

# BOS – Reporting & BI Engine

## HOW DATA BECOMES INSIGHT (Official Document)

Truth-first Business Intelligence, Audit-safe, Explainable

### 1. Core Doctrine

The BOS Reporting & BI Engine exists to explain business reality, not to decorate dashboards. All insights are derived from verifiable events and governed by clear definitions.

### 2. Role Within BOS

The BI Engine aggregates data from all BOS engines including Accounting, Inventory, Cash Management, Procurement, HR, Promotion, and POS systems.

### 3. Event-Based Data Model

BI operates on event streams rather than static tables. Every sale, cash movement, stock transfer, attendance scan, and promotion application is treated as an immutable event.

### 4. Semantic Layer & Metrics

Raw events are translated into business metrics such as revenue, margin, cash position, stock turnover, attendance rate, and promotion impact. Each metric has a documented definition.

### 5. Dashboard Views

The engine provides role-based dashboards for owners, managers, accountants, auditors, and staff. Sensitive data is protected by permissions.

### 6. Time, Comparison & Currency Logic

Reports support daily, weekly, monthly, and custom periods. Comparisons across branches and periods respect currency and country context.

### 7. Alerts & Early Warnings

The BI Engine generates alerts for anomalies such as cash leakage, inventory shrinkage, abnormal discounts, and attendance abuse. Alerts indicate risk, not guilt.

### 8. AI-Assisted Insights

AI may explain trends, answer business questions, and assist what-if analysis. AI does not alter data or make autonomous decisions.

### 9. Governance & Versioning

Reports and metrics are versioned. Changes create new definitions while preserving history. This ensures consistency during audits.

## 10. Export & Sharing

Reports can be exported via PDF, CSV, or API. Access is role-controlled and exports may include watermarks.

## 11. What the BI Engine Is Not

The engine does not manipulate data, does not perform accounting postings, and does not replace statutory reporting systems.

## 12. Final Doctrine

The BOS Reporting & BI Engine transforms operational events into trustworthy, explainable insights that support decision-making without compromising data integrity.