

# Revolutionizing Performance and Health

Myontec

Smart Clothing and AI-  
Powered Data Analytics







# Executive Summary

Myontec is a cutting-edge tech and data analytics company, leading the world in advanced smart clothing and EMG analysis solutions.

## MARKET NEEDS

Problem - Solution

Uniqueness

Use Cases

- Sport
- Rehabilitation
- Ergonomics

## MARKET

Wearable Tech. Market \$70.9 billion

Focus Market

Go to Market Strategy

## PRODUCTS

Established Tech and Product Portfolio

User Benefits

Patents and IP

## TEAM AND TARGET

Team

Revenue Streams

Investment Request

# KNOW YOUR MUSCLES

## Problem



Over 30% of athletes suffer injuries that are preventable with real-time muscle monitoring.

Biofeedback not used to prevent injuries or re-injuries.



How to optimize and improve performance?

Need for quick and accurate wearable.



## Solution

Muscle level biofeedback can accelerate recovery up to 50%, and prevent 80% re-injuries caused by muscle asymmetries.

Scientifically backed features and precise biometric analysis for reliable insights, tips and alerts.

Data accuracy enables better analysis. Training load, intensity, calories burned, and metabolic power are more accurate than those calculated from other vitals.

Just wear it! No preparation needed.

# Uniqueness

The world's only smart clothing with patented technology that measures both muscle activity (EMG) and motion (IMU) simultaneously.

Technology validated in 4 different countries, in 6 different universities.

Accurate and proprietary data from the skin to algorithms.

Algorithms based on scientific findings and validations.

Established technology and Product portfolio.

Existing customer base in Sport, Rehabilitation and Research.

## HUGE scaling potential!

1. **Muscles are used everywhere, all the time but biofeedback rarely utilized.**
2. **AI-powered analysis, tips and alerts that combines all relevant biometric data delivering clear, comprehensive insights on performance and health.**



## A Case Study – Team Sport

Despite the advancements in wearable tech, there is still a gap in capturing and analyzing muscle performance data at a granular level.



### CHALLENGES

- GPS + IMU or video based analysis can't read small movements, stationary position or accurate training load.



Player's load is estimation!



### RESULTS

- Individual and real internal load.
- Accurate game loading info enabling optimal training intensity.
- Accurate energy expenditure.
- Accurate metabolic power.
- Vo2max correlation...

## A Case Study - Football

Every year, billions of dollars are lost due to muscle injuries, sub-optimal training methods, and inefficient rehabilitation programs.



### CHALLENGES

- Return-to-play decision is done subjectively without feedback from muscles or joints.



### RESULTS

- Isometric comparison test 6 months after the surgery shows:
  - Asymmetry in quadriceps
  - EMG profile in operated leg not optimal
- Left quads not ready to handle training load or intensity.
- Player not ready for the game.

## A Case Study – Knee Rehabilitation

Arthrogenic muscle inhibition (AMI) can occur after knee injuries or surgeries, resulting from neural inhibition that causes failure in quadriceps activation. Based on the recent studies, almost 60% of the knee patients have features of AMI. There was 2 million ACL operations done in 2023 only.



### CHALLENGES

- Quadriceps activation failure and knee extension deficit after acute knee injury and surgery.
- AMI is not only problem in Quadriceps but knee extension movement and exercises can be compensated by Hamstring.
- These can pose a major challenge to effective rehabilitation and cause significant morbidity.



### RESULTS

- Immediate feedback what and how Vastus Lateralis and Medialis are activating.
- AMI can easily be reversible in the majority of patients with simple exercises.
- Hamstring compensation can be recognized and removed at the later stage of rehabilitation.



