KVANN Health — Clinical Pilot Resource & Hours Utilization Estimate

Prepared for: Dr. Andy Mendenhall, MD (Chief Executive Officer) & Executive Leadership

Client Organization: Central City Concern (Portland, Oregon)

Prepared by: KVANN HEALTH LLC (Oregon, USA)

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Key Contacts: Dr. Joseph Siemienczuk, MD (CEO & CMO) · Jaime J. Saavedra (VP Commercial) · Alexey Soshnin (CTO)

Focus Facility: Old Town Clinic (Portland, OR) · **Cohort:** 2–3 Volunteer Primary Care Providers

1. Executive Summary & Core Resource Metrics

KVANN Health LLC has engineered **Kvann Flow™**, an ambulatory schedule compaction and clinician rest protection engine designed specifically for high-acuity outpatient primary care and Community Health Centers.

This document provides Central City Concern executive leadership, clinical directors, and IT leadership with an audit-ready, transparent breakdown of technical effort and personnel commitment required to execute our **90-Day Assisted Clinical Pilot**.

90-Day Calibrated Resource Allocation:

Resource Track	Allocated Commitment	Operational Cadence	Key Focus & Scope
1. KVANN Engineering	**48 Hours Total**	~4 hrs / week	Template calibration, algorithmic tuning & assisted operations
2. CCC Internal IT Liaison	**6 to 8 Hours Total**	<30 min / week	Intake initiation, provider NPI alignment, connectivity sign-off
3. EHR Hosting (OCHIN Operations)	**10 to 14 Hours Total**	Weeks 2–4	App registration in Interconnect, JWKS binding, read-only scopes
4. CCC Clinical & Operations Staff	**~18 to 20 Hours Total**	Distributed over 90 days	Old Town Clinic Lead, Practice Manager, and 2–3 volunteer MDs

> ***The Executive Guarantee:***
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> *"KVANN provides 48 engineering hours inside the pilot window, on top of a completed pre-pilot baseline delivered at zero client cost. Furthermore, because we provide a Dual-Mode operational architecture, clinical value begins in Week 1 regardless of external EHR hosting review timelines."*

2. What Is Already Built (Pre-Pilot Evidence Panel)

KVANN does not conduct R&D on the client's clock. Before Day 1 of the pilot, all fundamental algorithm development, data normalizers, and clinical interfaces are 100% pre-built and verified against public surfaces:

Pre-Pilot Software Artifact	Pre-Pilot Validation Surface	Verified Status
Discrete Optimization Engine (Gravity Stacking, Lunch Firewall on a 15-min integer grid)	Local testbed & historical clinic logs	**115+ Unit & Integration Tests Green** (100% exit code 0)
SMART-on-FHIR OAuth2 Client (Asymmetric RSA key-pair & public JWKS endpoint)	`open.epic.com` Public Epic Sandbox	**Pre-validated** against Epic R4 backend specifications
FHIR R4 Schema Normalizers (`Appointment`, `Schedule`, `Slot` read models)	Epic R4 schemas & synthetic clinical test sets	**Pre-mapped** to standard integer calendar states
Staff-Facing Tetris Dashboard (Compaction recommendation interface)	Standalone client-side application	**Staged & Demonstrable** (10-minute live demo available)

Because these core assets are fully pre-built, **the 48 in-pilot engineering hours are dedicated exclusively to Old Town Clinic template calibration, provider workflow alignment, and assisted operational support**.

3. The 90-Day Clinical Pilot Schedule & Pacing

The pilot is structured into four distinct phases designed to accelerate clinical time-to-value while accommodating external hosting change-control timelines:

Phase & Timeline	Operational Focus	Key Deliverable	KVANN Eng	CCC Internal IT	EHR Host (OCHIN)	CCC Clinical & Ops
Phase 1: Weeks 1–2 *(Days 1–14)*	**Intake Handshake & Baseline**	Initial Data Confirmation & Baseline	**12 h**	**3–4 h**	**6–8 h**	**Lead:** 1 h **Exec:** 1 h

