



GUIDED BY AI, **DRIVEN BY YOU**

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The Future of at-home Physical Therapy with Extended Intelligence (XI)



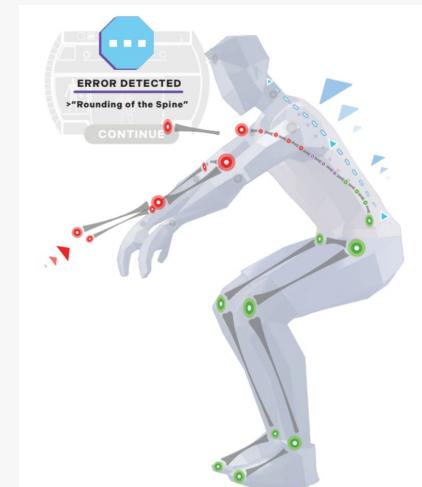
Physio XI delivers real-time, clinically validated movement quality feedback using adaptive AI – without wearables or expensive hardware.

Motivation Fades.
Errors go Unchecked.
Recovery Slows.

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THE PROBLEM

- Movement quality is invisible once patients leave the clinic and must maintain exercises on their own.
- Specialized hardware remains costly and impractical for most clinics and individuals, blocking scalability.
- Static home programs are unable to track and celebrate patient progress; engagement and adherence nosedive within days.
- When AI is a black box, trust breaks down—for patients, clinicians, and practitioners alike.
- Form errors in exercises go unchecked, stalling recovery and risking re-injury.



AI-enhanced home rehabilitation improves adherence and functional outcomes versus conventional home programs. Real-time feedback at home has been shown to improve ROM and quality-of-life scores following surgery (Abedi et al., 2024; Jung et al., 2025).



Active, Adaptive AI that
Understands Movement.

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THE SOLUTION

- Markerless motion tracking delivers real-time biomechanical analysis.
- Runs on smartphones and tablets – wearables and VR headsets are not required.
- Adapts to patient progress with personalized feedback loops.
- Transparent, open-source clinical benchmarks drive trust and adoption.
- Clinician-calibrated AI detects faults like knee valgus, spinal compensation.

Markerless, AI-driven motion capture shows clinical-grade reliability.

Studies demonstrate good-to-excellent agreement with marker-based systems for gait and spatiotemporal metrics, and improved ROM, pain, and patient-reported outcomes when used for real-time home feedback ([\(Schoenwether et al. 2025; Lee et al. 2025\)](#)).

We Aim to Become the Industry Benchmark for Open, Adaptive AI in Rehab — Trusted by Physical Therapists, Covered by Insurers, and Accessible on Any Smartphone.

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TECHNOLOGY & IP

Temporal graph AI for longitudinal recovery tracking

Physio XI adapts to the user's progress over time via cutting-edge advancements for better prediction and recommendation during recovery.

Barriers to entry:
real-time feedback +
clinical benchmark +
model transparency +
data pipeline

Physio XI combines scientific rigor and seamless UX. Achieving this integration of intelligence, trust, and usability will readily set our product at the forefront of competitors.

Reinforcement learning guided by clinician corrections

Our AI doesn't just learn from data—it learns from experts through clinician-guided feedback to enhance model accuracy and trustworthiness.

Hardware-aware model optimization for smartphones (<400ms latency)

Real-time insights and guidance are enabled by efficient compression of the AI model based on device settings for best possible performance.

COMPETITIVE LANDSCAPE

	HARDWARE NEEDED	FEEDBACK TYPE	AI ADAPTATION / OPEN SOURCE	TARGET USE	REVENUE MODEL
PHYSIO XI	Smartphone or Tablet TV (smartcast) VR (option)	Real-time Adaptive	Real-time adaptive AI / Yes	Clinic Home	\$300/month practitioner sub. \$0 OOP
HINGE HEALTH	Wearables + smartphone app	ROM tracking + async coaching	AI-powered tracking, non-adaptive / No	Employer MSK pain programs	Employer/Payer-paid \$0 OOP
SWORD HEALTH	Wearable sensors + tablet	Real-time coaching + AI	Real-time AI, clinician oversight / No	Employer MSK rehab	Employer/Payer-paid \$0 OOP
XRHEALTH	VR Headset	VR session-based	Session-based AI feedback, clinician-guided / No	Clinic + remote VR therapy	Reimbursement model & Enterprise Sales \$0-\$150/session for patients

FDA & Reimbursement Readiness.

