**PRD-38 — Conflict Minerals (3TG) Due Diligence**

**Intent**

Collect, validate, and roll up Conflict Minerals (3TG: tin, tantalum, tungsten, gold) due diligence using CMRT inputs; surface product risk and produce exportable evidence packs.

**Preconditions**

• Supplier directory linked (Partner Store) and certificate hub (PRD-21).

• Document vault with hashing (PRD-11) and lab/QA linkage (PRD-34) for smelter/refiner verification docs.

• CMRT template mapping and smelter/refiner reference list (trusted snapshots).

**Steps**

• Ingest CMRT: accept supplier CMRT uploads (any version); compute file hash; parse scope, smelter lists, and declarations; store as CMRT Intake Receipt.

• AI Assist (advisory): normalize smelter names/IDs; flag unknowns; suggest likely matches with confidence; reviewer approves mapping.

• Roll-up to Products: link CMRT coverage to products/components; compute per-product status (RCOI performed, DRC conflict-free, undeterminable) with WHY and coverage % (by spend/weight/count as configured).

• Evidence Binding: attach independent audit certificates or refiner validations to smelters; show pass/fail and expiry (PRD-34 hooks).

• Exceptions & Remediation: open tasks for missing CMRTs, unverifiable smelters, or expired audits; track supplier responses and age.

• Reporting & Packs: generate customer/authority-ready Conflict Minerals Pack (smelter list, statuses, coverage, evidence hashes, narrative) per reporting period; sign and store pack receipt.

• Change Hooks: if supplier updates CMRT or a smelter status changes, recompute roll-ups and emit ImpactDelta with a human-readable summary.

**Edge cases**

• Suppliers submit outdated CMRT versions → accept with warning but request refresh; block risk-critical shipments if policy requires current version.

• Duplicate or alias smelter IDs → merge with audit trail; never silently drop entries.

• Partial BOM coverage → label remaining risk explicitly; require executive approval for shipment if below tenant threshold.

**Done when**

• Each product’s 3TG posture is computed and explainable; per-period Conflict Minerals Pack is exportable with signed receipts; holds trigger on missing/expired evidence per tenant policy.