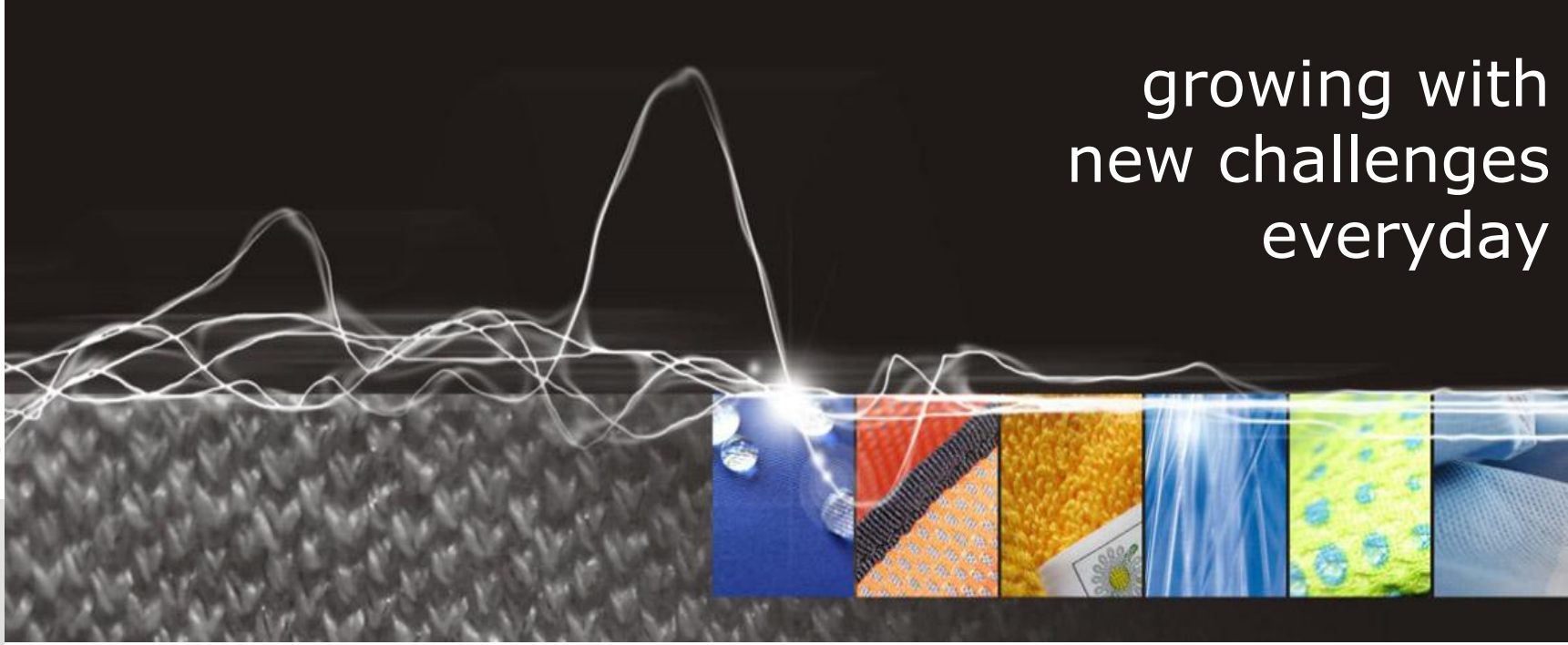


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7th EAS Conference
Lisbon
September 10th

Helder Rosendo
hrosendo@citeve.pt

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Presentation

- About CITEVE
- Conventional & Technical Textiles
- Sport Business in EU
- Global Trends in Soprt products
- Trends on Textile & Clothing products
- Some examples NPD by CITEVE
- Some interesting innovative products & technologies
- Discussion

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mission

- Support the technical and technological development of the Portuguese Textile and Clothing industries through innovation encouragement and dissemination, promotion of quality improvement and also as an instrument for the definition of industrial policies for the sector.

