



GUIDED BY AI, **DRIVEN BY YOU**

## CONTACT

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



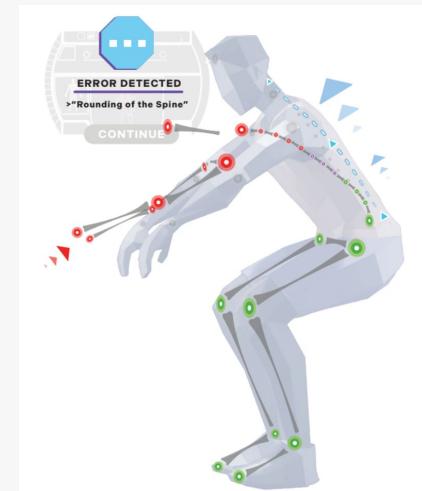
Physio XI delivers real-time, clinically validated movement quality feedback using adaptive AI – without wearables or expensive hardware.

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(S)
<b>PHYSIO XI</b>	Smartphone or Tablet TV (smartcast) VR (option)	Real-time Adaptive	Yes / Yes	Clinic Home	\$300/month practitioner sub. \$0 OOP
<b>HINGE HEALTH</b>	Wearables	Range of Motion only	No / No	Pain Mgmt	Employer/Payer Cost per Member \$0 OOP
<b>ONESTEP</b>	Smartphone	Range of Motion + basic form	No / No	General PT	B2B Licensing & Practitioner sub. \$150/session for patients
<b>XRHEALTH</b>	VR Headset	VR session-based	No / No	Niche / Clinic	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

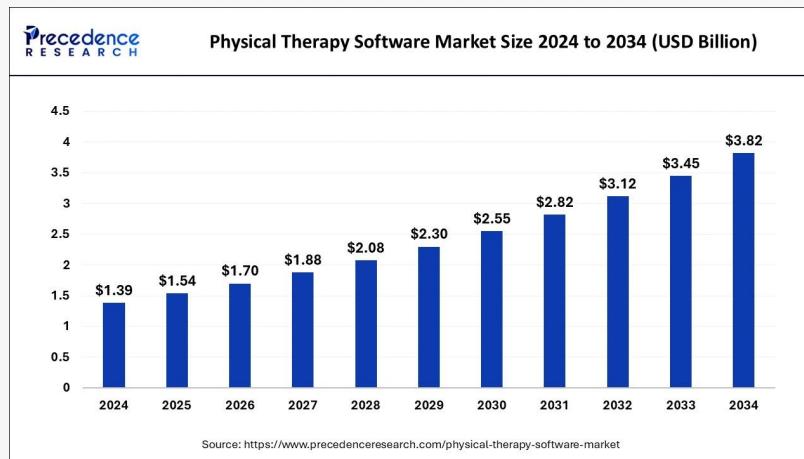
250K+ Physical Therapists  
30K+ Senior Living Facilities

### 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.

## 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
<b>Users</b>	20	74	298	878	2703
<b>License (\$)</b>	1200	1800	2600	3200	3600
<b>Revenue (\$M)</b>	0.04	0.20	0.93	3.14	11.92
<b>Expenses (\$M)</b>	1.06	1.51	2.36	3.93	6.94
<b>Net Income (\$M)</b>	-1.02	-1.32	-1.42	-0.78	+4.98