## A Case Study – Corporate Wellness

# Gartner®

Gartner says (Oct 2024): "*Data Accuracy and Analytics Are Key Value Propositions for Advanced Wearables.*  
*Example case – Myontec*"



### CHALLENGES

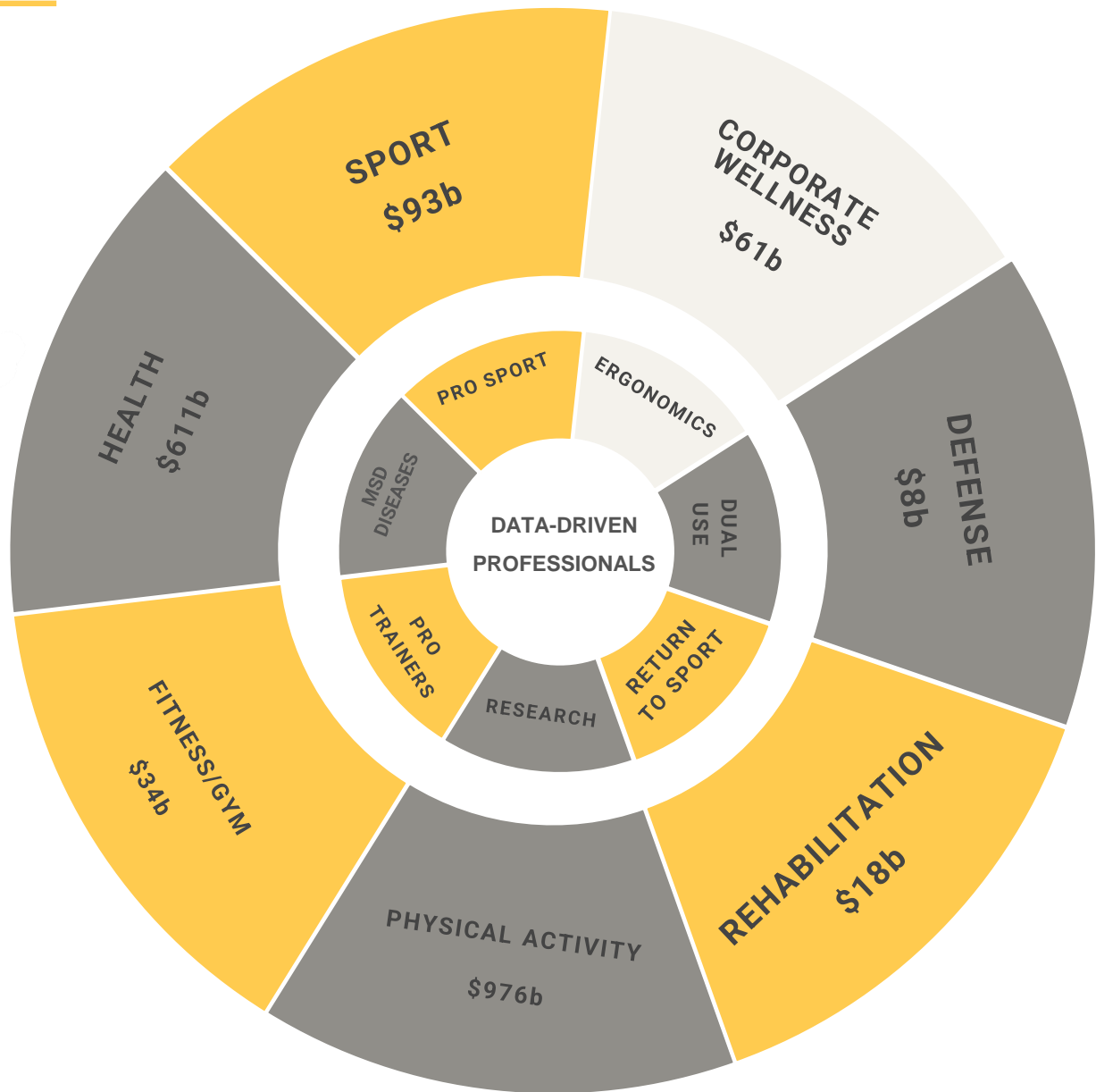
- Increasing carpal tunnel syndrome and sick leaves.
- No possibility to increase the production line speed.