	Ingestion • Initiate OCHIN third-party app request • Ingest 30-day anonymized historical schedule export • Mode B operational on Day 1	Audit				
Phase 2: Weeks 3–4 *(Days 15–28)*	**Template Calibration & Baseline Report** • Lock provider templates & Lunch Firewall rules • Deliver 30-day historical density variance report • OCHIN sandbox testing validation	**First Schedule Density Variance Report** (Joint sign-off)	**12 h**	**1–2 h**	**2–3 h**	**Lead:** 2 h **Mgr:** 2 h
Phase 3: Weeks 5–10 *(Days 29–70)*	**Live Assisted Pilot (Staff-Facing)** • 6 consecutive weeks of compaction recommend	Weekly Density Lift Reports & Calibration Checkpoints	**16 h**	**1 h**	**1–2 h**	**2–3 MDs:** 3 h ea **Mgr:** 1 h/wk

	ations • Bi-weekly 15-min touchpoints with volunteer MDs • Mode A credential cutover when cleared					
Phase 4: Weeks 11–12 *(Days 71–90)*	**Outcome Evaluation & Executive Briefing** • Measure net completed visit lift vs. historical baseline • Evaluate provider rest & overtime reduction metrics	**Final Clinical ROI & Operational Case Study**	**8 h**	**1 h**	**1 h**	**Exec:** 1 h **Mgr:** 1 h
TOTALS	**Complete 90-Day Lifecycle**		**48 Hours**	**6–8 Hours**	**10–14 Hours**	**~18–20 Hours**

4. Resource Commitment Breakdown by Organization & Role

A. Central City Concern Personnel

Role / Title	Key Responsibilities During Pilot	Total Hours (90 Days)	Average Pacing
CCC Internal IT Liaison	Submit third-party app intake to OCHIN; verify Old Town Clinic provider NPIs; attend kickoff and	**6 to 8 hours**	~2 hrs in Wks 1–2; then ~30 min bi-weekly

	handoff reviews; sign off on test connectivity.		
Executive Sponsor *(Dr. Andy Mendenhall)*	Executive kickoff alignment (30 min); final clinical outcome and ROI briefing (1 hr).	**2 hours**	Month 1 & Month 3 checkpoints
Clinical Lead / Champion *(Dr. Joseph Siemienczuk + CCC Lead)*	Review baseline simulation assumptions, confirm Lunch Firewall parameters, participate in calibration check-ins.	**4 to 6 hours**	~30 min every two weeks
Practice Manager *(Old Town Clinic)*	Validate provider scheduling templates, review weekly recommendations, provide workflow feedback.	**8 to 10 hours**	~45 min / week
Volunteer Providers (2–3 MDs)	Review recommended appointment blocks during normal clinic prep; bi-weekly 15-min touchpoint.	**3 hours / provider**	~15 min every two weeks (Zero evening charting time)

B. External EHR Hosting Partner (OCHIN Technical Operations)

Technical Milestone	Specific OCHIN Interface Engineering Activities	Estimated Hours
App Registration & Scoping	Register Kvann Flow client ID in OCHIN Interconnect gateway; assign read-only scopes (`Appointment.read`, `Schedule.read`, `Slot.read`).	**4 to 6 hours**
Authentication & JWKS Binding	Validate asymmetric RSA public key against Kvann's hosted JWKS URI; configure tenant token endpoint.	**3 to 4 hours**
Non-Production Testing	Verify sandbox connectivity with CCC test tenant; confirm zero-write-back boundary.	**2 to 3 hours**

Production Promotion Sign-off	Enable read-only traffic for Old Town Clinic pilot providers; issue production endpoint URI.	**1 to 2 hours**
TOTAL OCHIN COMMITMENT	**Standardized SMART-on-FHIR App Onboarding Lifecycle**	**10 to 14 Hours**

Note on Governance: Business Associate Agreement (BAA) execution and organizational change-control review are administrative/compliance milestones conducted during pre-kickoff and are not charged against clinical IT hours.

5. Security Posture, Epic Backend Services & JWKS Architecture

Hospital CIOs and technical directors require absolute certainty regarding system security and infrastructure boundaries. KVANN operates under three strict architectural safeguards:

Security Pillar	Architectural Implementation	Clinical & CIO Guarantee
1. Asymmetric Cryptography (RFC 7523)	Authenticates via private-key JWT assertion verified against KVANN's public JWKS endpoint.	Zero shared static passwords or API tokens stored on client servers.
2. Scoped Read-Only Access	Strictly limited to `system/Appointment.read`, `system/Schedule.read`, `system/Slot.read`.	Medical charts, progress notes, labs, and billing are 100% inaccessible.
3. One-Hour Removal Guarantee	Client credential revocation instantly terminates all data polling.	Zero agents, zero background daemons, zero persistent software footprint.