### BUSINESS MODEL METRICS – Base Case

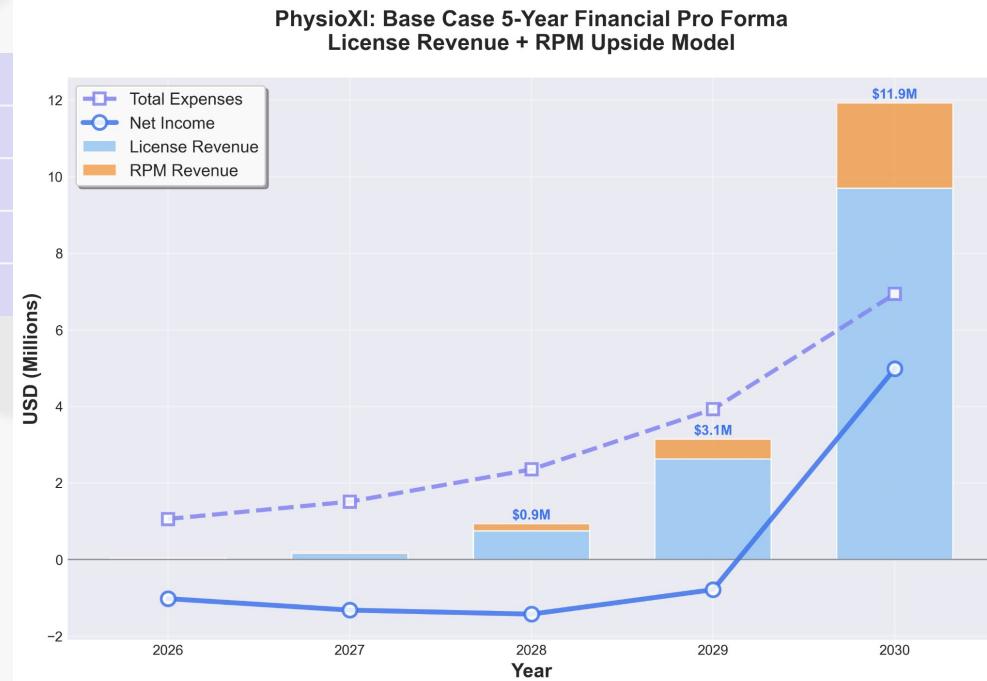
250K licensed PTs (addressable market)

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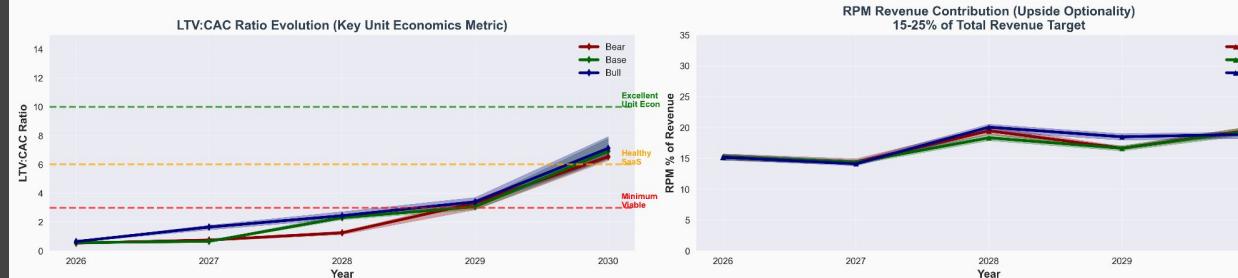
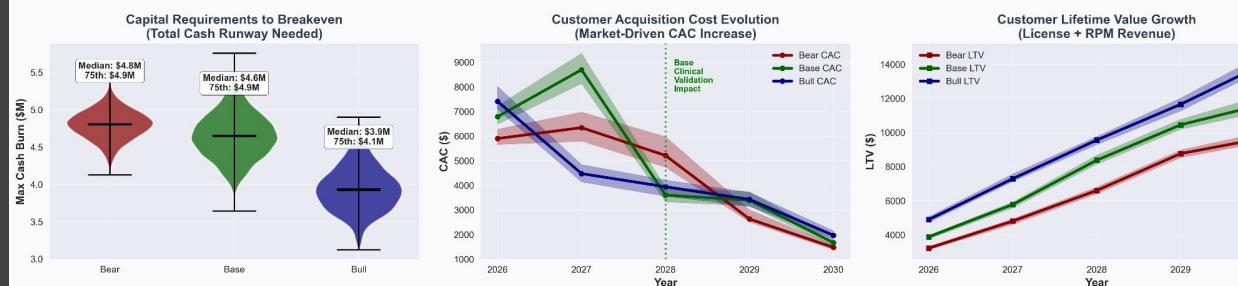
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Seeking visionary SEED investors to scale  
clinically-validated, AI-driven Physical Therapy

