



manas

Every Mind deserves Care, because silence should never be a sentence

CTO Program Group 2 presents innovative AI-driven mental health support solutions

Manas R&D Portfolio (Impact Project)

Portfolio goal

MANAS is an AI-driven companion for proactive risk detection and early corrective intervention in mental health care. This portfolio decomposes MANAS into 5 fundable projects that collectively enable a fully operational system

Early detection lead-time

6–12 mo sooner

Rural/underserved reach

↗30–40%

User retention

2× baseline

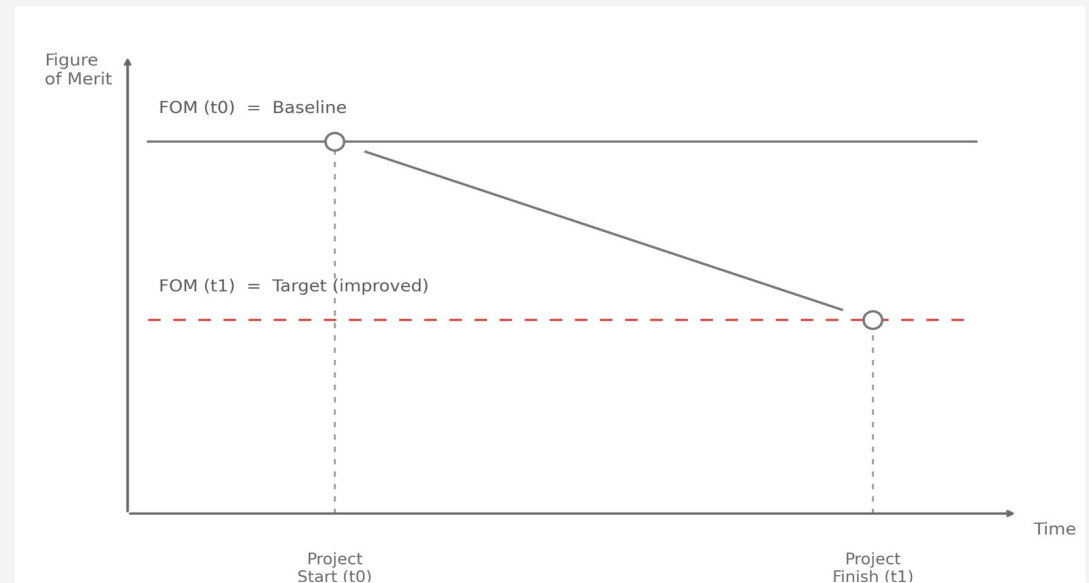
Relapse reduction

- 25%

What's in scope (capabilities we fund)

- Multimodal detection (speech, text, image/behavior signals) with evaluation pipelines
- Privacy-first architecture: on-device inference + federated learning + differential privacy
- Safety & governance: moderation, explainability, audit logs; pilot methodology with clinicians/partners
- Productization: mobile-first pilot app, backend services, analytics dashboards, feedback loops

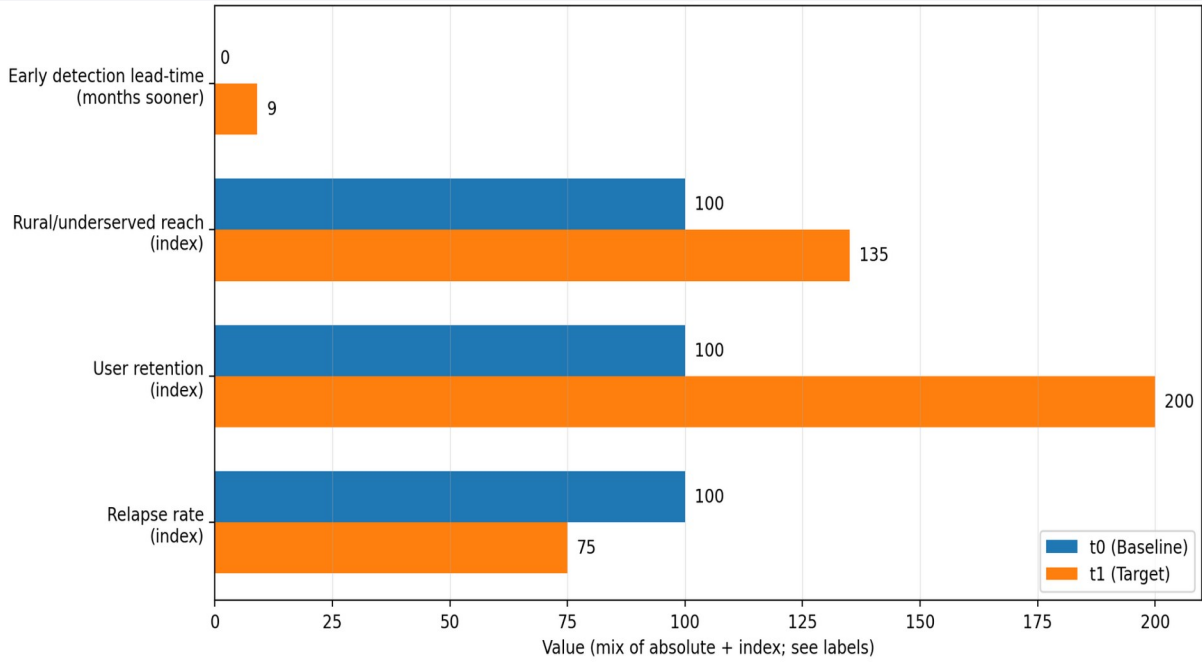
Portfolio Figure-of-Merit (FOM) Targets (t0 : t1)