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group

citeve

citeve TUNISIE

citeve BRASIL

AFTEBI
ASSOCIAÇÃO PARA A FORMAÇÃO TECNOLÓGICA E PROFISSIONAL DA BEIRA INTERIOR

CENTI
Centre for nanotechnology and Smart Materials

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near the Portuguese Industry, but not only…

Portugal
- V. N. Famalicão
- Covilhã



International Offices

- ❑Tunisia
- ❑Brasil
- ❑Chile
- ❑Argentina

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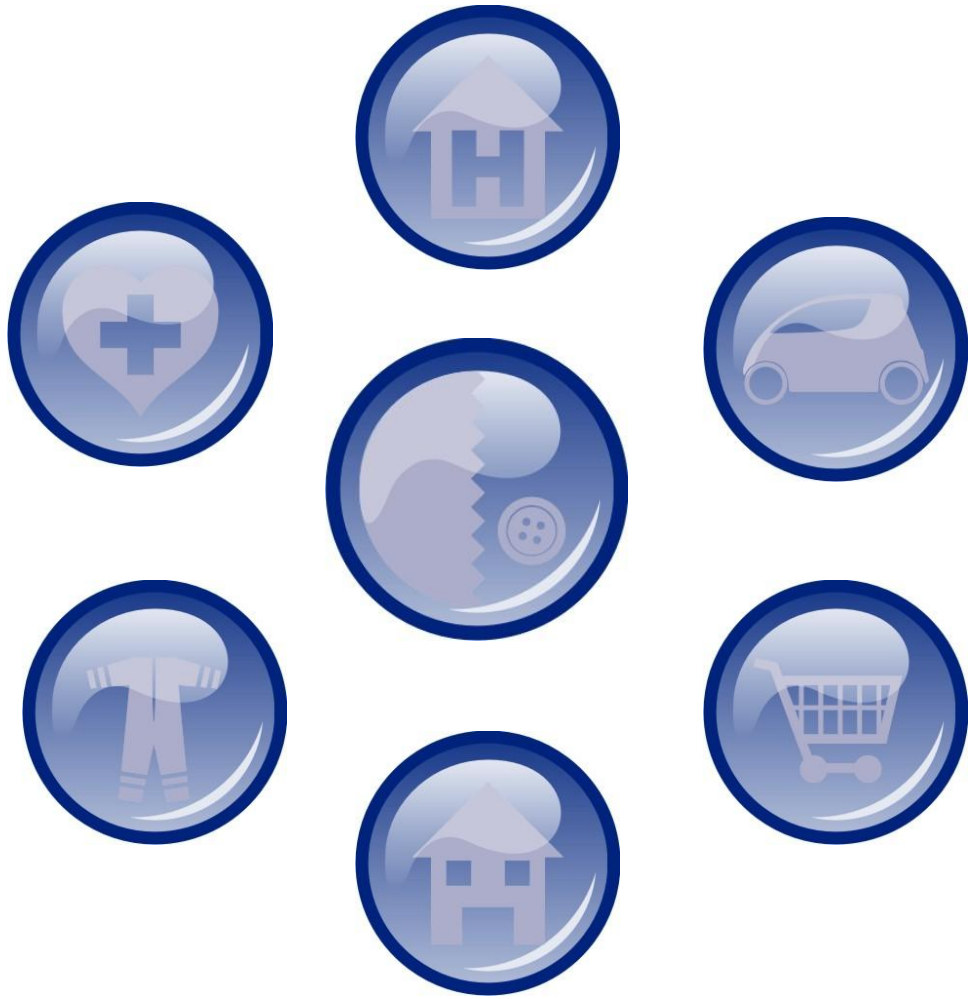
main areas

- Laboratorial Testing
- Technology & Engineering
- Innovation
- Training & Coaching
- Product Certification
- Design & Fashion Intelligence

