



"OPTIMIZING MANUFACTURING PROCESS" PERFORMANCE TRACKING IN NESTLÉ MOROCCO'S DAIRY DEPARTMENT VIA POWER BI

Internship presentation by Achraf Kabbour, April 2025

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EXECUTIVE SUMMARY

- Internship at Nestlé Morocco's Dairy Department, spring 2025.
- Goal: Address inefficient manual tracking of Nestlé Continuous Excellence (NCE) processes.
- Solution: Developed a Power BI dashboard for real-time tracking of 7 Key Success Requirements (KSRs) and 4 Digital Tools (DTs).
- Impact: Improved visibility, identified 35 overdue tasks, and proposed Industry 4.0-aligned solutions.
- Key stat: KRONES line at 86% KSR compliance vs. OCTABINE at 37%.

NESTLÉ AND DAIRY CONTEXT



- Nestlé Global: World's largest food & beverage company, USD 91.2B revenue (2023), 180+ countries.
- Nestlé Morocco: Nido, top-selling powdered milk, drives revenue in USD 2B dairy sector.
- Dairy Market Trends: Growing demand (USD 729.8B by 2030), digitalization, sustainability challenges.
- Morocco's Industry 4.0: Government push for digitization aligns with project goals.

BUSINESS PROBLEM



Issue: Manual Excel tracking of NCE (7 KSRs: Safety, Quality, etc.; 4 DTs: POKA, DMO, etc.) led to:

- Delays: 3-day reporting lag.
- Errors: Inaccurate data risking safety/quality.
- Non-simultaneous reviews: Hindered decision-making.
- Impact: Threatened Nido's quality compliance and operational efficiency.
- Relevance: Aligns with Nestlé's digitization goals and Morocco's Industry 4.0 initiative.

#	KSR (Key Standard Routine)	Purpose
1	Cleaning (CIL)	Ensure machines are clean, safe, and ready for operation
2	Centerline (CL)	Keep critical machine settings in optimal range
3	Changeover	Standardize startup, shutdown, and product change procedures
4	Maintenance Planning	Preventive maintenance and planning to avoid breakdowns
5	Quality	Quality checkpoints to avoid product defects and rework
6	Safe Way of Working	Ensure compliance with safety behaviors and practices
7	Tagging (if AM pillar active)	Visual tagging to identify abnormalities and open issues

