

# IHEP Investor Due Diligence Package

Finalized consolidated packet (excluding NIST mapping document and the interactive investor dashboard)

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Classification	Investor Due Diligence - Confidential
Package Status	Complete (consolidated)
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Prepared By	Jason Jarmacz, Founder & CEO (content owner); compiled into single packet for distribution

**Distribution:** This packet is intended for authorized investors and diligence reviewers. Do not redistribute.

**Exclusions:** The Security & Compliance Framework - NIST Mapping document and the Interactive Investor Dashboard web app are intentionally excluded per request. This packet still summarizes security/compliance posture at a high level.

# Contents

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1. Executive Summary
2. Company Overview and Problem Statement
3. Implementation Overview (Platform, Operations, and Delivery Plan)
4. Market Research and Competitive Analysis
5. Go-To-Market Plan
6. Financial Model Summary (10-year projections)
7. System Architecture Overview
8. Phase I Detailed Project Plan (18-month roadmap)
9. Clinical Study Protocol and IRB Materials (summary)
10. Intellectual Property Strategy
11. Risks, Mitigations, and Milestones
- Appendix A. Key Metrics Snapshot
- Appendix B. Document Control and Contact

# 1. Executive Summary

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IHEP is a population-health and health-equity platform combining digital health technology, peer navigation, financial empowerment, and AI-driven prediction to improve treatment adherence and outcomes for underserved patients. The initial clinical focus is HIV care, with an 18-month prospective study design and three pilot sites.

- **Market:** \$28.7B total addressable opportunity in population health management; \$2.8B serviceable market by Year 5.
- **Clinical objective:** Improve medication adherence (MPR  $\geq$  80%) vs. matched historical controls; 750 participants across three sites.
- **Business model:** Multi-stream revenue (grants, pilots, payer/insurance, EHR licensing, pharma/data partnerships).
- **Regulatory posture:** HIPAA-aligned security practices and a roadmap toward HITRUST i1 and SOC 2 Type II.
- **Return profile (modeled):** Seed investor outcomes modeled at 3.6x to 12.9x MOIC across scenarios; base case 7.5x MOIC and 22.4% IRR.

Metric	Value (from source index)
TAM	\$28.7B
SAM (Year 5)	\$2.8B
Revenue (Year 5)	\$3.6M
Revenue (Year 10)	\$35M
Break-even	Year 8
Capital needed (10-year plan)	\$102.1M total
Seed raise (planned)	\$3.5M
Seed valuation (illustrative)	\$12M pre-money
Pilot sites / participants	3 sites / 750 participants
Clinical phase duration	18 months
Patents pending (planned)	3 provisional filings

## 2. Company Overview and Problem Statement

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IHEP targets a familiar failure mode in chronic care: clinical plans exist, but adherence and follow-through are fragile when patients are navigating instability, stigma, and fragmented support. The program pairs a software platform with peer navigation and financial empowerment to reduce missed appointments, improve medication adherence, and generate measurable health and cost outcomes.

### Core concept

- A digital twin per participant spanning patient, behavioral, clinical, financial, and social dimensions.
- Operational workflows for appointments, reminders, outreach, care-team coordination, and peer navigator actions.
- AI-driven risk prediction to prioritize interventions and identify likely non-adherence before it happens.

### Who benefits

- Patients: improved engagement, adherence support, and reduced friction with care.
- Providers and clinics: fewer no-shows, better retention in care, better outcomes tracking.
- Payers/employers: reduced avoidable costs through improved adherence and retention.

### Initial clinical focus

The initial study population described in the index is HIV patients (750 participants) across three sites, with adherence as the primary outcome at 12 months.

## 3. Implementation Overview

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This section consolidates the implementation and delivery details referenced across the system architecture document and the Phase I execution plan in the source index. It is written as a build-and-operate plan that a technical diligence team can sanity-check quickly.