1. **The Iron Rule of Read-Only Scoping:**

Automated access is **strictly confined to read-only calendar resources** (`Appointment`, `Schedule`, `Slot`). Clinical charts, progress notes, lab results, and billing codes are **100% read-only and mathematically inaccessible**.

2. **Asymmetric Key Security (Zero Shared Passwords):**

Authentication utilizes modern asymmetric public-key cryptography (RFC 7523 JWT signed with private key, verified against KVANN's public JWKS endpoint). No static client passwords or API tokens are stored on client servers.

3. **The "One-Hour Removal" Guarantee:**

> *"The pilot is removable in under one hour: revoke the client credentials in OCHIN Interconnect, delete the export script. No agents, no background servers, and zero persistent software footprint inside CCC infrastructure."*

6. Dual-Mode Operating Guarantee (The OCHIN Queue Defense)

In healthcare IT, external consortium approval queues can take 4 to 8 weeks. To ensure that administrative review timelines never delay clinical benefits for Old Town Clinic providers, KVANN provides an unconditional **Dual-Mode Guarantee**:

Operational Tier	Workflow & Data Flow	Technical Footprint & Dependencies	Value Delivery Timeline
Mode A: Integrated Epic Operation	Direct SMART-on-FHIR REST polling via OCHIN Interconnect	OAuth 2.0 connection; subject to standard external hosting review	Active upon OCHIN credential issuance
Mode B: Assisted Export Operation	Staff export daily/weekly schedule report from Epic	Encrypted report transport; generates identical visual Tetris view	**100% operational on Day 1 (Zero OCHIN wait)**

> ***The Strategic Advantage for CCC Leadership:***
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> *"Mode B is our guarantee that Central City Concern receives immediate clinical value without waiting for OCHIN's change-control cycle. If OCHIN takes four to six weeks to issue sandbox credentials, Old Town Clinic clinicians still begin schedule optimization on Day 1. When OCHIN credentials clear, the pilot transitions seamlessly to Mode A without resetting the baseline or the 90-day clock."*

7. FQHC Grounding: Old Town Clinic Reality & Provider Agency

Central City Concern's Old Town Clinic operates in a demanding environment characterized by complex patient acuity and high baseline cancellation/no-show rates (typically 20% to 35% in community health settings). Kvann Flow is purpose-built for this clinical reality:

Dynamic Gap Compaction vs. Rigid Booking

Traditional schedulers fail in FQHCs because rigid algorithms break when patients arrive late or cancel. Kvann Flow treats cancellations as **dynamic compaction opportunities**: it pools fragmented 10-minute voids into usable, backfillable appointment openings without double-booking clinicians or running past closing hours.

The Provider Agency Guarantee

Primary care doctors do not burn out from patient care; they burn out from loss of agency and calendar chaos. Kvann Flow enforces an inviolable clinical pact:

Invariant	Clinical Policy	Enforcement Mechanism
1. Inviolable Lunch Firewall	Clinicians receive a protected midday rest window every day.	Hard mathematical constraint enforced by engine; cannot be scheduled over.
2. Algorithmic Equity	Equal care access regardless of insurance type or socioeconomic status.	Neutral slot allocation based strictly on clinical visit urgency and availability.
3. Clinician Agency & Veto	Zero automated booking onto calendars without human confirmation.	Staff-assisted recommendations presented for clinical approval before booking.
4. Independent Validation	Baseline and final density metrics are co-signed by CCC leadership.	Empirical pre-pilot baseline; "we do not grade our own homework".

8. Summary of Terms & Next Steps

- **Pilot Investment:** Flat fixed-fee of 3,500 to 5,000 USD (100% credited toward Year 1 subscription upon full deployment).
- **Satisfaction Clause:** Full refund within 30 days from live assisted operation if schedule density gain is <5% over the 30-day pre-pilot baseline, or if clinicians veto safety.
- **Immediate Next Step:** Joint 30-minute technical alignment call with CCC Clinical IT Lead to initiate Mode B template review and submit the standard OCHIN third-party app intake request.

Submitted by KVANN HEALTH LLC. Approved for distribution to Central City Concern Executive Leadership.