SWOT Analysis – Cornflow Project

Project Context: Data Analytics & BI System for Corn Production Analysis

Client: Sai-Krupa Trending Pvt Ltd

Vendor: Sainath Chikane (Freelance)

# Strengths (Internal Advantages)

* Strong Domain Understanding – The vendor (Sainath) worked across analytics, data engineering, and business operations.
* Full-Stack Ownership – End-to-end control over ETL, database, Power BI, and SQL layers.
* Custom BI Design – Dashboards tailored to actual decision-making needs: cost, production, ROI, expansion zones.
* Structured Documentation – BRD, FRD, FSD, RFP/RFQ were professionally developed for transparency.
* Low Cost Delivery – Project executed at ₹1.2 Lakhs — a budget-friendly, high-quality delivery.

# Weaknesses (Internal Limitations)

* No Real-Time Data – Manual upload limits the automation potential.
* Limited Integration – No API for weather, pricing, or IoT in Phase 1.
* Single Resource Dependency – One-man execution (Sainath) poses delivery risks in scaling or support.
* No Performance Benchmarking Tools – Lacks integration with alerting or monitoring systems.

# Opportunities (External Possibilities)

* AI/ML Forecasting Models – Predictive models for yield, price, or supply chain planning can be added in Phase 2.
* Mobile Dashboarding – Power BI mobile version or native app for field users.
* API Integration – Weather APIs, mandi rates, logistics tracking can enrich insights.
* New Clients – Sai-Krupa can use this framework to offer analytics to other farmers/vendors as a paid service.
* Grant/Funding – Scalable agri-analytics platforms are eligible for government or agri-tech startup support.

# Threats (External Risks)

* Data Availability Risk – If production data is delayed or corrupted, analytics is stalled.
* User Adoption – End users may be unfamiliar with digital dashboards; needs proper training.
* Technology Obsolescence – Manual ETL could become inefficient as data volume increases.
* Cybersecurity – Without hardened cloud infrastructure, data leakage or unauthorized access is a threat.
* Competition – Larger agri-tech companies might offer similar solutions with more automation and support.

# SWOT Summary Table

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| Strengths: - Domain knowledge, full-stack delivery - Power BI integration - Strong documentation  Weaknesses: - Manual upload, limited automation - No IoT or API connection yet - One-man dependency | Opportunities: - AI/ML forecasting - Mobile dashboards, grant support - Scalable for other clients  Threats: - Cybersecurity risks - Low user training/adoption - Manual ETL may not scale long-term |