### Delivery model

- Cloud-native platform delivered as a set of microservices (initially on Google Cloud Platform).
- 18-month Phase I roadmap (Mar 2026 to Aug 2027) organized into 36 two-week sprints.
- Parallel workstreams: (A) platform development, (B) clinical pilots, (C) regulatory and operations.

### Milestones (Phase I)

- Month 6: MVP launch to pilot sites.
- Month 12: first pilot outcomes measurement; target deltas include adherence +15% and engagement 70% (from index).
- Month 15: Series A diligence materials complete.
- Month 18: Series A close target.

### Operating assumptions

- Pilot configuration: three sites, 750 participants total (clinical protocol).
- Security posture: encryption, key management, audit logging, and incident response procedures; HIPAA alignment is assumed.
- Resilience goals: Recovery Time Objective (RTO) under 1 hour and Recovery Point Objective (RPO) under 15 minutes (from index).

### Build principles

- Start narrow, prove outcomes, then scale: prioritize adherence workflows, navigator tooling, and outcomes measurement.
- Integrate where clinicians already live: EHR integration is treated as an adoption requirement, not a nice-to-have.
- Design for audits from day one: consistent logging, access controls, and documented procedures.

## 4. Market Research and Competitive Analysis

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The source index positions IHEP in the population health management market, with a cited \$28.7B TAM and a \$2.8B SAM by Year 5. The thesis is that health systems and payers will pay for measurable adherence and retention improvements when the solution integrates with clinical workflows and produces audit-ready outcome evidence.

### Market sizing (as referenced)

- TAM: \$28.7B (population health management).
- SAM: \$2.8B by Year 5 (serviceable segment).
- Sizing method: bottom-up segmentation plus customer discovery validation (as stated in the index).

### Customer discovery signals (as referenced)

- Interviewed health systems and payers acknowledged the market opportunity and the need for an IHEP-like solution (index claims 100%).
- Adoption cycle estimate: ~3-year market adoption cycles, favorable for early entrants.

### Competitive landscape (examples)

Company	Category	Typical positioning
Omada	Digital chronic care programs	Condition-focused, employer/payer channels
Virta	Metabolic care / diabetes	Deep condition programs; outcomes-driven
Innovaccer	Data activation platform	Analytics and interoperability focus
Health Catalyst	Healthcare analytics	Enterprise data warehousing and analytics
Teladoc	Virtual care platform	Broad telehealth + chronic offerings

### Differentiation thesis (from index narrative)

- Broader-than-single-condition coverage combined with deep integration into care workflows.
- Patient-centric design with peer navigation and financial empowerment as first-class components.
- Defensibility through data assets, network effects, and regulatory readiness.

## 5. Go-To-Market Plan

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The go-to-market plan described in the index is structured as a phased enterprise healthcare motion: prove value via pilots, convert to commercial contracts, then scale through payer and platform partnerships.

### Three-phase approach

- **Phase 1 - Proof of concept:** health system pilots (target 3 pilot sites; \$75K-\$150K pilot contracts).
- **Phase 2 - Commercialization:** expand within pilot systems; begin payer deals (Medicare Advantage, regional PPOs, Medicaid).
- **Phase 3 - Leadership:** national scaling with partnerships, EHR marketplace listings, and standardized playbooks.

### Primary channels (as referenced)

- Health systems and clinics (pilot-to-enterprise conversion).
- Insurance payers (particularly Medicare Advantage and Medicaid-adjacent programs).
- Employers and CDFIs as adjacent channels for financial empowerment components.
- Partner ecosystems: EHR vendor marketplaces and cloud marketplaces.

### Enterprise sales characteristics

- Enterprise cycles modeled at ~6 months in the plan (note: industry can run longer; see risk section).
- Target contract economics: \$100K to \$2M annual contracts by Year 5 (index).

### Sales targets (as referenced)

Year	Target	Notes
2	\$400K ARR	2 mid-market deals
5	\$14M ARR	6 large + 12 mid + 30 small deals
10	\$35M ARR	National leadership position

## 6. Financial Model Summary (10-year projections)

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This section summarizes the 10-year financial model items listed in the source index. It is not a substitute for a spreadsheet model, but it captures the key assumptions, outputs, and scenario ranges for diligence discussions.

