Appendix A1 – LCM Portfolio Analysis Algorithm Outline

Module: LCM Portfolio Analysis

This module is designed to evaluate real estate portfolio performance across a range of strategic and operational metrics. It leverages internal and external data to provide strategic insights into occupancy, lease value trends, sustainability exposure, and long-term financial viability. The algorithm dynamically adjusts scoring weightings based on asset class and ownership goals (e.g. growth, divestment, or holding).

Key Inputs

• Lease data (length, expiry dates, break clauses)

• Occupancy rates and vacancy periods

• Asset energy ratings (EPC), sustainability data

• Net operating income (NOI)

• Maintenance and capital expenditure history

• Benchmark portfolio data (optional)

Outputs

• Portfolio health score (0–100)

• Risk-weighted lease maturity exposure chart

• Occupancy efficiency rating (%)

• Sustainability risk flag (traffic-light style)

• Suggested asset strategy: retain, reposition, divest

Pseudocode

```
function calculate_portfolio_analysis(portfolio_data): for asset in
portfolio_data: lease_score = score_lease_maturity(asset.lease_dates,
asset.breaks) occupancy_score = calculate_occupancy(asset.vacancy,
asset.capacity) income_score = normalise(asset.noi, asset.value)
sustainability_risk = assess_sustainability(asset.epc_rating,
asset.emissions) capex_trend = analyse_capex_history(asset.capex_log) #
Weighting adjustments based on strategic goals if asset.strategy ==
'growth': weightings = [0.3, 0.2, 0.3, 0.1, 0.1] elif asset.strategy ==
'hold': weightings = [0.25, 0.25, 0.2, 0.15, 0.15] else: # divest
weightings = [0.4, 0.1, 0.2, 0.2, 0.1] asset_score =
weighted_sum([lease_score, occupancy_score, income_score,
sustainability_risk, capex_trend], weightings) output.append({
'asset_id': asset.id, 'health_score': asset_score, 'recommended_action':
determine_strategy(asset_score) }) return output
```

This module is a core decision-support tool for asset managers, property strategists, and finance leads. It integrates dynamic weighting and cross-variable correlation scoring that is not standard in existing real estate dashboards. Replication would require access to diverse lease and sustainability data plus the domain knowledge encoded into the weighting logic.