### RESULTS

- Changing long knife blades to medium size blades.
- Instructions to technique vs. speed.
- Optimal meat preparation.
- Optimal recovery.
- 30% decrease in sick leaves.
- None carpal tunnel syndromes.

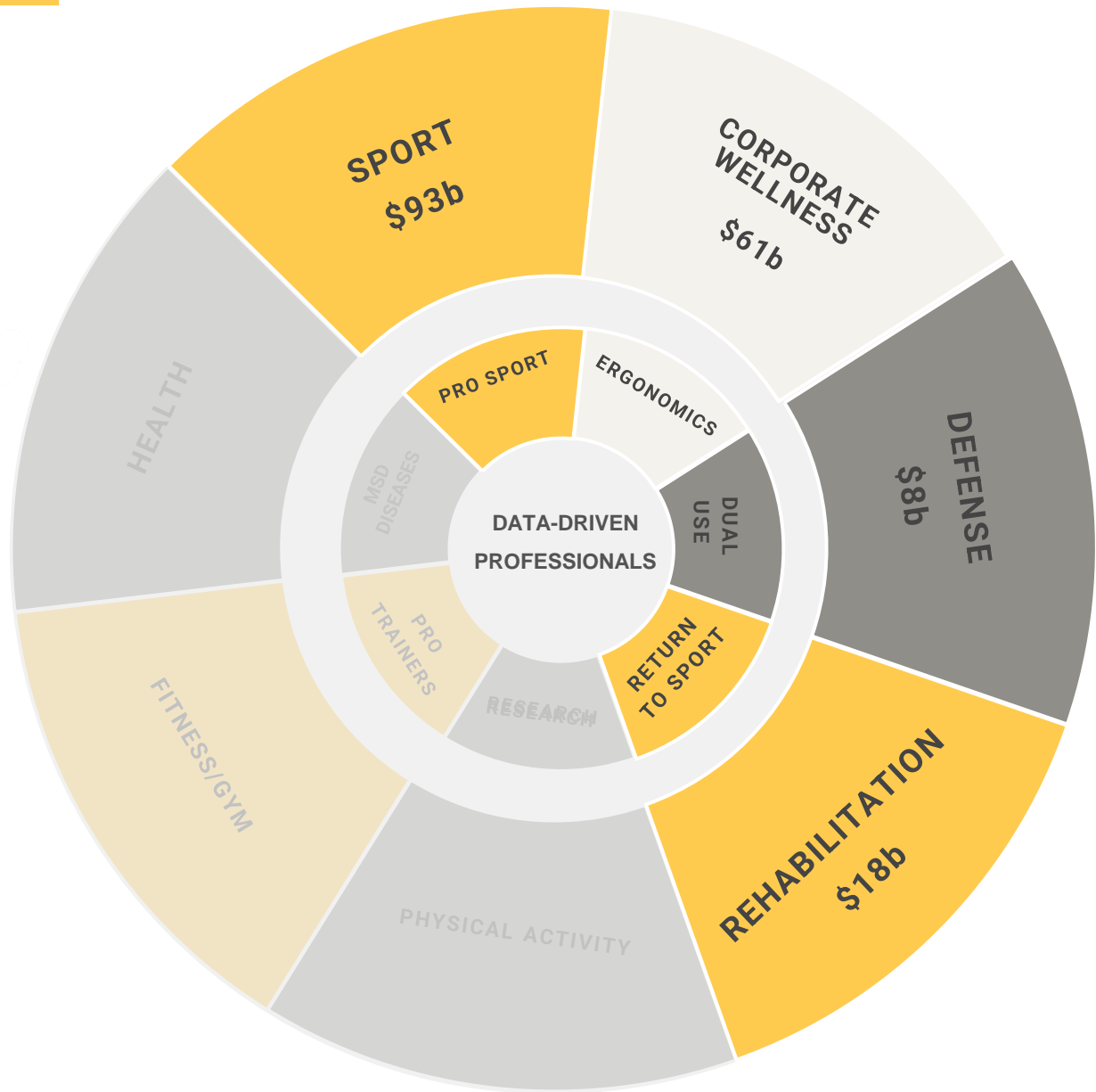
# Wearable Technology Market



**Global Health  
Market**

**Multi-trillion  
Dollar  
Market**

# Focus Market Sizing \$180b



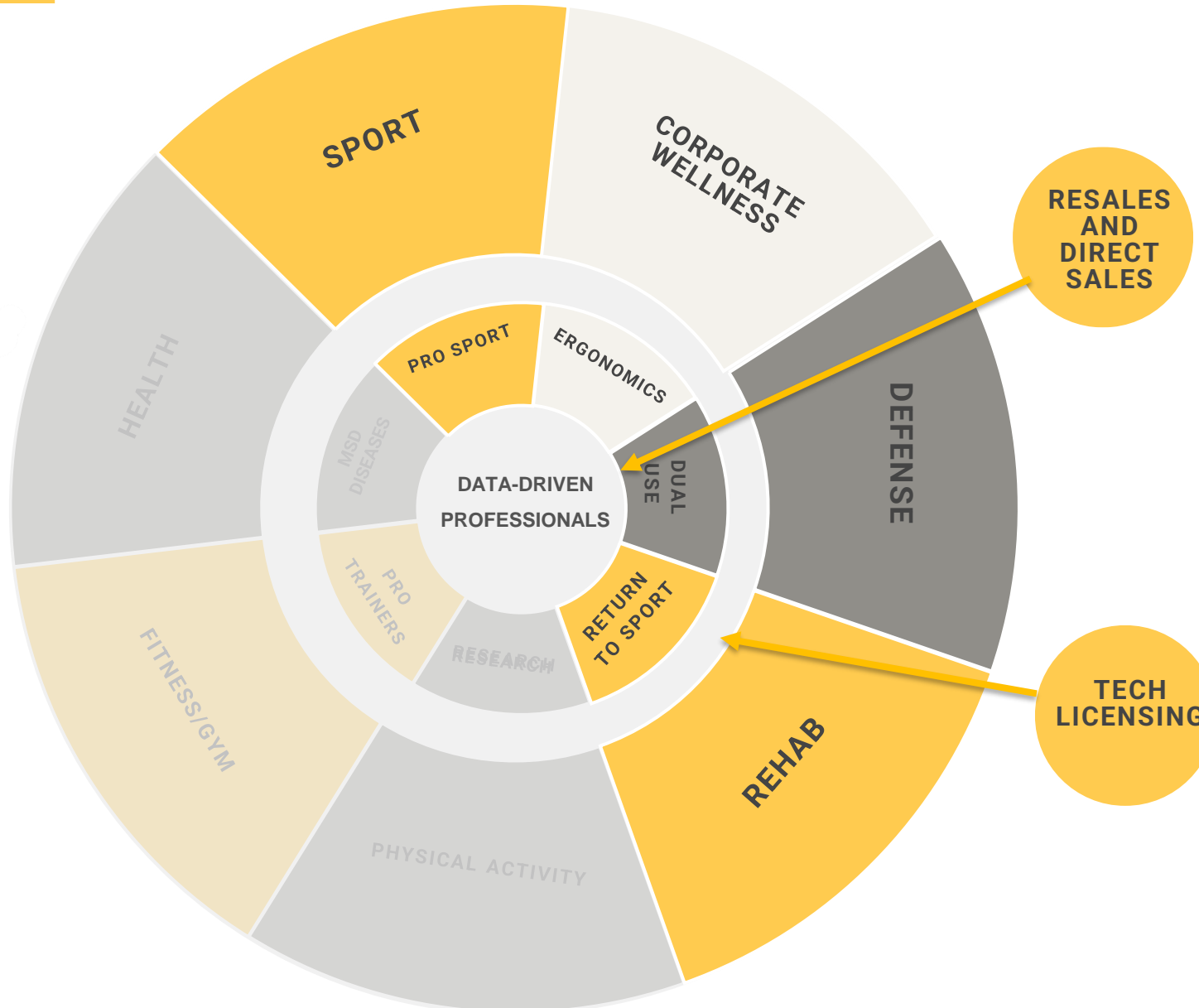
**Sport \$93b**

**Rehab \$18b**

**Defence \$8b**

**Corporate Wellness \$61b**

# Go-to-Market Strategy



- **MARKET ENTRY & EXPANSION PLANS**

Established a strong foothold in specific regions, and plan to expand aggressively into new markets by leveraging partnerships with local distributors.