Mapping for MANAS Retention 1.0x → 2.0x (index), Relapse 100 → 75 (index)

L2 Figures of Performance (MANAS)

Performance Gap Analysis (t0 → t1)



Metrics & Measurement

Metric	Current (t0)	Target (t1)	Measurement
Early detection lead-time	0	6–12 months sooner	Time-to-flag vs baseline clinical pathway
Underserved reach	1.0 (index)	1.3–1.4 (index)	+ adoption/activation in rural cohorts
User retention	1.0×	2.0×	90-day retention; DAU/MAU
Relapse reduction	1.0 (index)	0.75 (index)	Relapse events per quarter

Portfolio of sub-projects (5)

Portfolio projects (mapped to capability gaps)

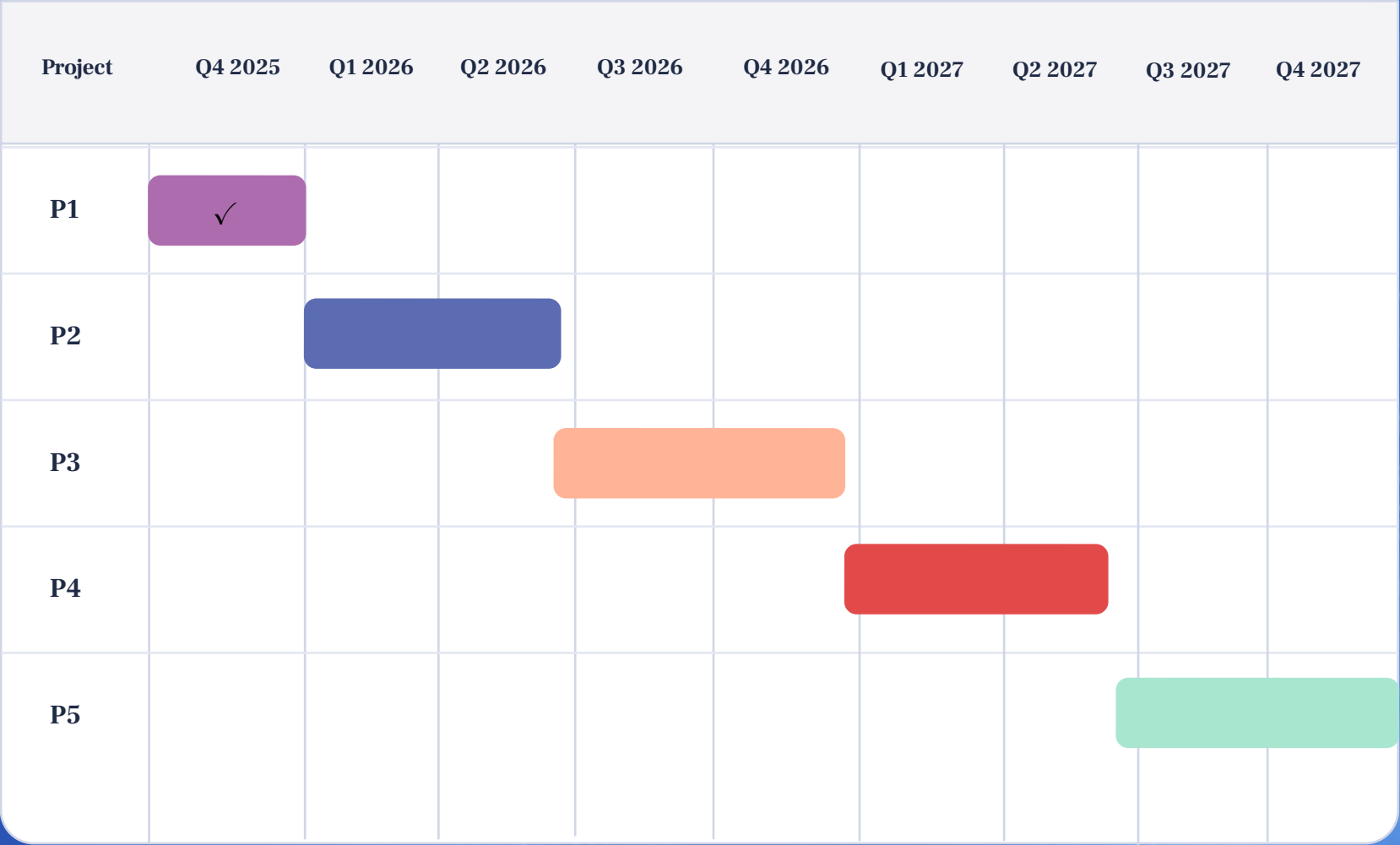
Project	FOM (t0: t1)	Key deliverable	Dur.	Budget (NRC)	Risk
P1: Signal discovery + PRD & regulatory	Validated signal categories: 0: 5; PRD maturity: draft: signed-off	PRD + ethics/legal constraints + pilot plan	3 mo	\$700K	L
P2: MVP platform + pilot app (alpha)	End-to-end flow success rate: 70%: 95%	Backend + mobile pilot app + analytics	5 mo	\$3.5M	M
P3: Multimodal detection v1 (text+speech)	Detection AUROC: 0.70: 0.85; lead-time model: 0: 6 mo	Baseline models + eval pipeline	6 mo	\$4M	M
P4: Privacy, safety & governance hardening	Privacy controls coverage: 40%: 90%; auditability: low: high	On-device + federated sandbox + audit logs	6 mo	\$2.5M	H
P5: Pilot programs + measurement dashboards	Retention: 30%: 60%; relapse reduction: 0%: 25% (target)	Pilot with partners + KPI dashboards	6 mo	\$2.5M	M

