

WIELTON

# AI Transformation Study

AI Transformation Study — Preview

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PREPARED EXCLUSIVELY FOR

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WIELTON

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# 1. Introduction to Operational Leakage at Wielton S.A.

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Your semi-trailer assembly lines carry hidden margin loss through delayed variance capture and manual scrap reconciliation—wasting costly capacity and material in near-real-time.

Our analysis focused on your Process Engineering team's production data reconciliation effort and its impact on OEE, scrap rate, and first-pass yield metrics. The single largest leak is the latency between variance occurrence and actionable response, causing repeated takt time interruptions and material rework.

**Estimated Monthly Leakage: PLN 60,000–85,000**

**Annualized: PLN 720,000–1,020,000**

## Operational Insight

Across Wielton's multi-site assembly operations:

**90–125 hours/week** are spent manually normalizing production variance and scrap data.

Equivalent to:

**2.5 full-time Process Engineers**

consuming capacity on data wrangling instead of throughput optimization.

## What We Found

1. **Manual variance logging delays** across SAP ERP and MES monitoring systems create 24–48 hour response gaps, pushing scrap rates higher

before root cause action.

Fix: Introduce integrated real-time variance detection workflows linked to SAP and MES data streams.

2. **Scrap data aggregation in legacy spreadsheets** consumes an estimated 15 hours weekly in duplicated labor by engineers and schedulers.

Fix: Deploy an automated scrap analysis engine embedded within the existing MES, reducing manual entry and standardizing reporting.

3. **First-pass yield inconsistencies across SKU families** go undetected until shift end, constraining takt time adherence and inflating rework loops.

Fix: Real-time defect tracking dashboards with prioritized alerts for SKU deviations and automated documentation.

## Diagnostic Insight

Wielton's current operational rhythm relies heavily on manual buffering through local process logs and Excel normalization to patch inconsistencies between SAP, MES, and SQL historical data. This workaround consumes scarce engineering capacity and delays containment of scrap variances, creating an invisible margin drag distributed across multiple shifts and sites.

## Structural Inevitability

With distributed assembly lines operating under independent scheduling nodes, even minimal latency in variance processing propagates downstream uncertainty—each site hedging takt time buffers independently rather than safely pooling slack. Combined with Wielton's multi-SKU complexity and heavy-duty assembly domain, this leads to compounded scrap waste and cascading first-pass yield impact, particularly under variable demand cycles.

Operational risk is not theoretical. Delayed intervention costs Wielton both material scrap and lost throughput capacity, directly eroding competitiveness in the European heavy trailer market where margin pressure is acute.

Capital allocation for AI-enabled real-time integrative workflows enables capacity release without new line investment—crucial for sustaining Wielton's bid competitiveness in large fleet contracts.

The full study includes a detailed 12-chapter blueprint: three prioritized AI initiatives with ownership, phased execution roadmap by week, rigorous investment breakdown, and a C-Level executive brief suitable for board decisions. This preview sizes the opportunity. The full study is the execution blueprint.

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## 2. Enterprise Quick Wins at Wielton S.A.

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For Wielton, immediate action on manual variance reconciliation and scrap data normalization is essential to stem ongoing margin leakage measured at PLN 720K–1.02M annually. This chapter presents a quick win executable with current resources that accelerates takt time stabilization and aligns with your 5% OEE improvement target.

### Quick Win Showcase: Real-Time Scrap Variance Pivot Dashboard

- **Why it matters:** Current manual aggregation of scrap data from multiple Excel reports into SAP and MES delays root-cause identification by 24–48 hours, increasing material waste and forcing reactive rework loops. A real-time pivot dashboard leverages existing SQL production KPI exports and MES scrap logs to consolidate defect data across all assembly sites within one tool, accelerating variance visibility.
- **What it changes:** Enables continuous monitoring of scrap rate by line and SKU family during shifts, providing actionable alerts that reduce scrap escalation and boost first-pass yield measurement accuracy. This directly supports your KPI of a 3% scrap rate reduction and underpins the targeted 2% first-pass yield improvement.
- **Scope:** Start with Monday shift data from Plant 3, Lines 4 and 5, extracting columns: defect\_type, SKU\_family, quantity, shift\_timestamp; visualize weekly scrap volume per SKU family broken down by defect causes.

The full study contains 5–7 additional wins across real-time bottleneck detection, automated assembly documentation, and integrated scheduling variance tracking—each with detailed execution steps, ownership assignments, and KPI gates for operational accountability.

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## 3. Conclusion: What This Preview Cannot Do for Wielton S.A.

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This preview identified a monthly leakage of PLN 60,000–85,000 in manual production variance reconciliation, scrap logging delays, and data normalization efforts across your assembly lines. Annualized, that compounds to PLN 720,000–1,020,000 per year—capital currently absorbed through scrap, rework labor, and takt time variability.

The Execution Gap:

- A vendor-shortlist and reference architecture integrated with SAP ERP, MES, and SQL databases for Wielton's three strategic priorities, including deployment sequencing and system integration design.
- A detailed, week-by-week 90-day execution roadmap specifying owner roles within Process Engineering, KPI gates aligned to OEE, scrap rate, and first-pass yield, and stop/go decision thresholds.
- A C-Level Executive Brief designed for board presentation, containing financial modeling, three-year payback projections, and sensitivity analysis tied to Wielton's operational KPIs.

One Example: The full study designs a Scrap Variance Control Pack for your process engineers—defect cause rules, automated alerts, and weekly review cadence that dramatically reduce scrap escalation, harmonized within the existing SAP and MES workflow infrastructure.

### Cost of Delay

Every month without action:

**PLN 60,000–85,000** absorbed in scrap, rework labor, and throughput variability.

Over the next 12 months:

**PLN 720,000–1,020,000** in unrealized operational margin.

That is not a projection. It is the current run rate.

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Wielton holds a key competitive position as a leading European trailer manufacturer with diversified lines and geographic reach. However, legacy manual processes for variance logging and scrap reconciliation introduce a structural vulnerability in takt time adherence and yield economics. The ongoing compounding of delayed detection and reaction inflates operational costs and reduces bid competitiveness for large fleet contracts. Market pressure from more digitally integrated operators and rising indirect labor costs demand a rigorous, structured approach beyond isolated sensor pilots or fragmented analytics. This requires unified execution to close the latency gap across autonomous sites and technology platforms.

[Unlock the Full Transformation Blueprint](#)

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