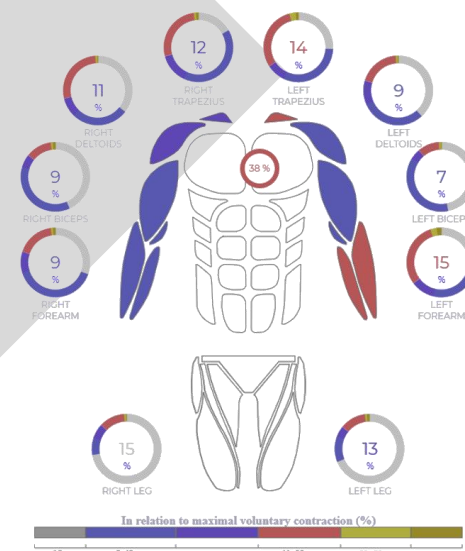
Focus on both direct-to-consumer sales and B2B solutions.

- **GROWTH STRATEGY**

Focus on licensing Myontec technology to companies looking for accurate data-driven analysis of human health like sport apparel brands, health tech or wellness companies, integrators, vendors in military segment etc.



# Established Technology and Product Portfolio





## User Benefits

- Real-time muscles and heart rate feedback.
- Load and distribution monitoring. What muscles you are using?
- Track recovery and relaxation.
- Prevent injuries with alerts for risky asymmetries or inadequate relaxation.
- Optimize training intensity by measuring internal load.

COMING within a year!

- MUSCLE STIFFNESS
- ENERGY EXPENDITURE (kJ)
- LACTATE (mmol/L)
- METABOLIC POWER (Watts)
- GLUCOSE (g/mol)
- VO2max



**Non-invasive, real-time picture of Your health!**

# Patents & IP



## CURRENT IP PROTECTION:

- Method to measure surface EMG with sensor embedded clothing Feature specifics methods to measure exercise, fatigue and ergonomic load.
- Patent coverage in USA, EU, UK, Hong Kong.
- Mobile app, PC software and firmware protected.
- Trademarks protected.

## FUTURE IPs

- Multiple functionality patents on roadmap including new sensor and wiring solution as a platform to measure different biometrics from the skin.
- Strongly focus on scientific based algorithm development and AI.
- Roadmap in place for patenting additional conditions in the next 6-12 months.

