

Climate-equipment monitoring and predictive-maintenance architecture

Client Major national retail group
Role Enterprise Architect / Solution Architect
Period 2015-08 — 2015-12

CONTEXT

Inconsistent temperature control across thousands of stores drove product losses and elevated energy costs, with equipment failures handled reactively. The client needed to move quickly to tender, but the wrong architectural choice would mean expensive rework.

APPROACH

Framed temperature control as a strategic operational asset rather than utility infrastructure. Made the economic logic explicit — what data is needed, where it is captured, how it is governed, how signals become maintenance decisions — and developed two architectures (centralized cloud vs. distributed hub) as distinct trade-offs rather than one recommendation.

OUTCOME

Gave a major national retail group two tender-ready architecture options for climate-equipment monitoring and predictive maintenance, with a quantified 10% electricity-cost reduction and a path to eliminate spoilage from equipment failure.

- Quantified 10% electricity-cost reduction and elimination of spoilage from equipment failure.
- Two complete architecture options with explicit centralized-vs-distributed trade-offs.
- Vendor-evaluation framework and phased roadmap, leaving the client tender-ready.

KEY RESULT

Framed two tender-ready architecture options for retail climate-equipment monitoring with a quantified 10% electricity-cost reduction, moving the client from vague cost-reduction aspiration to a defensible, ready-to-procure investment decision.