REGULATORY & REIMBURSEMENT PATHWAY

FDA Pathway

Planning for FDA pre-submission (SaMD, Class II) in Phase II

Phase I

IRB-approved study (n=15) with clinician-AI agreement metrics.

Validation Metrics

Cohen's $k > 0.8$; SAE reporting aligned with FDA guidelines.

Our validation targets (e.g., Cohen's $k > 0.8$, excellent within/between-session reliability) align with recent clinical evaluations of AI-driven markerless motion capture and digital MSK therapeutics used in gait and rehab assessment ([Schoenwether et al. 2025](#)).

Reimbursement

Payer discussions to align with CPT codes for remote therapeutic monitoring (RTM)

MARKET OPPORTUNITY

Overview

TAM: \$1.5B
SAM: \$750M
SOM: \$35M

Primary Targets

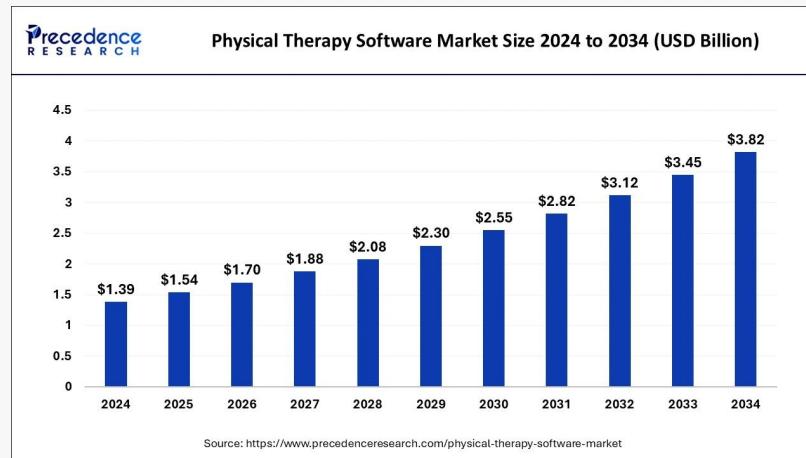
250K+ Physical Therapists
30K+ Senior Living Facilities

Expansion Toward

Primary: Physical therapy clinics and rehab specialists

Secondary: Senior living communities, outpatient surgery centers, home health orgs

Future: Telehealth platforms & personal health systems, insurance payers, sports medicine, manufacturing, VA, DOD



A Billion-Dollar Rehabilitation Market Ripe for Disruption.

\$12M

At 1% market capture among PTs and senior living facilities, projected annual revenue is \$12M, on par with or exceeding early-stage competitors.

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Cost Structure

- R&D (AI, motion capture, edge optimization)
- Clinical validation & regulatory compliance (IRB studies, clinician recruitment)
- Cloud infrastructure for model updates and clinician feedback loop
- Customer support, onboarding, and training
- Sales and channel partnerships

Revenue Streams

B2B SaaS Licensing: Monthly/annual subscription model for clinics, senior living facilities, and health systems

Per-Patient Licensing: Clinics and PTs pay per active patient seat/month

Pilot-to-Enterprise Expansion
(multi-site or network-wide)

Key Activities

- AI model development
- Clinician annotation loops for reinforcement learning
- Platform development and mobile edge deployment
- Strategic partnerships for distribution (clinics, health systems)
- Regulatory pathway planning (FDA engagement)

Key Partnership

- Clinical pilot sites: physical therapy clinics, senior living facilities
- Research hospitals for validation and clinician feedback
- AI researchers for open-source development and benchmarking
- Payers for reimbursement validation

BUSINESS MODEL

Physio XI will monetize through SaaS licensing and per-patient pricing models for PT clinics and senior living facilities. We begin with pilots and scale into broader contracts, anchoring clinician trust and payer readiness through validation and open benchmarks.