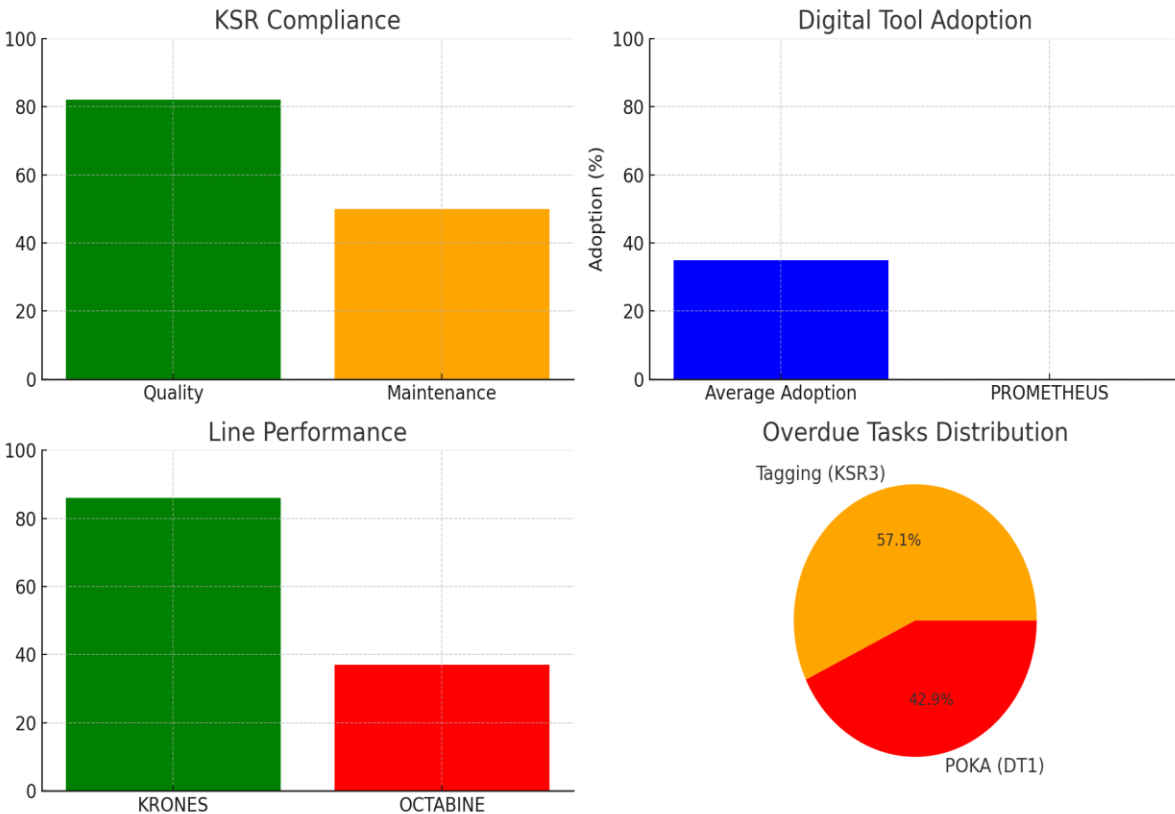
POWER BI SOLUTION

•Methodology:

- Data Sourcing: Extracted ~300 tasks from Excel.
- Data Transformation: Cleansed data, added fields (e.g., “Days Remaining”).
- Analysis: Used DAX for stats (e.g., avg KSR progress).
- Dashboard: Built KPIs, slicers, and visualizations (bar charts, tables).
- Key Features: Real-time tracking, drill-downs for 5 production lines (SCHMUKER, OPTIMA, KRONES, OCTABINE, MATEER BURT).

KEY FINDINGS

Performance & Risk Insights from Nestlé Dairy Department



- KSR Compliance: Quality (82%) strong, Maintenance (50%) weak.
- Digital Tools: Low adoption (35% avg), PROMETHEUS at 0%.
- Line Performance: KRONES (86%) excels, OCTABINE (37%) lags.
- Overdue Tasks: 35, mostly Tagging (KSR3) and POKA (DT1).
- Insight: Maintenance and digital tool gaps risk downtime and efficiency losses.

IMPLEMENTATION CHALLENGES

- Limited Live Data: Manual Excel updates slowed analysis.
- Operator Resistance: Preference for Excel, viewed Power BI as complex.
- Resource Constraints: Production prioritized over dashboard adoption.
- Tech Skills Gap: Operators needed training (e.g., POKA at 45% progress).
- Mitigation: Conducted training and town halls, but time constraints persisted.



STRATEGIC RECOMMENDATIONS

- Full Power BI Integration: Live data by Q3 2025.
- Resource Reallocation: Shift from KRONES to OCTABINE by May 2025.
- Digital Tools: 100% POKA compliance by Q2 2025, plan PROMETHEUS for Q3.
- Maintenance Committee: Form by June 2025 to address 50% compliance.
- Feedback System: Weekly via Power BI by May 2025.
- Alignment: Supports Nestlé's sustainability and Morocco's Industry 4.0 goals

- Objectives: Master Power BI, enhance transparency, gain management experience.
- Lessons: Flexibility and persuasion are key; digital transformation needs cultural shifts.
- Future: Prepared for management roles and Industry 4.0 contributions in Morocco.

INTERNSHIP REFLECTIONS

CONCLUSION

- Summary: Power BI dashboard improved transparency, addressed inefficiencies, and aligned with Industry 4.0.
 - Impact: Enhanced operational efficiency, supported Nestlé's sustainability goals, and set a model for Morocco's dairy sector.
 - Call to Action: Nestlé should adopt recommendations to stay competitive and lead in digital transformation.
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THANK YOU

ANY QUESTIONS?