed the data. The hospital management teams received comprehensive analytics on a weekly basis, covering various aspects of their operations.

Results

The implementation of Vamstar's Hospital Data Orchestration methodology yielded significant results for the hospital group:

Granular Insights:

The management teams gained access to per patient, per ward, and per procedure level analytics, enabling them to identify variations across hospitals and understand net costs for delivering services across geographies. Additionally, it also brought to surface key insights about shortages and product utilisation trends across sites.

Improved decision-making:

The analytics ranged from descriptive and prescriptive to predictive, providing alerts, notifications, and event-level insights. This empowered the hospital group to fine-tune its healthcare operating environment and make informed decisions while minimising operational risk.

Optimised reimbursement:

The hospital group gained a clear understanding of accessible reimbursement and how it split across the cost lifecycle, allowing them to optimise their financial performance.

Targeted investments:

With insights into costly mistakes and areas requiring improvement, the hospital group could direct investments more effectively, ensuring better resource allocation and cost management.

Conclusion

By partnering with Vamstar and implementing its Hospital Data Orchestration methodology, the European hospital group successfully transformed its cost structure and supply chain management. The AI-powered analytics provided granular insights, improved decision-making, optimised reimbursement, and enabled targeted investments. This case study demonstrates the power of AI in driving operational efficiency and financial sustainability in the healthcare industry.

Average Savings - - - - - **23%**

20X - - - - - **Supply Chain Efficieny**

Data Standardisation - - - - - **99.9%**