



# Digital literacy enables up-to-date sleep medicine in inclusive healthcare

## eSleep\_dHealth

*MEDILS - Mediterranean Institute for Life  
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# Smart Sleep Sensing

**Group 2** - Increasing accessibility of high quality non wearable sleep detection

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# The Problem

- **Many sleep disorders go undetected**
  - OSA, Insomnia, RLS, RBD, etc.
  - Prevalence increases with age
- **The trouble with wearable devices**
- **Accessibility** issues for frail groups and people with low digital literacy

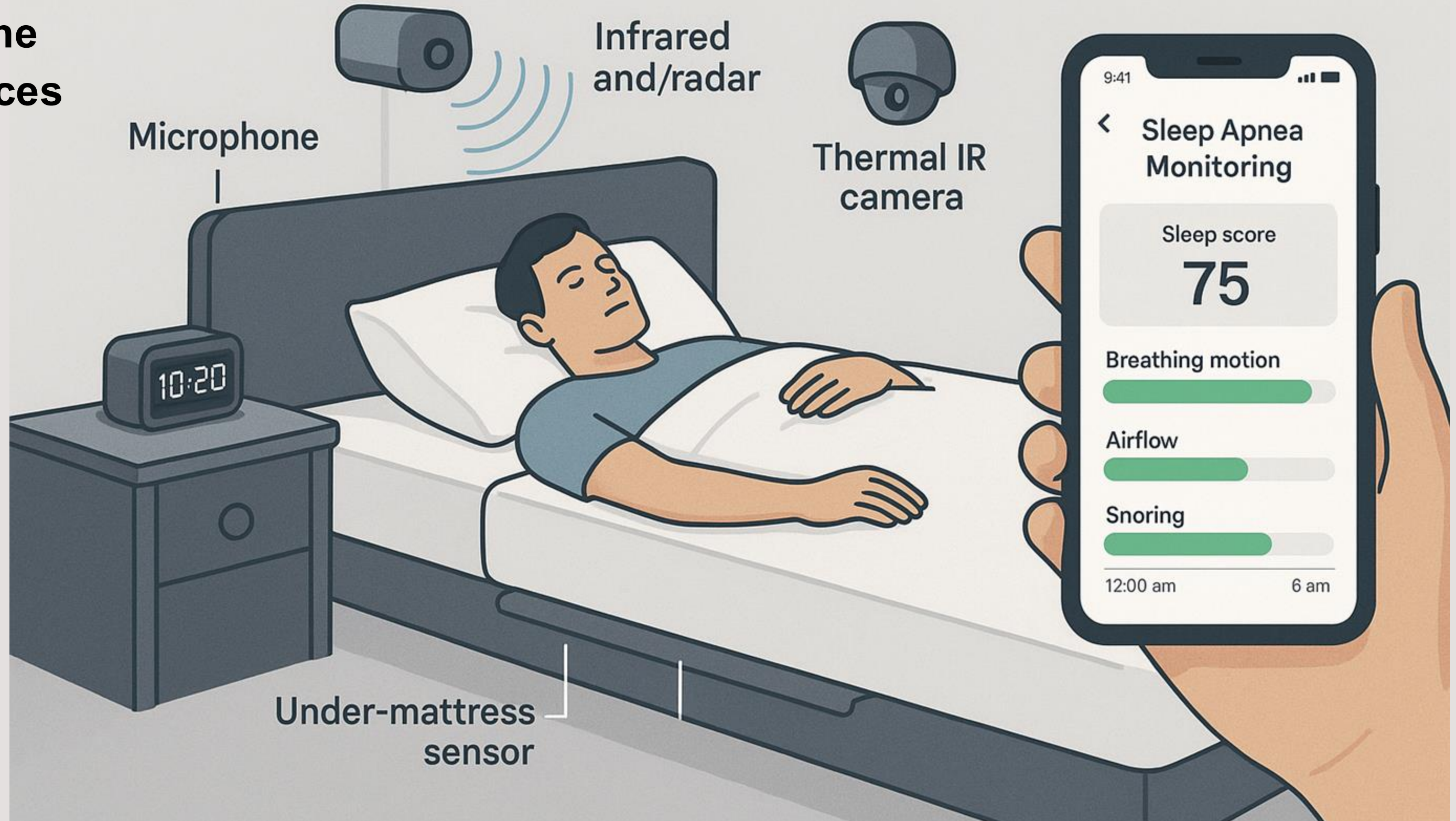




# The Solution

Enabling people to detect possible sleep disturbances without the need for wearable devices