Portfolio totals

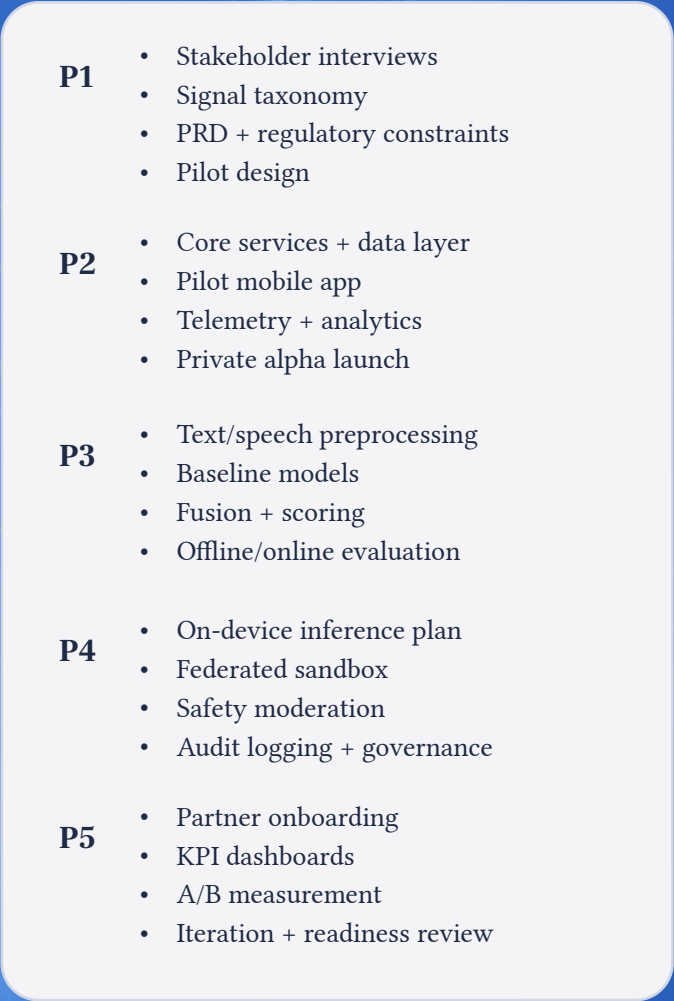
Base: \$13.2M | +15% Mgmt Reserve: \$2M | Total: \$15.2M | Risk mix: ~30% low, ~40% medium, ~30% high