High Gross Margins, Scalable Tech, and Growing Demand for Reimbursable Home Rehab Fuel Long-Term Growth.

FINANCIAL SUMMARY — PRO FORMA

	2026	2027	2028	2029	2030
Users	20	74	298	878	2703
License (\$)	1200	1800	2600	3200	3600
Revenue (\$M)	0.04	0.20	0.93	3.14	11.92
Expenses (\$M)	1.06	1.51	2.36	3.93	6.94
Net Income (\$M)	-1.02	-1.32	-1.42	-0.78	+4.98

BUSINESS MODEL METRICS – Base Case

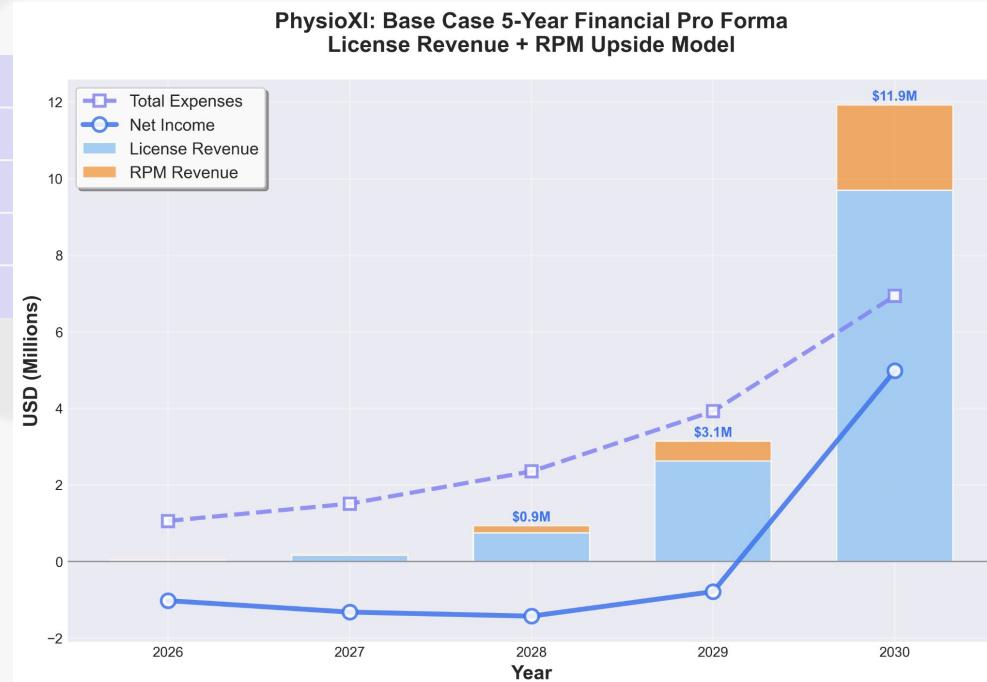
250K licensed PTs (addressable market)

7:1 LTV:CAC Ratio at 1% market capture

CAC: \$1,750

Customer LTV: \$12,000

Values found from Monte Carlo Analysis.
Detailed breakdown in Appendix.



We Seek \$5M to Fund MVP Deployment, Clinical Validation, and Payer Engagement — Building Evidence Toward Scalable, Reimbursable Growth.

FUNDING & USE OF PROCEEDS

Current Raise: \$5M Seed

- MVP deployment in 5 pilot sites
- Longitudinal case studies
- FDA pre-submission + payer engagement
- Team build-out (tech, product, clinical liaison)
- Edge deployment optimization

Milestones Funded by this Seed Round:

- First commercial contracts (clinics and senior living)
- Validated patient outcomes + PT feedback loops
- Regulatory pathway defined
- Payer discussions initiated
- Revenue readiness by end of round

Total Capital Estimation:

To Positive Cash Flow ~\$4M

Covers infrastructure, MVP validation, core team, early sales

Predicts modest initial revenue offsets around Year 3

To Exit-Readiness ~\$6–8M across two rounds

Includes scale-up, regulatory approval, payer integration

Positions for strategic acquisition or Series B

MULTIPLE EXIT PATHWAYS IN HEALTH TECH ECOSYSTEM

Strategic Acquisitions

Digital MSK Therapy Platforms

E.g., Hinge Health, Sword Health

Want: tech that improves outcomes, payer traction, and clinical differentiation

Medtech & Surgical Recovery

E.g., Stryker, Zimmer Biomet

Want: patient monitoring + digital recovery solutions aligned with their core offerings

VR/XR Health Tech Startups

E.g., XRHealth, MindMaze

Want: movement intelligence + mobile-first product to expand market footprint

Also,

Employer Wellness Platforms, Big Tech, & Consumer Health to consider!

Precedents & Market Signals

Hinge Health valuation \$2.5B+ (digital MSK therapy, but no real-time quality feedback) [\[source\]](#)

Sword Health raised \$340M+ (camera-based home PT, but no adaptive AI) [\[source\]](#)

Kaia Health partnered with major payers but lacks clinical transparency or open benchmarks [\[source\]](#)

MindMaze raised \$220M+ for neurorehab; strong appetite for AI-driven, rehab-specific platforms [\[source\]](#)

Exit Timeline

Seed Stage (Now–18 months)

previous slide for details

Series A (18–36 months)

Expand to 100s of clinics and home deployments.

Demonstrate real-world ROI: patient adherence, outcomes, and provider efficiency.

Pursue FDA clearance or formalize digital therapeutic recognition.

Series B, or Exit (36–48 months)

Achieve positive cash flow and clinical data milestones to attract acquirers.

Potential acquisition by strategic partners seeking to enhance their digital health offerings.

OUR TEAM

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Let's Transform
Rehabilitation
Together

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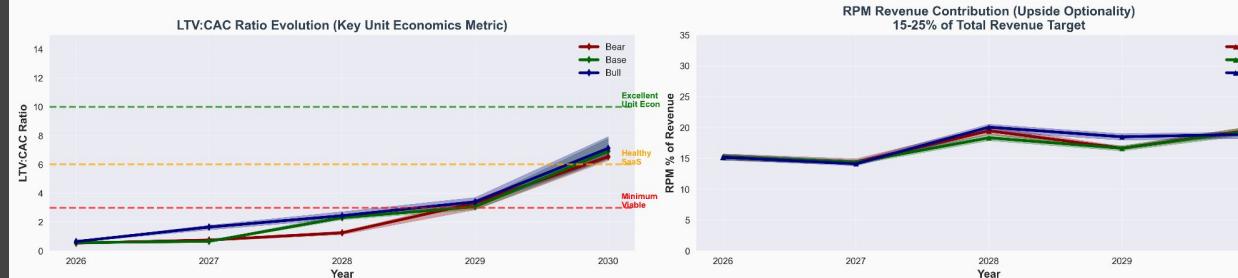
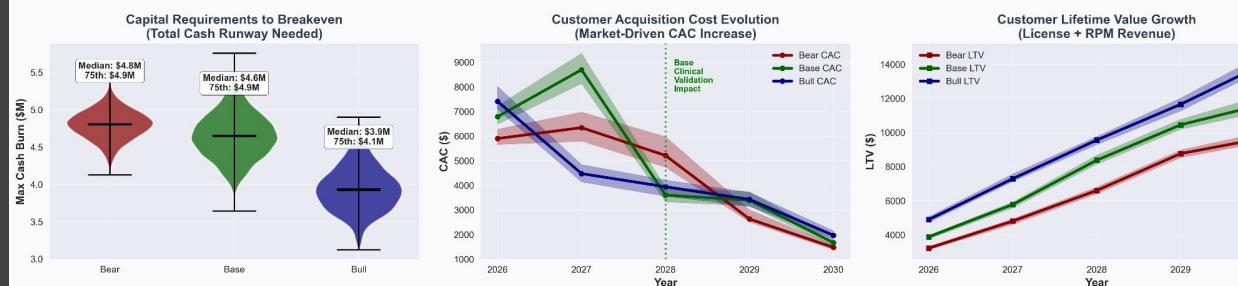
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Seeking visionary SEED investors to scale
clinically-validated, AI-driven Physical Therapy