## Multimodal Sleep Apnea Monitoring





## COMPETITORS

Withings	under-mattress, adult OSA screening
emfit	under-mattress wellness athletes
 sleep number	smart beds comfort + wellness focus
EIGHT SLEEP	smart beds comfort + wellness focus
ŌURA	wearables track SpO <sub>2</sub> dips only
 fitbit	wearables track SpO <sub>2</sub> dips only
SnoreLab SleepCheckRX	Audio-only apps

## OUR EDGE

- Multimodal accuracy
- Early detection for children
- Real-time action
- All-in-one hub



# Target Market



Undiagnosed adults & parents  
of children with early-onset sleep  
apnea



Healthcare providers & consumer  
wellness/tech users



Growing \$10B global sleep  
apnea device market



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# Thanks for listening

## Questions ?



- Market opportunity
- Business model
- Go-To-Market strat
- Team composition
- Financials and Funding Ask
- Call to Action



# Market Opportunity

The global adult population

- Focus on people who are very sensitive to wearable devices and people are unable to be more aware of their sleeping pattern

By utilizing methods/Modality and Approaches that have shown success in isolation, we combined them using machine learning / AI ensemble to get enhanced accuracy for non contact sleep detection





# Business Model



## Streams of Revenue

**All-in-one hardware bundle + AI-powered software**

1. Device Sales (One-time purchase)
2. Subscription Model (Recurring revenue)  
Monthly/annual fee for advanced software features (e.g. personalized sleep recommendations, cloud data storage & reports for doctors)
3. B2B partnerships (Sleep clinics & hospitals, insurance companies, employers & wellness programs)
4. Data Insights (Future opportunity to pharma, research institutions, or health AI developers)



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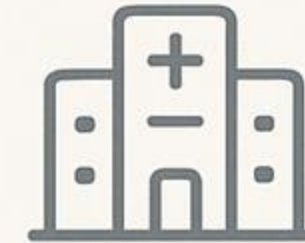
# Go-to-Market Strategy

## Phase 1: Direct-to-Consumer

(early adopters, tech-savvy health enthusiasts)



## Phase 2: Partner with sleep clinics & hospitals (validation and credibility)



## Phase 3: Scale via insurance reimbursement & corporate wellness programs



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# Traction/Milestones



- Include examples like:
  - Completed stages of the Design Thinking process (e.g., user interviews, ideation sessions)
  - Early prototypes
  - Initial user feedback or insights
  - Defined validation steps (planned or completed)
  - Planned timeline for next development phases
- Focus on demonstrating movement and commitment - even if you haven't launched anything yet.