Schedule ♦ WBS (phase-level)

Portfolio Gantt (Q4'2025–Q2'2027)

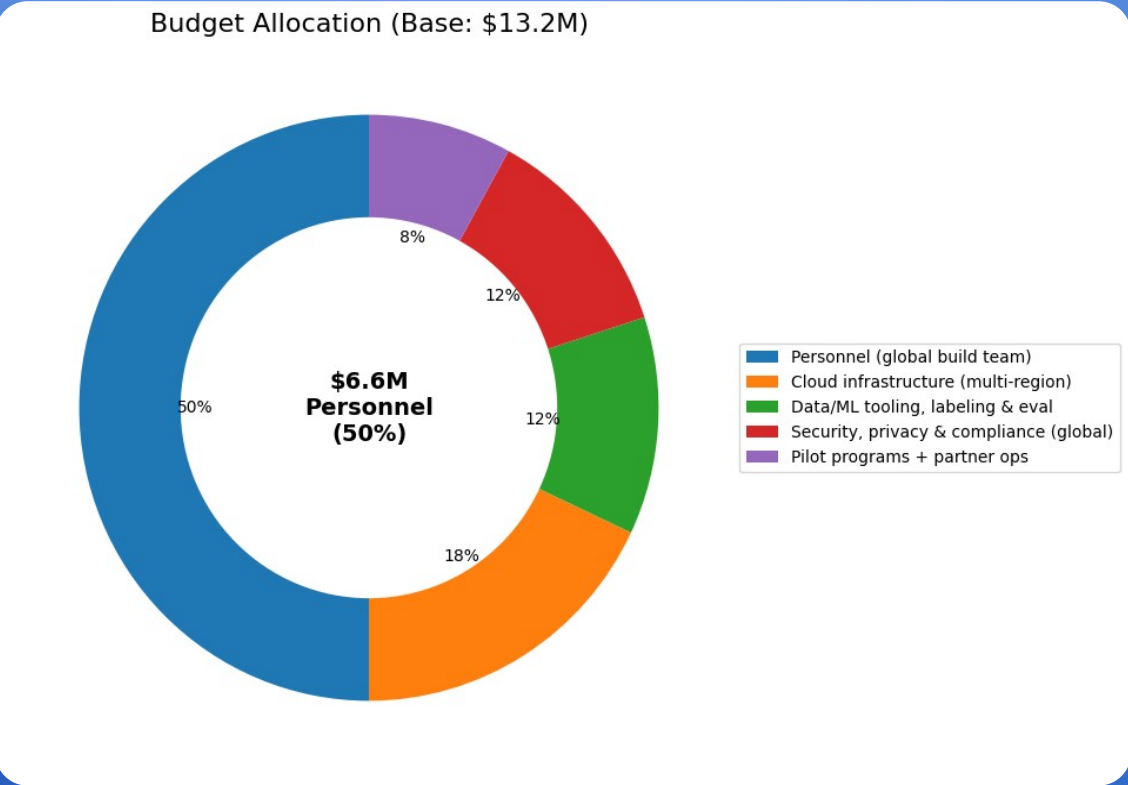


WBS (phase-level, per project)



Budget (portfolio-level)