APPENDIX WITH SUPPORTING DATA
AVAILABLE UPON REQUEST

APPENDIX



Scenario	2030 Customers	2030 Revenue	Capital Need	Final LTV:CAC	Breakeven	RPM %
Bear	1,608	\$5.9M	\$4.8M	6.8:1	January 2030	19%
Base	2,701	\$11.9M	\$4.6M	6.9:1	October 2029	20%
Bull	3,399	\$16.1M	\$3.9M	6.9:1	June 2029	19%

Systematic Business Outlook

Bear Case SaaS growth delivers \$6M revenue (~0.5% market capture)

Regulatory milestones drive both efficiency gains and market positioning

7:1 LTV:CAC ratio = solid unit economics grounded in market reality

\$5M ensures runway execution with quantified confidence

Monte Carlo modeling confirms robust projection



Empirically Validated, Scientifically Motivated

Clinically Validated Digital Rehab and Real-Time Feedback

- Jung SJ, Kim JH, Rhee SJ. (2025)—<https://doi.org/10.1186/s13102-025-01374-1>
Lee YK, Yoon EJ, Kim TH, Kim JI, Kim JH. (2025)—<https://doi.org/10.3390/jcm14238467>
Olawade, D. B., Adeleye, K. K., Egbon, E., Nwabuoku, U. S., Clement David-Olawade, A., Boussios, S., & Vanderbloemen, L. (2025)—<https://doi.org/10.21037/atm-25-61>

ML / AI / VR in Healthcare

A growing body of research finds that AI-driven home-based rehab is highly effective at encouraging patient compliance through personalized approaches.

- Abedi et al. (2024)—<https://doi.org/10.1038/s41746-024-00998-w>
- Khalid et al. (2024)—<https://doi.org/10.2147/IJGM.S453903>
- Melnykova et al. (2020)—<https://doi.org/10.3390/math8081211>
- Tack (2019)—<https://doi.org/10.1016/j.msksp.2018.11.012>

Real-Time Feedback in Rehabilitation

Sports training and physical rehab studies show improved performance using real-time interactive feedback via wearable devices and MMT systems.

- Kang et. al. (2024)—<https://doi.org/10.3390/jcm13237377>
- Hribernik et al. (2022)—<https://doi.org/10.3390/s22083006>
- Beibl et al. (2021)—<https://doi.org/10.2196/26658>
- Junata et al. (2021)—<https://doi.org/10.1186/s12984-021-00922-3>

Markerless Motion Tracking in Rehab

MMT has an established track record in rehab applications that use pre-recorded data to produce actionable reports.

- Schoenwether et al. (2025)—<https://doi.org/10.1371/journal.pone.0316119>
- Das et al. (2023)—<https://doi.org/10.1038/s41598-023-49360-2>
- Pottorf et al. (2023)—<https://doi.org/10.26603/001c.88003>
- Mauntel et al. (2021)—<https://doi.org/10.4085/1062-6050-0023.20>

Reinforcement Learning in Clinical Settings

RL can enable adaptive, human-centered real-time healthcare tools—a paradigm shift from their current role as predictive models.

- K et al. (2025)—<https://doi.org/10.7759/cureus.82756>
- Jayaraman et al. (2024)—<https://doi.org/10.1038/s41746-024-01316-0>
- Liu et al. (2020)—<https://doi.org/10.2196/18477>
- Zade et al. (2020)—<https://doi.org/10.1016/j.cmpb.2020.105443>



Empirically Validated, Scientifically Motivated

Open Source Data

Our proposed technology will take advantage of key data repositories for real-world rehab poses, markerless AI training, and therapy-specific movement analysis.