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markets



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brands accreditations





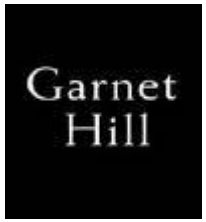
















































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anual figures

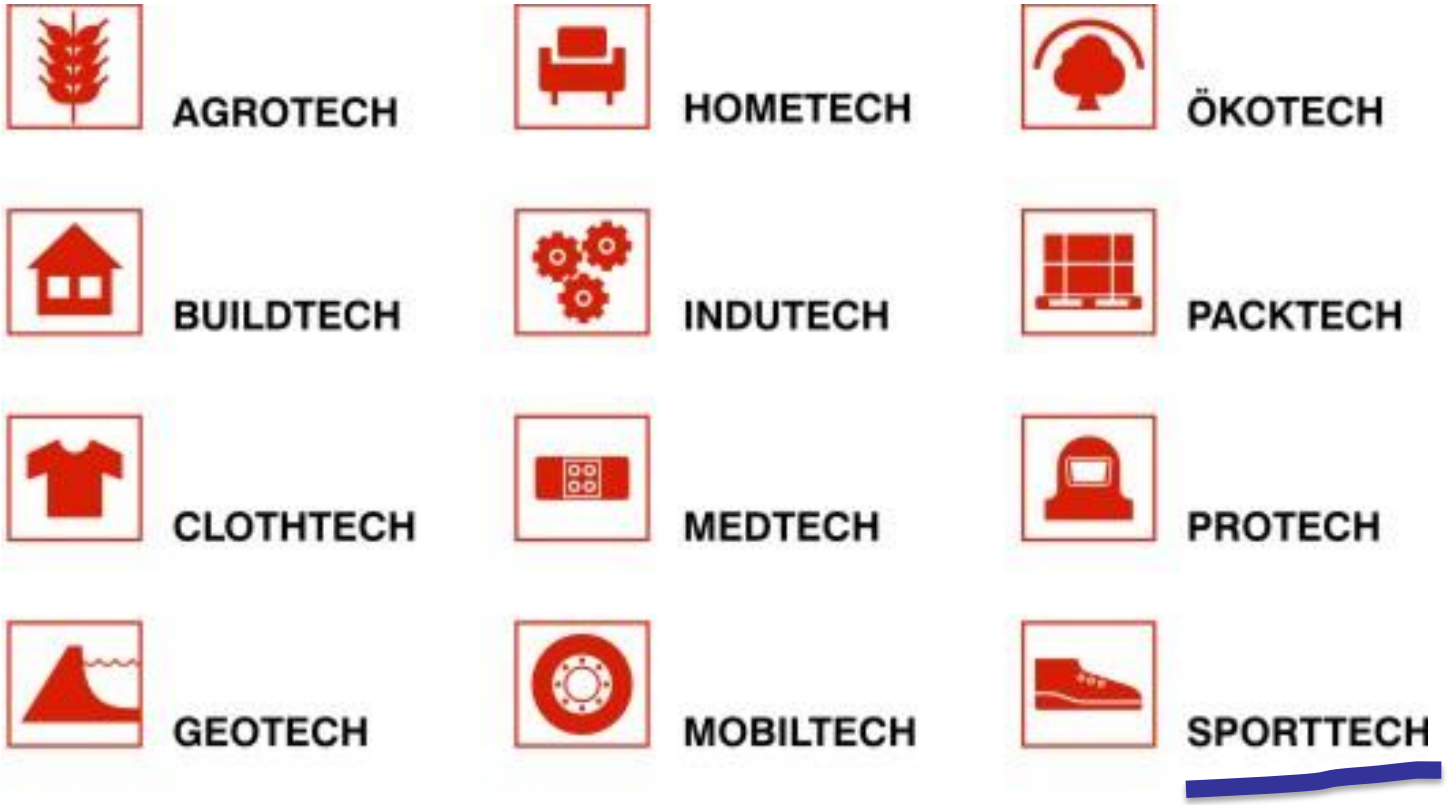
160.000 laboratory tests 250 standards

400 product certification 22 R&D on going projects 170 full time staff 160.000 training ours 1.800 active clients 617 membership companies

