ENERGICA: CLIENT SUCCESS STORY

# Custom Machine Learning for AI-Powered Wheat Pricing — Turning Data, Analytics and Geopolitics into Market Edge

*Food & Beverage Enterprise — Middle East Region*

## CHALLENGES & ISSUES

- **Demand forecasting gaps:** overstocking and stockouts around Ramadan and peak seasons.
- **Fragmented data:** sales, inventory, and supply chain data siloed across systems.
- **Supply chain inefficiencies:** manual planning drove delays and perishable wastage.
- **Scaling constraints:** rapid expansion outpaced legacy, rule-based systems.
- **Logistics cost volatility:** Asia–Gulf freight rates up 35–55% amid route disruptions.
- **Wheat pricing exposure:** input costs near 2-year highs, up ~30% YoY.
- **Geopolitical risk:** Iran–Gulf tensions disrupted Hormuz shipping lanes.

## OUR SOLUTION

- **Demand forecasting model:** tuned to regional seasonality and events.
- **Data integration pipeline:** unified POS, inventory, and supply chain data.
- **Predictive inventory & procurement:** optimized stock, cut spoilage.
- **Customer segmentation:** targeted promotions and personalization.
- **Logistics cost forecasting:** tracks freight, fuel, and route risk.
- **Commodity price monitoring:** flags wheat & input-cost risk early.
- **Geopolitical risk indicators:** triggers contingency planning.
- **Live dashboards & alerts:** real-time demand and risk visibility.

## MARKET SNAPSHOT INFORMING THE MODEL — JUNE 2026

| Wheat Price | Freight Rates | Hormuz Risk |
|---|---|---|
| **~\$6.40–\$6.50/bu** | **+35–55%** | **~20% of oil flow** |
| Up ~29% YoY, near 2-year highs. | Asia–Gulf spot rates, plus reroute delays. | Transits neared zero at peak crisis. |

*Sources: Energica Wheat Pricing Model (June 2026).*

## CRITICAL SUCCESS FACTORS

1. **Data Quality Over Quantity —** verified sources over speculative estimates.
2. **Transparent Assumptions —** every forecast assumption documented for audit.
3. **Human-in-the-Loop —** probabilistic ranges; experts decide.
4. **Adaptive Learning —** flags when historical patterns break down.
5. **Actionability —** every forecast pairs with a clear and accurate pricing.

This model predicts wheat pricing with relative accuracy, enabling proactive procurement decisions. **The result:** stable input costs, less spoilage, faster procurement, and a price forecasting framework built to withstand market shifts.

## OUTCOMES

| | | |
|---|---|---|
| **Reduced Wastage**<br>Less spoilage via event-aware forecasting. | **Fewer Stockouts**<br>Better stock availability at peak demand. | **Price Forecast & Cost Stability**<br>Logistics and input costs better anticipated. |
| **Faster Procurement**<br>Auditable, data-driven decisions. | **Stronger Engagement**<br>Personalized offers, better retention. | **Built to Scale**<br>Resilient framework for continued growth. |