SynthMoCap, Hewitt et al. (2024)—<https://doi.org/10.1145/3687772>
UCO Physical Rehabilitation, Aguilar-Ortega et al. (2023)—doi.org/10.3390/s23218862
PHYTMO, García-de-Villa et al. (2022)—<https://doi.org/10.1038/s41597-022-01387-2>

AI Model Optimization for Edge Devices

Physio XI will leverage cutting-edge advances in AI model optimization for efficiency, accuracy, and adaptability across devices and data types.

Wang & Jia (2025)—<https://doi.org/10.48550/arXiv.2501.03265>
Zhou et al. (2024)—<https://doi.org/10.48550/arXiv.2408.12840>
Benmeziane et al. (2021)—<https://doi.org/10.24963/ijcai.2021/592>

Synthetic Data in ML / AI

Synthetically augmented data can render more robust training sets, providing time- and cost-effective solutions while overcoming privacy risks.

Perrone et al. (2024)—<https://doi.org/10.1101/2024.09.27.24314497>
Dindorf et al. (2024)—<https://doi.org/10.3389/fbioe.2024.1350135>
Bicer et al. (2024)—<https://doi.org/10.1016/j.biomech.2024.112358>
Giuffrè & Shung (2023)—<https://doi.org/10.1038/s41746-023-00927-3>

Temporal Deep-Learning, Modeling, and Prediction

Significant advances in temporal deep-learning methods have enhanced predictive accuracy and interpretability in critical applications in both clinical and ICU settings.

Hancox et al. (2024)—<https://doi.org/10.48550/arXiv.2409.06585>
Barnes et al. (2024)—<https://doi.org/10.48550/arXiv.2407.09373>
Zhou et al. (2024)—<https://doi.org/10.1182/bloodadvances.2023011752>
Chen et al. (2024)—<https://doi.org/10.24963/ijcai.2024/637>

Branding



COLORS

EAA50A
EA7F0A
3E74ED
98C7F2
8383F2
D8D8F4
F7F7F7
212121

FONTS

HEADINGS
INDIVISIBLE / BOLD / CAPS
Body
Indivisible / Regular / Regular case

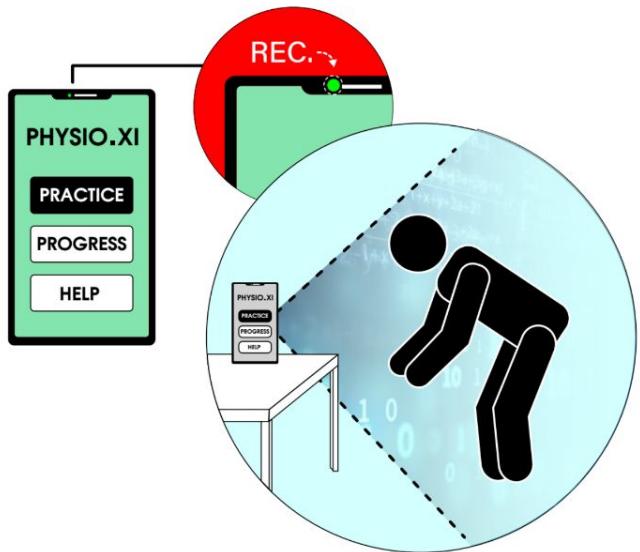
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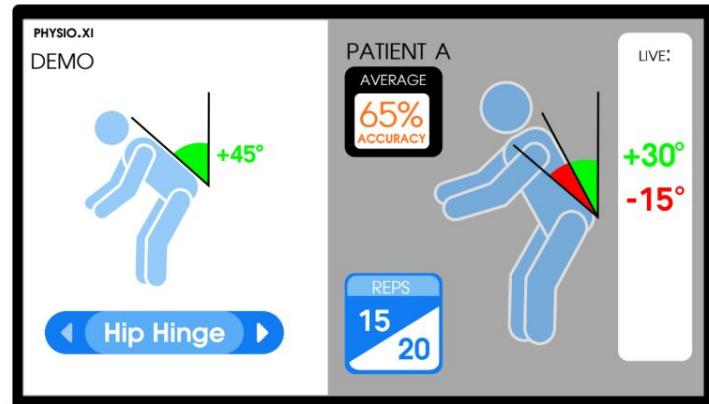
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Imagined Deliverable:

