COACHING
LIKE YOU HAVE
NEVER SEEN
BEFORE.
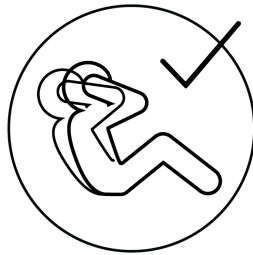
HEDDOKO

WHAT IS HEDDOKO™?

HEDDOKO™ is a wearable technology that serves as a personal training partner and coaching companion. HEDDOKO™ is a smart compression shirt and compression pants that continuously track one's body movement in order to guide him or her towards optimal performance and precision in sports.

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BENEFITS

OPTIMIZE MOVEMENT PRECISION
The combination of the smart garment with an artificial intelligence back-end system allow us to capture and analyze motion data and provide meaningful coaching feedback.

REDUCE RISK OF INJURY
HEDDOKO™ captures specific body metrics such as muscle fatigue and amount of force applied to the joints. It identifies incorrect movements, reducing the risk of injury.

MAXIMIZE COACHING PRODUCTIVITY
HEDDOKO™'s solutions provide coaches, trainers, and movement specialists with reported analytics to evaluate the level of performance at which multiple athletes execute their exercises.
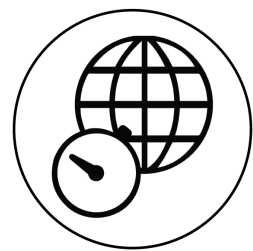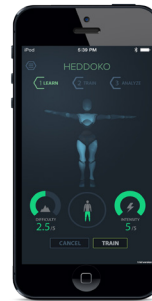
COACH ANYTIME, ANYWHERE
Coaches are not limited to athlete's schedules. With HEDDOKO™, training data and reports are accessible from any device whenever and wherever you need them — in the gym, on the field, in the studio, in the rink, or on the green.
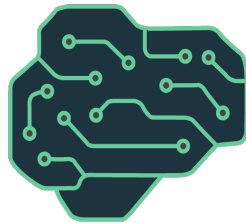
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HOW IT WORKS

SMART GARMENT
Captures and filters movement data.

MOBILE APP
Models 3D movement and provides live coaching feedback.

ARTIFICIAL INTELLIGENCE
Analyzes data to determine body metrics such as limb orientation, joint angles, velocity, and acceleration that can help determine movement efficiency and quantify risk of injury.

WEB APP
Provides dashboards and reports to track performances.

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THE HEDDOKO GARMENT

The suit is composed of a compression shirt and compression pants with integrated sensors to capture movement of the core and limbs.
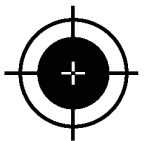
Full body compression suit comprised of smart pants and a smart shirt.

Sensors are integrated within the garment's fabric measuring height, width, and body volume.

10 areas of data capture around the body to continuously track the user's biomechanics in real-time.

E-textile sensors measure variables including muscle fatigue and joint pressure.

The garment is designed to be comfortably worn under any sports gear.

Breathable fabric is used to optimize the regulation of body moisture and heat.

Haptic sensors that vibrate are integrated into the garment to indicate correct/incorrect movements.

Garments are designed to be washable and withstand tough training conditions.

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THE CORE

The sensors continuously communicate with a central unit on the garment that directly transfers the data to a smart device through Low Energy Bluetooth.

BLUETOOTH
Battery pack has secure BLUETOOTH LE wireless communication capabilities to transmit data from 50 meters away to:

