**OPS-15 — FinOps & Cost Guardrails**

**Intent**  
Make costs predictable per tenant; alert on anomalies; stop runaway queries or usage.

**Preconditions**

* Cost export hooks (cloud billing), per-tenant tagging.

**Flow**

1. **Attribution**: tag all workloads/storage by tenant & feature.
2. **Budgets**: per-tenant monthly budgets; alerts at 80/100%.
3. **Guardrails**: query cost caps, auto-throttle bulk jobs, fair-share scheduler.
4. **Anomaly detection**: detect spikes (e.g., enrichment storms), auto-notify tenant + ops.
5. **Dashboards**: cost by feature/tenant, cost per decision, storage by tier.

**Edge cases**

* Shared workloads → proportionally attribute by usage metrics.
* Free tier abuse → rate-limit & email escalation.

**Done when**

* Dashboards live; alerts verified; throttles prevent overage; monthly FinOps report generated.