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](https://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

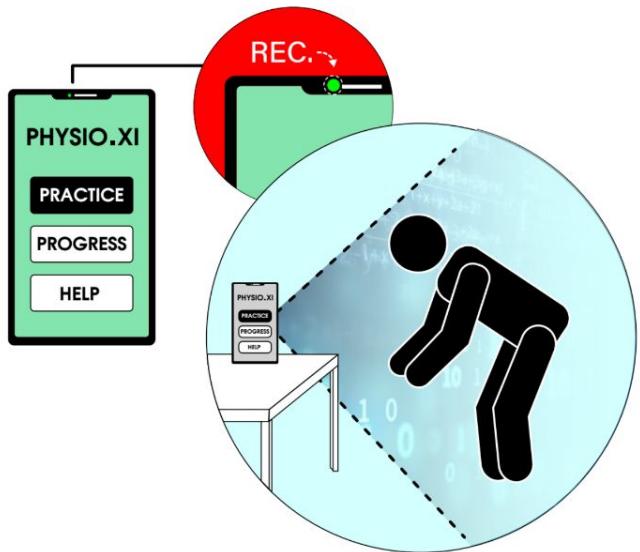
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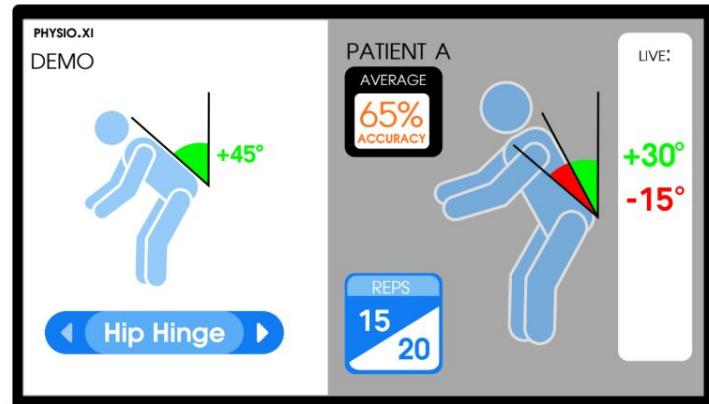
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# Imagined Deliverable:

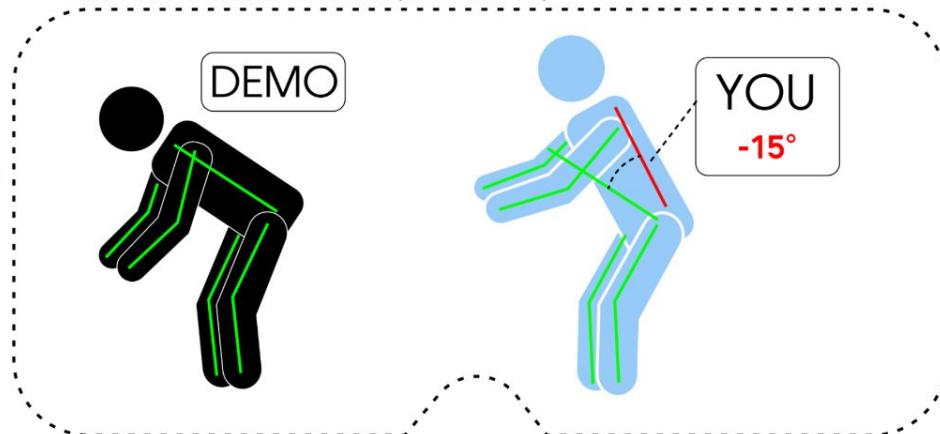
CAMERA TRACKING (DATA **INPUT**)



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 &amp; 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" &amp; "Calander")

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