# Financials & Funding Ask

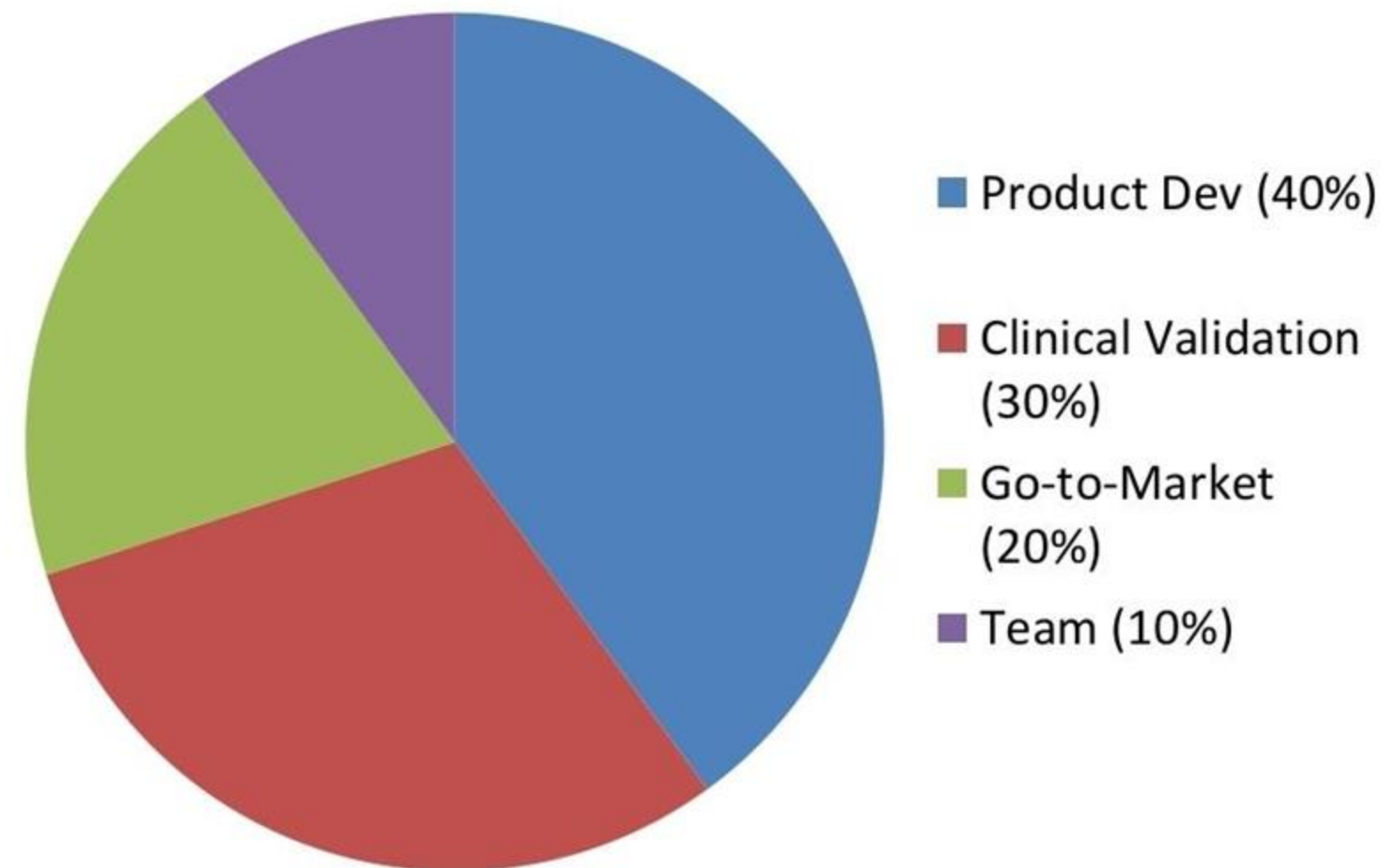
[Projections]

Year 1: Pilot launch, 1,000 devices sold → \$300K revenue

Year 2: Market expansion, 5,000 devices sold + subscription → \$1.5M revenue

Year 3: Expected to break even

**€750K Funding Ask Allocation**



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# Call to Action/Closing



- Clearly state what you are asking for (e.g., funding, partnership, pilot opportunity).
- Reinforce the importance of your solution and why it matters now.
- Use this moment to evoke empathy in your audience - show the real-world human impact of the problem and how your innovation can make a difference.



# Disclaimer



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Sensor / Modality	Company / Example	What they diagnose / detect
Under-mattress sensor (BCG mat)	Withings Sleep Analyzer, Emfit	Sleep apnea screening (adult), sleep quality, snoring
Infrared / video camera	Research prototypes (e.g., Lund University, MIT studies)	Breathing motion, posture, suspected apnea events
Thermal IR camera	Research (various universities)	Airflow from nose/mouth, apnea detection
Microphone (audio)	SleepCheckRx app, SnoreLab	Snoring, pauses in breathing, possible OSA
Radar (Doppler / mmWave)	Google Soli (research), university spin-offs	Breathing rate, sleep stages, apnea events
Smart beds (embedded sensors)	Sleep Number, Eight Sleep	Sleep stages, snoring, some apnea indicators
Overnight pulse oximeter	Masimo, Nonin, Wellue O <sub>2</sub> Ring	Oxygen desaturation index (proxy for apnea severity)