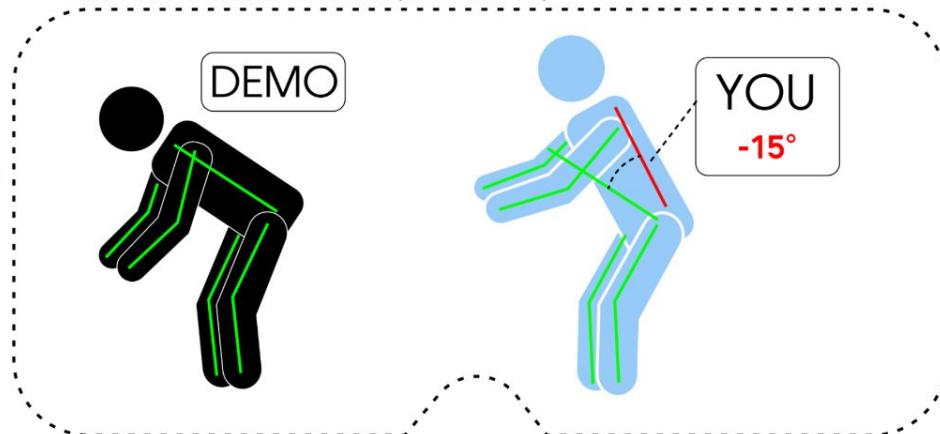
CAMERA TRACKING (DATA **INPUT**)



REAL TIME FEEDBACK TV/MONITOR (DATA **OUTPUT**)



REAL TIME FEEDBACK VR/HEADSET (DATA **OUTPUT**)



- highlights the calculated difference between user activity, and accurate performance
- guides for accurate performance

User Interface/Experience Criteria (Overview)

A ADHERENCE

Progress / Follow-up / Schedule

V VALIDATING CORE SUCCESSS

Reaching "Peak State" / Encouragement / Gained Stability

**(A) ● (Push) Notifications**

Think: Duolingo, but tethered to an operative calander

(V) (A) ● Progress/Calander

Interactive yearly calander in-app, marked out with up-coming/past physio.xi workouts, expandable upon tap, record for individual workouts/overall program progress. *Reflective of info displayed on HEADSET "Dashboard", summarized.*

● User Profile

Name, Patient Info, PT treatment notes

(A) ● Treatment Overview/Breakdown

Similar to "Dashboard", but with a more complete version of PT notes, and records of medical assessments for patient's refrence

(V) (A) ● PT Portal/Communication

(Progress/Surveys from HEADSET "Workout Follow Up" visible to PT office- "I noticed that your hip-hinges have been maked as 'extremely difficult'- Let's schedule a meeting to discuss an alternative PT regime."

● "Launch Workout/Routine"

Sync/Pair to Headset Experience (both devices "visible/detectable" to one another)

**● Sync/Pair to Mobile Device (Compatible RGB camera)****(A) ● Start/Launch "Screen"**

Overview/Progress Indicator, similar to MOBILE "Progress/Cal" and "User Profile"

"Launch Workout" button

(V) ● "Dashboard"

of reps, progress, supportive info (Targeted region, Exercise name, PT accessories required)

"?" button (ref to exercise tutorial)

(A) ● Tutorial

Corrective Exercise Guide demo, visual & auditory instruction

(V) ● Avatars

User (M/F options, less stylized), Kai (Toggle Options for 2< characters)

(V) ● "Active Feedback Indicators"

Skelaton, Goniometer-esque thing to toggle on/off for extra info

Red, Blue, Green alignment regions/visual language

Audio Cues/FX (pass, stop, complete, exit, enter, select, hover, tips)

(A) ● "Workout Follow Up"

Cal./Plan/Schedule next session (synced to MOBILE "Notifications" & "Calander")

Post-Workout Survey ("How was that for you?" extremely difficult, average, extremely easy etc.)