PREDICTIVE MAPPING · NOT "AI-POWERED"

Predictive mapping for clinical data harmonization & interoperability

A one-page brief for CIOs, CMIOs, and clinical data leaders

Why "predictive," not "AI-powered"

Magellan is a **predictive mapping platform** for clinical data harmonization and interoperability across Epic, Cerner, HL7 v2, FHIR R4, DICOM, and LOINC/SNOMED. The **Semantic Match Engine proposes** source-to-target mappings with confidence scores, rationale, and lineage; **named SMEs approve** them with cryptographically attested decisions. Every mapping is versioned, every approval is signed, and every change is recorded in a hash-chained, ULID-keyed ledger that satisfies **HIPAA**, **21 CFR Part 11 §11.10(e)**, and **ONC HTI-1** transparency requirements.

> *"AI-powered" implies autonomous decisions auditors and regulators cannot inspect. **Predictive mapping** implies machine-generated proposals reviewed and signed by accountable humans — the posture FDA GMLP, ONC HTI-1, and audit committees expect.*

Time to a regulated, AI-ready clinical dataset

Stage	Today (manual)	With Magellan
Source & target schema discovery (Epic / Cerner / HL7 v2 / FHIR R4)	4–8 weeks of analyst interviews and spreadsheet archaeology	**2–3 days — ingest existing mapping spreadsheets, FHIR profiles, and OpenAPI specs at one shared version**
Source-to-target mapping & terminology binding (LOINC / SNOMED / RxNorm)	8–16 weeks of manual review by clinical informaticists	**3–5 days — Semantic Match Engine proposes, named SMEs approve**
Audit evidence & sign-off package (HIPAA, §11.10(e), HTI-1)	4–8 weeks reconstructing lineage from emails and tickets	**Continuous — hash-chained ledger emits the evidence package on demand**
Total time to a regulated dataset ready for downstream AI / analytics	~~~6 months~~	**~2 weeks**

§9 — Predictive mapping vs. "AI-powered"

Dimension	"AI-powered"	Predictive mapping (Magellan)
Audit posture	Suggests autonomous decisions auditors cannot inspect	**Machine proposals; named SMEs approve and sign every decision**
Clinical accountability	Black-box; no signer for an erroneous mapping	**ULID-keyed signature ties each mapping to a clinician of record**
ONC HTI-1 transparency	Triggers algorithm transparency questions	**Aligns with predicate-logic, source-attributed framing**
FDA GMLP fit	Hard to map to Good Machine Learning Practice	**Maps cleanly to GMLP human-in-the-loop & change-control**
21 CFR Part 11 §11.10(e)	Audit trail typically reconstructed after the fact	**Hash-chained ledger captures every change as it happens**
CIO / CMIO conversation	"Can you explain what the AI did?"	**"Here is the SME, the rationale, and the signed evidence."**

Next step. A 30-minute working session on one of your active interoperability projects (Epic ↔ FHIR, HL7 v2 ingest, registry submission, or AI training-data prep). We bring a draft mapping, the signed evidence package, and the §11.10(e) ledger view. **loren@magellanmeta.ai · magellanmeta.ai/audit**