# Team

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**Janne Pylväs**  
CEO



**Pekka Tolvanen**  
Founder, Head of R&D



**Riitta Simonen**  
Director, Concepts and Research

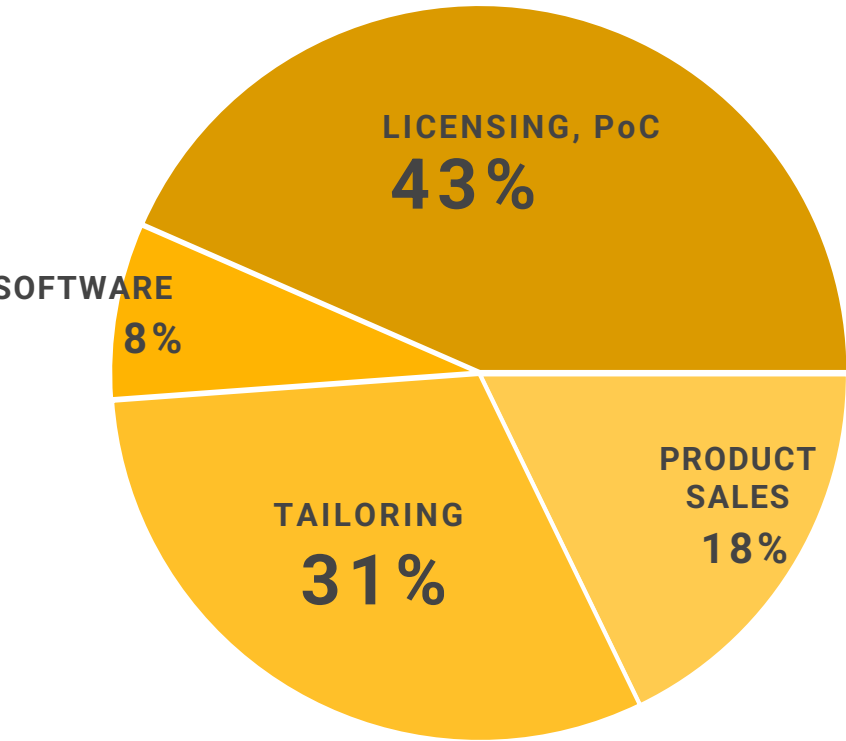


**Production and Development, Marketing**



# Revenue Streams and References

Business model shifting from products and software subscription sales to technology licensing.



## Rehabilitation



## Sport



## Brands



## Corporate Wellness



Investment Request

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## **Join Us Revolutionizing Sports tech and Health**

### **We're Raising \$5 Million to**

- **ACCELERATE GLOBAL EXPANSION AND SCALE TO DUAL USE**
- **ENHANCE AI-DRIVEN ANALYTICS**
- **BUILD A WORLD-CLASS TEAM**
- **SCALE MANUFACTURING CAPACITY**

**Invest in the Future of Human Performance  
and Health!**





# Contact Us

Janne Pylväs, CEO

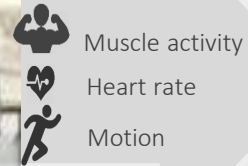
 +358 40 5073979

 [janne.pylvas@myontec.com](mailto:janne.pylvas@myontec.com)

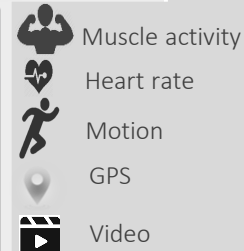
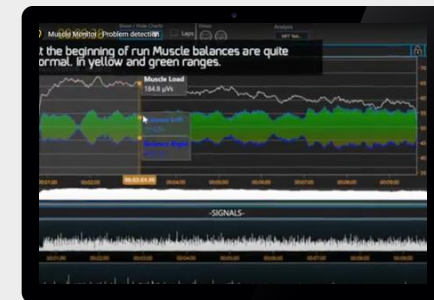


