

Healthcare Multi-Product Initiative – Risk Register (Product Solution Architecture)

Scale:

Likelihood (L): Low / Medium / High

Impact (I): Low / Medium / High

Risk Area	Description	L	I	Primary Mitigation	Owner
Stakeholder misalignment	Multiple legal entities (Plan, Provider, Hospital, Regions) have competing KPIs causing slow decisions and rework	High	High	Stakeholder map, decision-rights matrix, ADRs, exec steering cadence	Product + Architect
EHR / core system constraints	Legacy EHR limits API throughput, change windows, and write access	High	High	Façade + strangler pattern, read/write separation, sandbox validation	Architecture
Data interoperability failure	Inconsistent identifiers and semantics across product lines cause data quality issues	High	High	Canonical data model, semantic layer, data contracts, lineage	Data Architecture
Privacy / HIPAA breach	PHI exposure due to improper access, logging, or integration design	Medium	High	Zero trust, RBAC, DLP scanning, audit trails, privacy reviews in CI/CD	Security
System outage impacting care	Platform or network failure disrupts clinical workflows	Medium	High	Multi-AZ design, graceful degradation, manual fallback workflows	SRE / Ops
Clinical workflow rejection	New product increases clicks or disrupts clinician flow, reducing adoption	High	High	Clinician co-design, UX time-saved metrics, pilot rollout	Product
Risk Area	Description	L	I	Primary Mitigation	Owner
Platform resource contention	Product lines compete for shared APIs, identity, and data pipelines	High	Medium	Platform council, shared roadmap, capacity planning, chargeback	Platform Owner

Vendor lock-in	Vendor contracts restrict data access, integration modes, or timelines	Medium	Medium	Thin integration layer, open API requirements, exit clauses	Architecture
Scalability spikes	Telehealth, immunization, or seasonal events overwhelm systems	Medium	High	Autoscaling, load testing, chaos engineering	Engineering
Governance breakdown	No consistent ownership of schemas, APIs, or models across teams	High	Medium	Central catalog, schema approval workflow, contract testing	Governance
Identity & consent mismatch	Incorrect patient matching or consent enforcement causes safety/compliance issues	Medium	High	MPI, canonical identity service, consent management framework	Identity Team
Analytics mistrust	Clinicians don't trust or adopt insights due to lack of explainability	Medium	Medium	Explainable models, workflow-embedded insights, validation studies	Data / Product
Budget & procurement delays	Annual budgeting slows onboarding of tools or vendors	High	Medium	Phase roadmap to budget cycles, pilot funding models	PMO
Regional variability	Features fail due to state rules, language, or local workflows	Medium	Medium	Configurable features, regional pilots, local champions	Product

Top 5 Risks to Act on Immediately

1. Stakeholder misalignment
2. EHR integration constraints
3. Data interoperability & identity
4. Clinical workflow rejection
5. Privacy & compliance failure

Architect's Operating Principle

Mitigate high-impact risks early with architecture patterns, governance, and stakeholder alignment — not after delivery.