### Revenue streams (modeled)

- Non-dilutive: grants and research funding.
- Commercial: paid pilots, payer/insurance contracts, EHR licensing, pharma/data partnerships, and other services.

### Scale assumptions (from index)

- Headcount trajectory: Year 1 ~23 FTEs scaling to ~420 FTEs by Year 10.
- Unit economics trend: LTV improves from ~2.0x to ~8.1x; CAC declines from ~\$687 to ~\$432 over the plan horizon.
- Break-even at Year 8 (approx. 18,000 patients and \$48.7M revenue, per index).
- Cash-flow positive Year 9 (index).

### Capital plan (from index)

Category	Amount	Notes
Total capital required (10-year plan)	\$102.1M	\$88.5M equity + \$13.6M non-dilutive
Seed round (planned)	\$3.5M	Initial build + pilots + regulatory readiness
Illustrative seed valuation	\$12M pre	Used for scenario discussion in the index

### Investor outcome scenarios (from index)

Scenario	MOIC (seed)	IRR (seed)	Comment
Conservative	3.6x	Not specified	Lower adoption / slower sales
Base	7.5x	22.4%	Index base case
Aggressive	12.9x	29.1%	Faster adoption / scaling

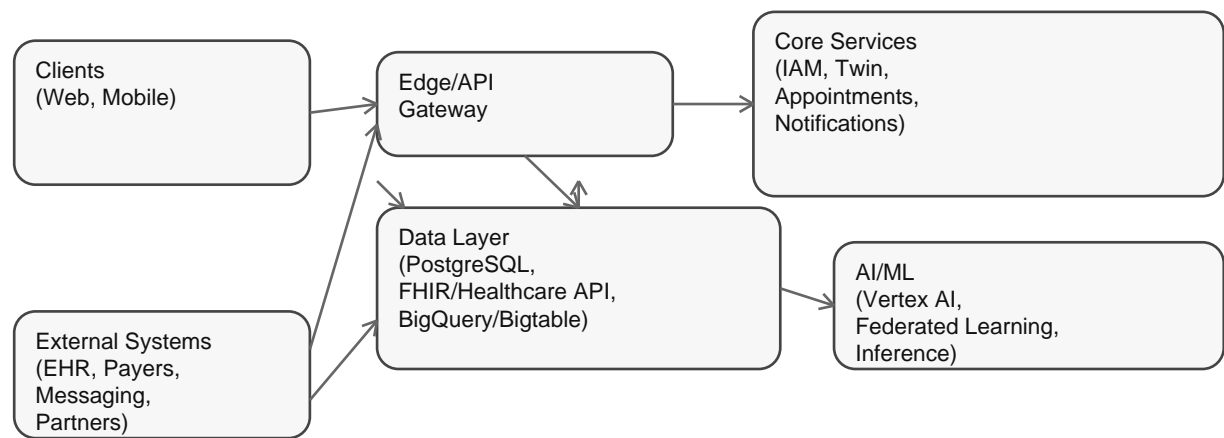
Modeling methods referenced

- Monthly cash flow projection (120 months).
- Sensitivity analysis with conservative/base/aggressive cases.
- Monte Carlo simulation (10,000 iterations) producing P10/P50/P90 outcome bands.
- Valuation scenarios using revenue multiples (4x-8x) and exit timing (strategic buyer Year 7; financial buyer Year 10).

7. System Architecture Overview

The source index describes a cloud-native microservices architecture with a digital twin core, operational workflow services, and an AI/ML pipeline for prediction and inference. This section summarizes the components and the quality attributes claimed in the index (scalability, resilience, and security).