•Smart phones and iPods
•Smart watches
•Central coaching station for team

OFFLINE OPERATIONS
Battery pack contains an internal memory for offline usage and data collection.
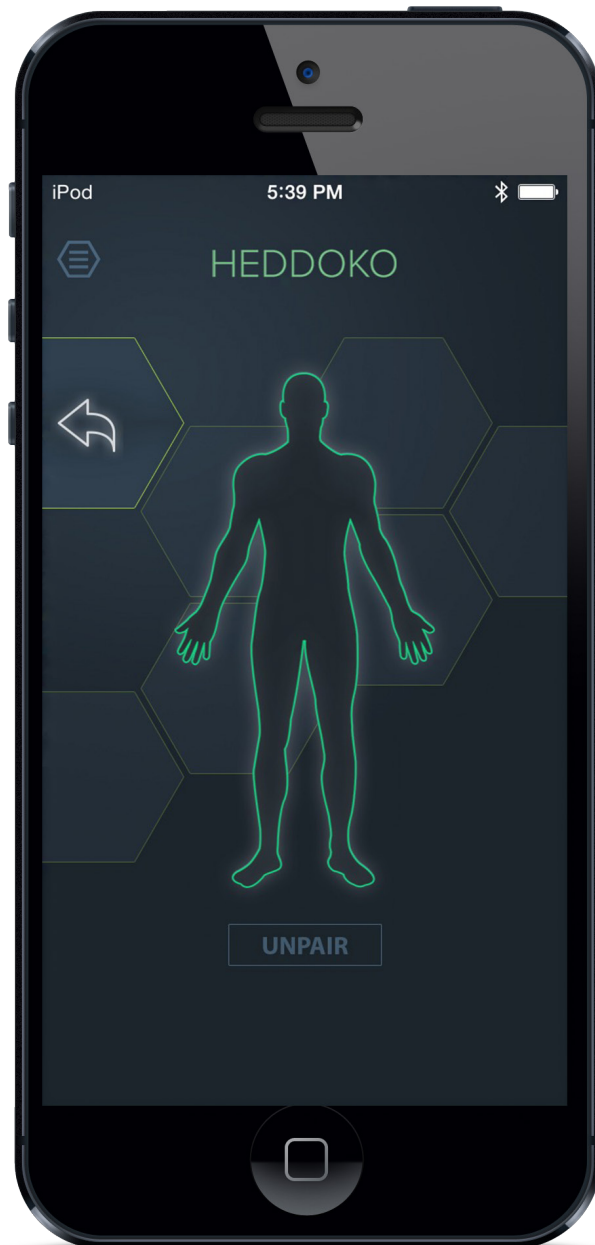
BATTERY LIFE
4 hrs of continuous tracking.

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MOBILE APP

HEDDOKO™ mobile app serves a dual purpose: it models the 3D movement of the user's body and provides live coaching feedback. It also transmits all the information to the artificial intelligence back-end system.

CONNECTING & CALIBRATING

PAIRING WITH GARMENT
First time users will be guided to pair their device with the garments.

USER PROFILE
Create a personalized user profile or login using social media.

INJURY PROFILE
User can set up the application to take his/her injuries or disabilities into account for the analysis of the exercise routines.

IDENTIFY LEVEL OF USER
The user can input his/her proficiency level for specific sports. This affects the system's tolerance thresholds for measurement accuracy in the analysis algorithms.

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COACHING TOOLKIT
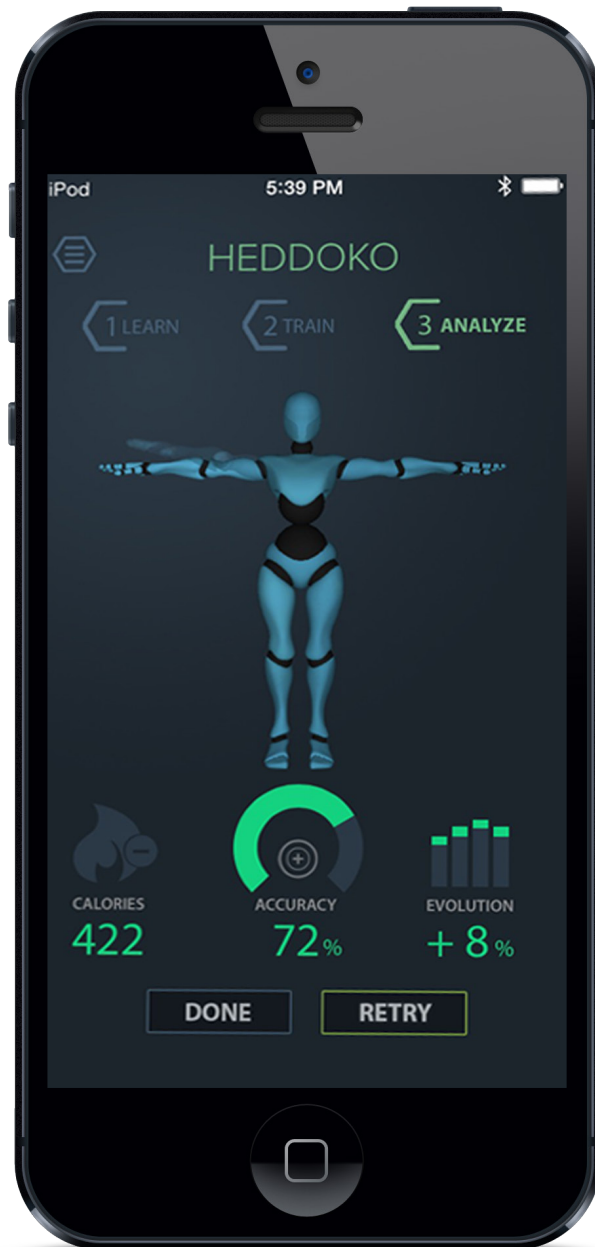
3D MODELING
The app provides 3D modeling of the user's movement allowing the monitoring of his/her routine.

