

# Appendix A1 – LCM Transactions Algorithm Outline

**Module Name:** LCM Transactions

**Purpose:** To centralize, categorize, and reconcile property-related transactions across lease events, tenant interactions, and contract updates. The module helps identify anomalies, reconcile financial entries, and score risk-prone transactions using proprietary logic.

**Key Inputs:** Raw lease transaction logs (timestamped entries) Property ID, tenant ID, unit ID  
Contractual terms: rent, service charges, review dates Bank reconciliation feeds External feeds: valuation data, eviction reports

**Core Algorithm Logic:** For each transaction in lease\_logs: Identify transaction type (rent, service charge, deposit, etc.) Cross-check transaction against active lease contracts: - Validate amount range ( $\pm$  threshold based on contract) - Verify due date vs. actual timestamp - Flag early/late payments for scoring Match transaction with bank feed using: - Unique lease ID and timestamp proximity - Amount proximity ( $\pm$  tolerance) If transaction unmatched: Flag as anomaly with 'Unreconciled' status If matched: Score transaction using: Risk = base\_score + late\_fee\_factor + anomaly\_weight Append risk\_score to transaction record Group all transactions per property/tenant: Aggregate scores for total risk insight Create summary view by property, unit, and period

**Key Outputs:** Risk-scored transaction ledger Flagged anomalies for audit trail Reconciliation report by lease Dashboard visual: high-risk transactions and unreconciled items