High-level architecture



Core services (examples mentioned)

Service	Purpose	Notes
IAM / Identity	Authentication, authorization, roles	Supports audit trails and least privilege
Digital Twin Service	Twin state, models, signals, history	Patient + behavioral + clinical + financial + social layers
Appointment Service	Scheduling, reminders, attendance tracking	Feeds adherence and engagement metrics
Notification Service	SMS/email/push notification orchestration	Template management and delivery tracking
Inference Service	Risk scoring and prediction	Model serving, monitoring, versioning

## **Data and analytics**

- Transactional store: PostgreSQL (index).
- Clinical data: Healthcare API / FHIR-oriented storage and schemas (index).
- Analytics and feature storage: BigQuery and Bigtable (index).

## **AI/ML pipeline (as referenced)**

- Training and orchestration: Vertex AI (index).
- Federated learning capability mentioned; supports privacy-preserving multi-site learning.
- Inference endpoints integrated with operational workflows (risk scoring drives outreach).

## **Quality attributes (as referenced)**

- Scalability: stress tested up to 10,000 concurrent users (index).
- Disaster recovery targets: RTO under 1 hour; RPO under 15 minutes (index).
- Security posture: Zero Trust principles, encryption, key management, and audit logging (index).

## 8. Phase I Detailed Project Plan (18-month roadmap)

Baseline schedule: Phase I kickoff in early March 2026; re-baseline dates after Sprint 2.

Phase I is described in the index as an 18-month execution roadmap (Mar 2026 to Aug 2027) with three parallel workstreams: platform development, clinical pilots, and regulatory/operations. The plan includes go/no-go gates at 6, 12, and 15 months.

### Workstreams

- **Workstream A - Platform development:** 36 two-week sprints covering core services, integrations, and analytics.
- **Workstream B - Clinical pilots:** three sites and 750 participants with outcome measurement.
- **Workstream C - Regulatory and operations:** compliance roadmap, IRB approval, hiring, vendor contracts.

### Budget and sources (from index)

Item	Amount
Phase I investment (total)	\$5.604M
Seed equity	\$3.5M
SBIR (planned)	\$0.300M
Grants (planned)	\$1.5M
Pilot revenue (planned)	\$0.304M

### Milestone timeline (simplified)

Month	Platform	Clinical	Reg/Ops
1-2	Foundation: IAM, audit logging, core services	Site onboarding planning	Vendor selection; policies; hiring plan
3-4	Twin core + appointment + notification MVP	IRB package finalization	HIPAA controls validation; BAAs
5-6	MVP hardening; pilot deployment	Pilot launch	IRB submission; training program
7-9	EHR integration iteration; analytics baseline	Enrollment ramp; monitoring	HITRUST i1 prep; SOC2 planning
10-12	Inference service; model iteration	Interim outcomes collection	Security testing; tabletop IR drills
13-15	Scale and reliability; DR drills	12-month outcome analysis	Series A materials; compliance audits
16-18	Production optimization; partner packaging	Study continuation; publication prep	Series A close target

### Success criteria and gates (from index)

- 6-month gate: MVP deployed to pilot sites; baseline telemetry and workflows functional.

- 12-month gate: initial pilot outcomes reported (targets include adherence +15% and engagement ~70%).
- 15-month gate: Series A diligence package complete; operational readiness demonstrated.

## 9. Clinical Study Protocol and IRB Materials (summary)

The index describes a prospective cohort study with matched historical controls designed for IRB submission. This section captures the key elements needed for medical/regulatory diligence discussions.

### Study overview (from index)

- Design: prospective cohort with matched historical controls.
- Population: 750 participants (HIV patients) across three pilot sites.
- Primary outcome: medication adherence (Medication Possession Ratio, MPR  $\geq$  80%) at 12 months.
- Secondary outcomes: viral suppression, appointment attendance, quality of life, and cost savings.
- Duration: 18 months with assessments at baseline, Months 3, 6, 12, and 18.