GHOST & ANNOTATIONS
The app provides annotations on the 3D model, giving instructions on how to adjust body positioning. A ghost of the "ideal movement standard" and/or a previous personal recorded movement will appear underneath the user's current movement to display the level of accuracy.

EXERCISE ROUTINES
The app is preloaded with sequences of exercise routines including cross training, warm ups and stretching.

AUDIO FEEDBACK
The app provides real-time audio coaching feedback during the exercise, giving specific instructions on how to execute movements correctly and efficiently.

SCORING
User is scored per movement and per routine based on how accurate his/her movements are compared to the standard.

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ARTIFICIAL INTELLIGENCE

Artificial intelligence allows the system to learn about the user's body and provide insight on his/her performance. The user has access to a web dashboard that shows his/her improvements in movement efficiency over time. This will become his/her personal training and team training profile.

PERFORMANCE METRICS
The full body movement analysis allows the automatic gathering of the following performance metrics.

- *MOVEMENT ACCURACY*
Percentage of errior/deviation from ideal movement standards.

- *POSITION OVER TIME*
Joint angles and limb orientation. Flexion/extension, internal/external rotation, adduction/abduction, pronation, supination.

- *VELOCITY AND ACCELERATION*
Average velocity of limb movements, rate of acceleration and deceleration.

- *JOINT PAIN*
Average force applied to joints

- *COMPLETION RATE*
Routine completion percentage based on accuracy (useful for injury rehabilitation routines)

- *RISK OF INJURY*
Calculates risk factor based on total volume (i.e.number of repetitions), movement velocity, and movement precision.
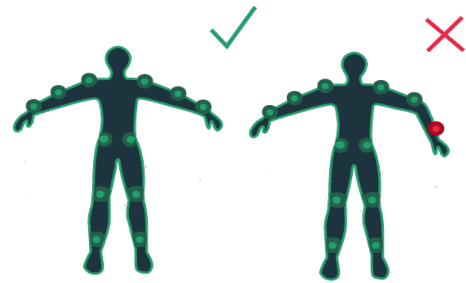
MOVEMENT ANALYSIS
Based on observations of the user's movements and environment, it classifies the nature of the movement (swinging golf club, shooting, squatting, etc.) It then ranks the movement accuracy compared to the user's golden standards which are based on 2 main elements:
- Research data and data gathered from athletes and coaches.
- The user's own recordings of perfect/target movements.
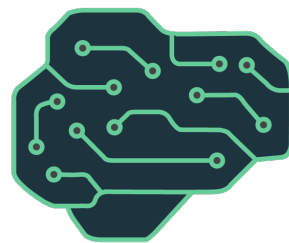
MACHINE LEARNING
Through usage, the system adapts to the user's body type and gives meaningful insight according to one's physical abilities. HEDDOKO™ can record body movement in order to customize its exercise database.
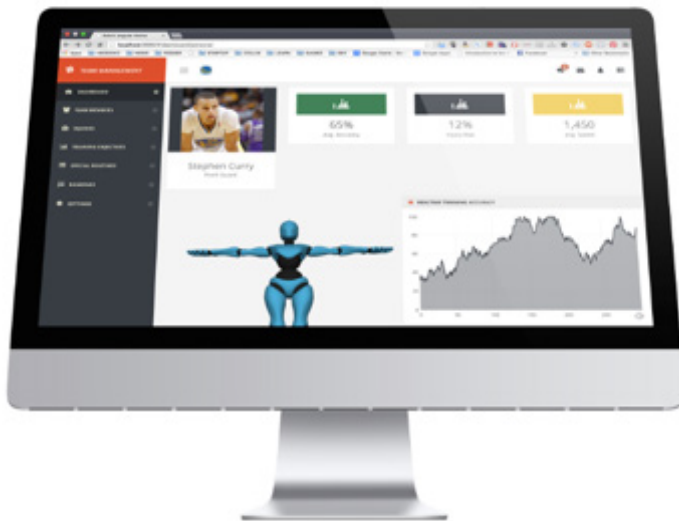
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MANAGEMENT DASHBOARD

