a sense for innovation



IEE SmartHealth

Health through motion.

iee-sensing.com


RANULFO
Ten years after losing his lower limb, Ranulfo has lived with persistent phantom pain.
BEN
Preparing for his first triathlon, Ben seeks the perfect balance between comfort and performance.
LENA
After two pregnancies, Lena wants to rediscover her fitness and feel confident in her movement again.
ASHA
After her stroke, Asha is working to regain independence in walking.

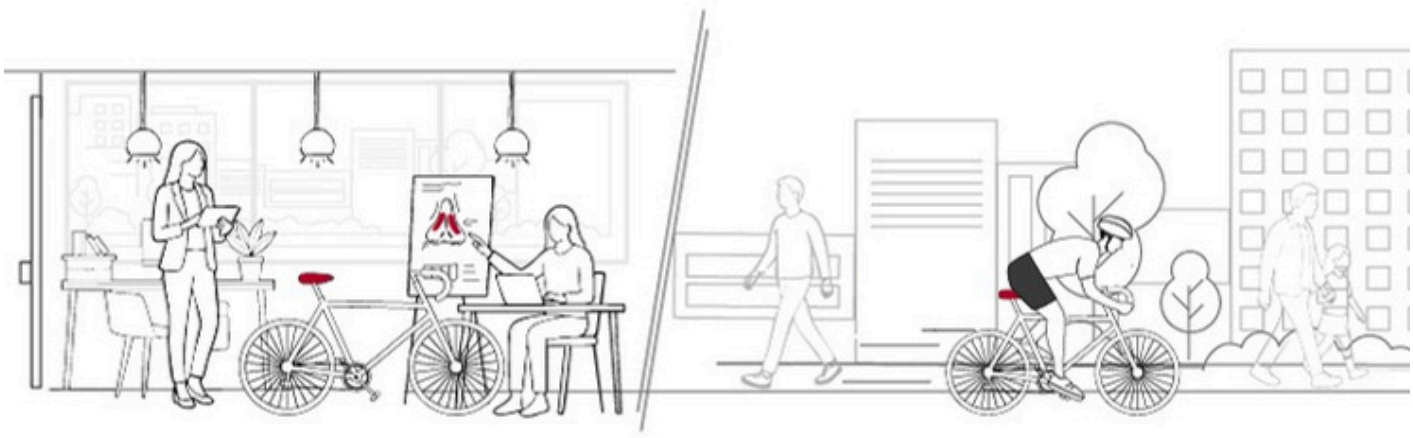

MARÍA
After hip replacement surgery and years living with diabetes and neuropathy, María struggles with pain and instability.
MIKE
Mike, recently diagnosed with early-stage Parkinson's disease, wishes to maintain independence.



Ben | 20 years

Optimizing performance through smart pressure sensing

Preparing for his first triathlon, Ben seeks the perfect **balance** between **comfort** and **performance**. IEE's pressure sensing technologies enable precise bike fitting and detailed biomechanical analysis to eliminate discomfort, enhance endurance, and **optimize athletic output**. By connecting sport and science, these insights transform training data into real performance gains.



Precision bike fitting that eliminates pressure pain and supports injury prevention

Personalized training analysis through repeatable pressure-based assessments

Data-driven optimization of athletic performance and equipment design

Connection between biomechanics and sensor data for continuous improvement

High-Resolution Measurement
IEE sensors capture detailed pressure patterns during motion

AI-Enhanced Optimization
Automated algorithms support personalized training plans

Customizable Solutions
From professional athletes to hobbyists, the system adapts to individual goals

Easy Integration
Lightweight, user-friendly systems seamlessly fit into existing sports equipment and workflows

gebioMized BIKEFIT

biomechanics a brand of GEBIOM



Lena | 36 years

Regaining strength and confidence through gait monitoring

After two pregnancies, Lena wants to rediscover her fitness and feel confident in her movement again. The IEE WalkinSense system provides real-time insight into gait and daily activity, supporting her in rebuilding strength safely and efficiently. Objective data helps her track progress, prevent overexertion, and make every step part of her recovery journey.