Global build investment structure



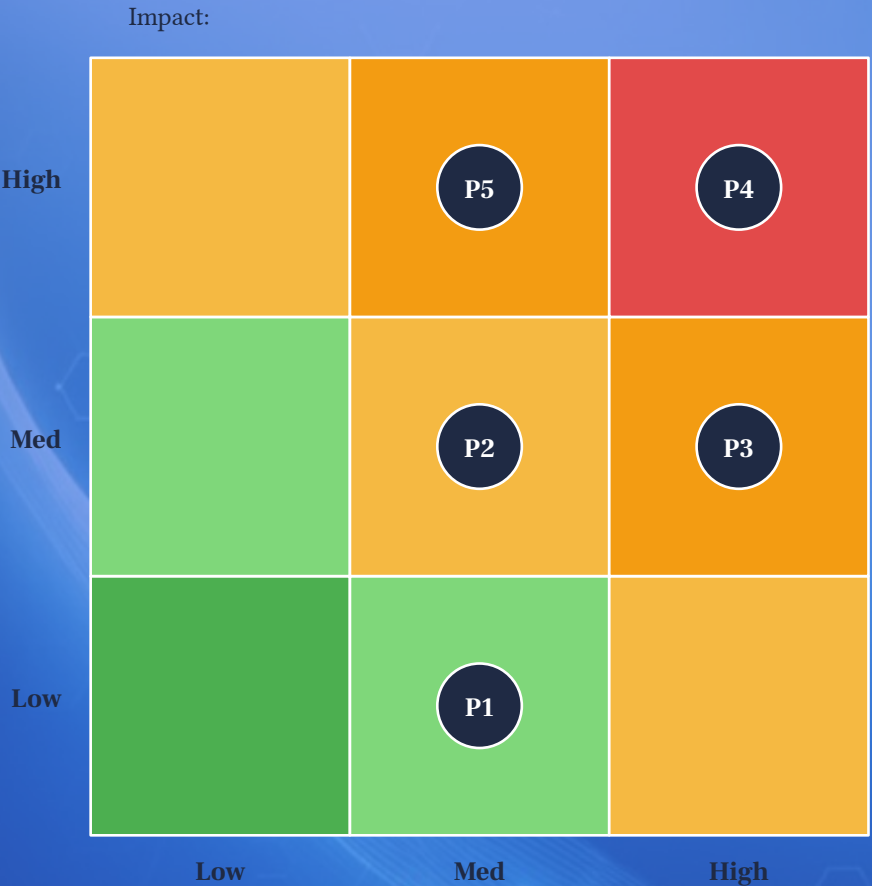
Budget (Base): \$13.2M | +15% MR: \$15.2M

Budget Base: Allocation Mix			
Category	Allocation	Amount	
Personnel (global build team)	50%	\$6.60M	
Cloud infrastructure (multi-region)	18%	\$2.38M	
Data/ML tooling, labeling & eval	12%	\$1.58M	
Security, privacy & compliance (global)	12%	\$1.58M	
Pilot programs + partner ops	8%	\$1.06M	
TOTAL	1	\$13.20M	

Personnel Breakdown (within 50%)			
Role	FTE	Months	Total
Program Leadership (Director + Product)	2	18	\$840K
Architecture & Platform Engineering	3	18	\$1.20M
Application Engineering (Backend + Mobile)	5	18	\$2.28M
AI / ML Engineering	3	18	\$1.35M
Data & Infrastructure (Platform + DevOps)	3	18	\$670K
Governance & Clinical Oversight	2	18	\$260K
TOTAL	18		\$6.60M

Notes: Order-of-magnitude NRC for global build phase. Investment phases from core capability development to platform integration and pilot validation. Management reserve retained at portfolio level.

Risk assessment ♦ portfolio rationale



Top risks & mitigations (portfolio view)

- **Model performance risk (P3):** mitigate via staged pilots, gold-standard labeling, and continuous evaluation.
- **Privacy/compliance risk (P4):** mitigate via privacy-by-design, audit logging, and alignment to NIST AI RMF.
- **Partner/pilot recruitment risk (P5):** mitigate with phased onboarding and a minimum of 2 partner tracks.
- **User engagement risk:** mitigate with culturally adaptive nudges and UX experiments.
- **Safety-critical false positives/negatives (P2/P3):** staged rollout + human-in-loop
- **Trust (P1/P3):** consent, audit logs, DP/Federated learning posture
- **Data quality ♦ drift (P1/P2):** monitoring, quality gates, retraining triggers
- **Operational escalation failure (P3):** runbooks, redundancy, monitoring
- **Cultural bias risk (P2):** diverse data + fairness evaluation + localized testing

Portfolio rationale

We intentionally carry ~20% high-risk work (P4) to unlock trust, privacy, and regulatory viability—while the remaining projects are incremental, execution-focused steps toward pilot-ready validation by Q4’2026.

Bibliography

LLM 1: GPT-4 Turbo (OpenAI) - Emotion Analysis

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LLM 2: Claude 3 Sonnet (Anthropic) - Wellbeing Assessment

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LLM 3: GPT-4 Turbo / Claude 3 Haiku - Action Recommender

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