The management dashboard allows teams and coaches to keep track of their athletes performances (individual and aggregated) and have a direct follow up with them.
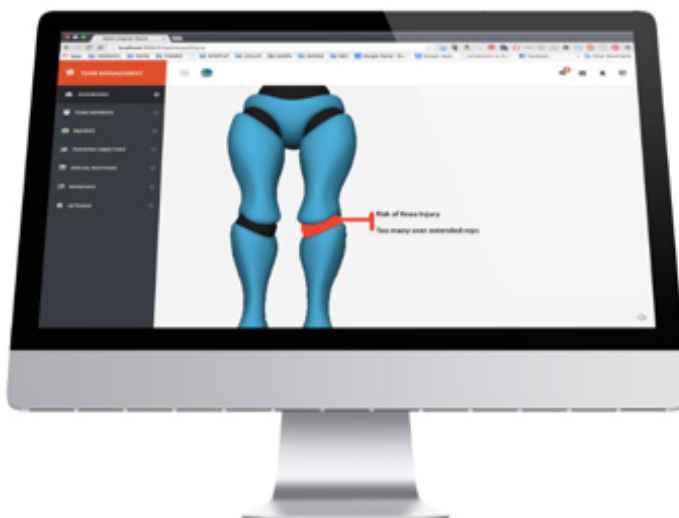

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WEB DASHBOARD

The HEDDOKO™'s User Data section gives you a full view of the performance and training plan of every athlete.

- USER PROFILE
- INJURY PROFILE
- USER LEVEL
- CALIBRATION DATA
- PAIRED DEVICES TRACKING
- RECORDED MOVEMENTS
- RECORDED SCORES
- USER OBJECTIVES
- ROUTINE PLAYLISTS
- RANKINGS
- PERFORMANCE METRICS

MONITOR PROGRESS
of all your players in terms of fitness, movement precision, and active workouts.

SET GOALS
for individual players to measure their movement precision during training.

SET TRAINING ROUTINES
catered to specific aspects of the game or an athlete's individual training needs.

SPECIFY INJURY
and set packages for athletes to do while healing from an injury.

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AWARDS & RECOGNITION

- Finalist - Wearable Technologies Innovation World Cup, Munich 2015
Nominated as a ground breaking garment in the field of wearable technology.

- Finalist - International Startup Festival, Montreal 2014
Recognized as one of city's most innovative local startups.

- Finalist - Special Jury Price at Founder Institute Demo Day, Montreal 2014
Nominated to present and recipient of award from a jury of mentors and investors.

- Finalist - First Founder Institute Montreal Cohort, Montreal 2014
Recognized as one of The Founder Institute's most promising Montreal startups in a pool of over 400 applicants.

- Finalist - Videotron Business Solution Competition, Montreal 2014
Nominated as a ground breaking garment in the field of wearable technology.

- Radio Canada Startup Documentary with Alexandre Taillefer "Alexandre et le Conquerants", 2015
Highlighted in Alexandre Taillefer's 8-week reality TV series on dynamic startups.

LET'S TALK

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