# Myontec in Sport

## Out-of-the Box Product



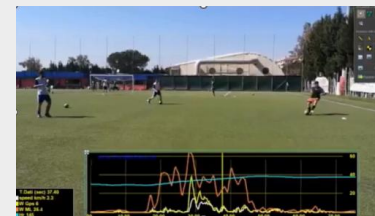
Muscle activity  
Heart rate  
Motion



Muscle activity  
Heart rate  
Motion  
GPS  
Video

## Solution as a Service

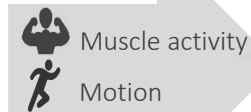
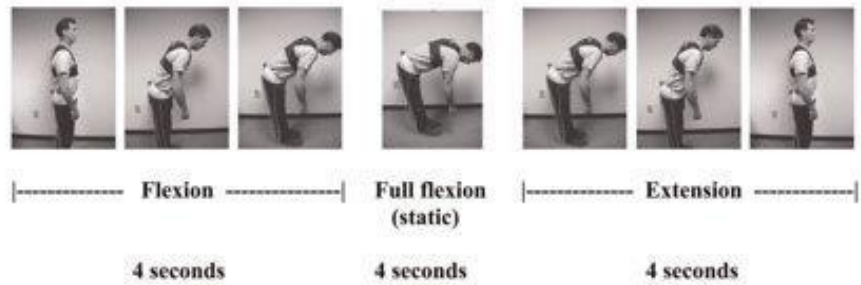
1. Measurements done and analysed by Myontec specialist.
2. Alternatively, measurements done by customer, analysis done by Myontec specialist.
3. EMG, IMU, HR, video and GPS data synchronized, combined and analysed
4. ***The most comprehensive performance and injury prevention analysis***



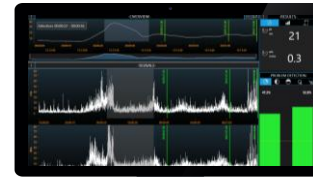


# Myontec in HealthCare and Rehabilitation

## Lower Back Pain Analysis with Myontec MBelt



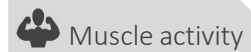
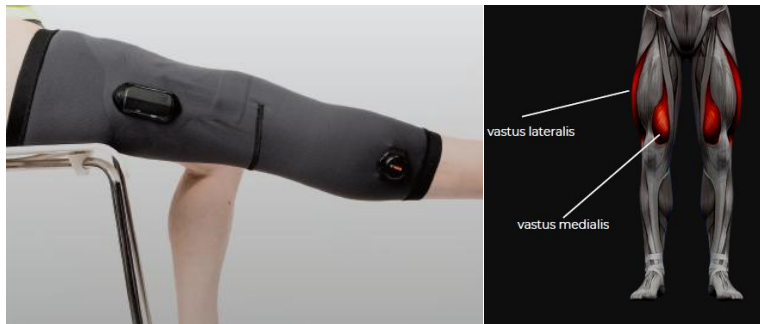
Healthy patient



Low back patient



## Knee Rehabilitation with Smart Knee Sleeve



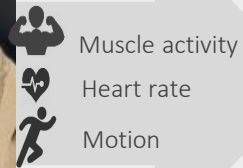
## Key Benefits

1. Fast to apply 5 min to diagnose.
2. Results are shown in real-time and post-analysis
3. MBelt can **identify low back pain with objective numbers and visualize it in EMG profile.**
4. Enables to **find root cause for the pain.**
5. **Gives biofeedback** to the patient during the rehabilitation process.
6. Applying MBelt for clinical settings improves health care cost-effectiveness, decision making and leads to reduced sick leaves due to low back problems.

1. Arthrogenic muscle inhibition (AMI) can occur after knee injuries or surgeries, resulting from neural inhibition that causes failure in quadriceps activation. Based on the recent studies, almost 60% of the knee patients have features of AMI.
2. Smart Knee Sleeve gives immediate feedback what and how Vastus Lateralis, Vastus Medialis and Hamstring muscles are activating.
3. AMI can easily be reversible in most patients with simple exercises.
4. Hamstring compensation can be recognized and removed at the later stage of rehabilitation.
5. Knee muscle weakness after ACL injury can be persistent from 3 months to 20 years if not properly rehabilitated with Smart Knee Sleeve.

# Myontec in Military

## Out-of-the Box Product



Muscle activity  
Heart rate  
Motion



## Solution as a Service

1. Measurements done and analysed by Myontec specialist.
2. Alternatively, measurements done by customer, analysis done by Myontec specialist.
3. EMG, IMU, HR, video and GPS data synchronized, combined and analysed
4. ***The most comprehensive performance and injury prevention analysis***