Monitors daily activity levels to ensure balanced recovery and progressive improvement

Identifies asymmetries and compensations to guide safer rehabilitation

Encourages consistency through measurable, motivating feedback

Supports return-to-fitness programs with data-backed confidence

Accurate Motion Tracking
Captures detailed gait and activity metrics for reliable progress monitoring

Real-Life Usability
Works seamlessly during normal daily activities, not just in clinical settings

Smart Feedback Loops
Translates data into actionable insights for users and clinicians

Clinically Validated Technology
Tested against gold-standard biomechanics systems for proven reliability



Asha | 47 years

Relearning mobility after stroke with functional stimulation and Gait Insight

After her stroke, Asha is working to regain independence in walking. Combining IEE WalkinSense data with Functional Electrical Stimulation (FES) provides an advanced rehabilitation pathway—stimulating weakened muscles while measuring progress in real-world movement. Together, these technologies help restore safer, more natural gait patterns.



Improves walking safety and stability through synchronized FES and gait analysis

Tracks rehabilitation progress and identifies risks such as drop foot or instability

Encourages confidence and autonomy in daily mobility

Reduces risk of falls and supports faster, more effective recovery

Precise Gait Metrics
WalkinSense captures every phase of movement for detailed analysis

Adaptive Stimulation Support
Enables coordination between sensor data and muscle activation

Validated Clinical Performance
Proven accuracy and reliability in rehabilitation environments

User-Centered Design
Comfortable, simple, and ready for home or clinic use



HEALTHCARE WEEK LUXEMBOURG
MEDICAL INNOVATION AWARD

Ranulfo | 52 years

Rediscovering sensation and freedom with advanced prosthetic feedback

Ten years after losing his lower limb, Ranulfo has lived with persistent phantom pain. IEE's sensory feedback technology helps him reconnect with his prosthesis—turning it into a feeling limb that restores stability, safety, and confidence. By reintroducing natural sensory input, the system supports pain relief and reawakens the joy of movement.



Restores sensory connection between body and prosthesis for safer, more confident walking

Reduces phantom pain naturally through sensory feedback and neural reorganization

Enables perception of ground surfaces for improved gait stability

Supports social reintegration and renewed quality of life

Real-Time Feedback
Sensors capture and transmit pressure data directly to the residual limb

Universal Compatibility
Works with any prosthetic foot design

Ultra-Low Power System
Wireless operation with long-lasting battery performance

Clinically Proven Approach
Based on Nobel Prize-winning findings on sensory reactivation

SAPHENUS®



Mike | 64 years

Managing Parkinson's through smart movement insights and gamified motivation

Mike, recently diagnosed with early-stage Parkinson's disease, uses IEE's WalkinSense and gamified rehabilitation to maintain independence and detect changes early. By combining gait analysis with interactive, personalized training games, he stays motivated while clinicians receive continuous updates on his condition.



Early detection of mobility changes to enable timely intervention

Motivating, game-based exercises that make therapy engaging and consistent

Continuous remote monitoring for safe home-based rehabilitation

Improved balance, stability, and overall movement confidence

Clinical-Grade Precision
Tracks over 40 gait parameters in real time

Adaptive Gamification
Exercises adjust automatically to the user's ability and progress

Remote Oversight
Enables clinicians to monitor performance from anywhere

Seamless Experience
Ultra-thin insoles ensure comfort and compliance for daily use



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Interested?



Alain Schons

Team Manager SmartHealth

+352 2454 2380

Alain.Schons@iee.lu



Tobias Meyer

Business Development Manager SmartHealth

+352 2454 2481

Tobias.Meyer@iee.lu



Fabio Boenigk

Key Account Manager

+352 2454 2382

Fabio.Boenigk@iee.lu