### Procedures and assessments (simplified)

Timepoint	Key activities	Data captured
Baseline	Consent, enrollment, baseline evaluation	EHR data, PROs, initial twin state
Month 3	Engagement check, early adherence monitoring	Appointments, MPR trend, outreach actions
Month 6	Midpoint evaluation	Interim outcomes, model recalibration signals
Month 12	Primary endpoint assessment	MPR, viral suppression, attendance, QoL
Month 18	Extended follow-up	Sustainability metrics, cost deltas, qualitative feedback

### Safety and governance (from index)

- Data safety and monitoring procedures and adverse event reporting included in the protocol.
- Ethical considerations and community engagement referenced.
- IRB approval expected Spring 2026 (index).

### Illustrative hypothesis targets (from index)

- Primary: 80% MPR in IHEP participants vs. 60% in controls (33% relative improvement).
- Secondary: 80% viral suppression vs. 55% controls; 85% appointment attendance vs. 70% controls; 30%+ cost savings.

## 10. Intellectual Property Strategy

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The index outlines a combined patent and trade-secret approach, with regulatory readiness also treated as a defensible moat. The goal is to protect the digital twin representation, self-healing system logic, and federated learning workflow.

### Patent strategy (from index)

Target patent	Theme	Timing (index)
Patent 1	Digital Twin Health State Representation	Filing Nov 2025; issue target Nov 2028
Patent 2	Morphogenetic Self-Healing Framework	Filing Nov 2025; issue target Dec 2028
Patent 3	Federated Learning for Healthcare	Filing Dec 2025; issue target Jan 2029

### Trade secrets (from index)

- Engagement algorithm and outreach logic.
- Datasets and feature engineering recipes.
- Peer navigator methodology and training playbooks.
- Model architecture and serving configuration.
- Contracting and commercialization playbook.

### Defensibility levers (from index)

- Regulatory pathway readiness (e.g., HITRUST certification roadmap; FDA digital therapeutic pathway planning).
- Network effects and data asset compounding (proprietary datasets valued \$3M-\$5M in the index narrative).
- Licensing opportunities via EHR vendors and pharma data partnerships.

### IP budget (from index)

Multi-year IP budget is referenced as ~\$230K over Years 1-10.

## 11. Risks, Mitigations, and Milestones

Early-stage healthtech carries predictable risks. The index lists a set of 'yellow light' risks and paired mitigations. This section consolidates them into a diligence-friendly register.

### Risk register (top items from index)

Risk	Why it matters	Mitigation (as referenced)
Early clinical stage	Limited published outcomes can slow adoption	Adoptive validation, IRB protocol, outcomes tracking
Reimbursement pathway	Pay established may depend on reimbursement; revenue uncertainty	Medicare/Medicaid; FDA DTx planning
Enterprise sales cycles	Longer than planned and runway risk	Pilot-to-commercial playbooks; partner marketplaces
Competitive response	Large incumbents could replicate features	Patent filings, trade secrets, regulatory barriers, data assets

### Milestones (time horizon)

- Immediate (Dec 2025): seed close (index timeline).
- Near-term (Q1 2026): MVP launch and IRB approval target.
- Medium-term (Q4 2026): Series A readiness.
- Long-term (2027+): path to profitability and multiple exit options.

## Appendix A. Key Metrics Snapshot

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Metric	Value
TAM	\$28.7B
SAM (Year 5)	\$2.8B
Revenue Year 5	\$3.6M
Revenue Year 10	\$35M
Break-even	Year 8
Capital needed (10-year)	\$102.1M
Seed investment	\$3.5M
Seed return (base)	7.5x MOIC, 22.4% IRR
Patients (Year 5)	25,000
Patients (Year 10)	75,000
Pilot sites	3
Pilot participants	750
Clinical duration	18 months
Patents pending (planned)	3

## Appendix B. Document Control and Contact

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**Classification:** Investor Due Diligence - Confidential

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### Contact

Name	Jason Jarmacz
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Investor relations	Available post-seed close (or via founder)

Note: This consolidated packet was produced from the Due Diligence Contents index. If you have the underlying standalone PDFs for each section, they can be embedded or appended verbatim in a revision.