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Technical Textiles



© 1996 Techtextil, Messe Frankfurt Gmbh

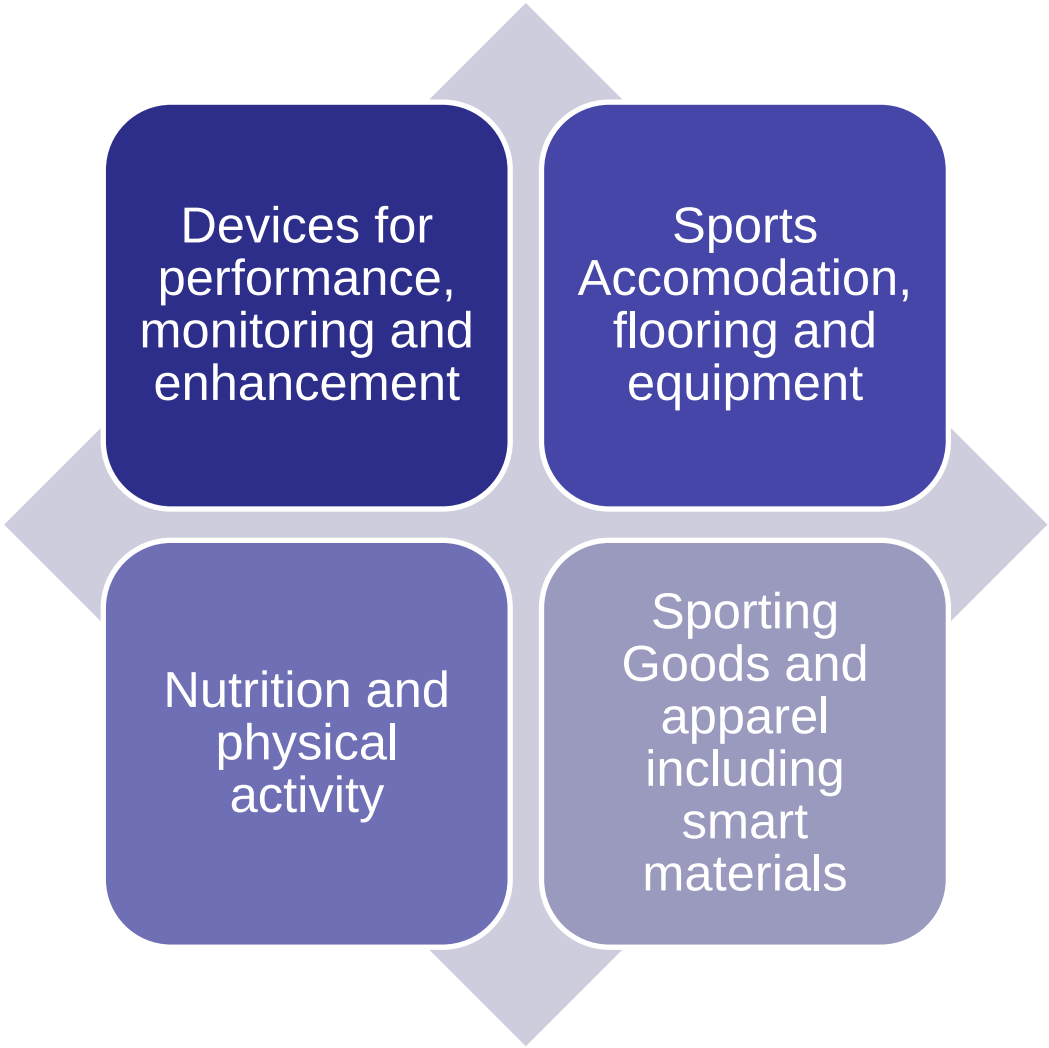
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Sports Business

- Many industrial sectors in sports
- High tech products
- Increasing economic relevance
- 37 billion euros turnover/year (Europe)
- Employment raised 60% (last 10 years)

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Main relevant areas



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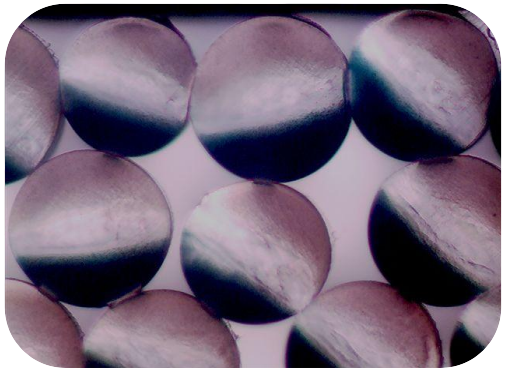
Most important sports (EU Markets)

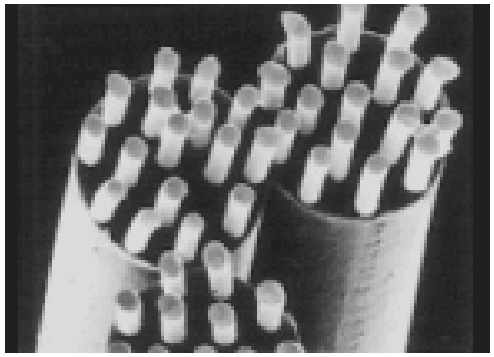
Country	Sports
Germany	Swimming, football , jogging, fitness, skiing, skating, tennis
France	Outdoor, football , skiing, fitness, swimming, jogging, tennis, martial arts
UK	Swimming, football , fitness, snooker, darts, golf, jogging, badminton
Italy	Football, swimming, skiing, tennis, fitness, outdoor, volleyball, basketball, fishing
Spain	Football, swimming, basketball, jogging, fitness, tennis, outdoor, skiing, martial arts
The Netherlands	Football, swimming, jogging, fitness, tennis, skating, outdoor, water sports
Belgium	Football, swimming, jogging, fitness, tennis, outdoor, skiing, basketball, table tennis
Denmark	Swimming, football, handball, badminton, fitness, outdoor, water sports, fishing

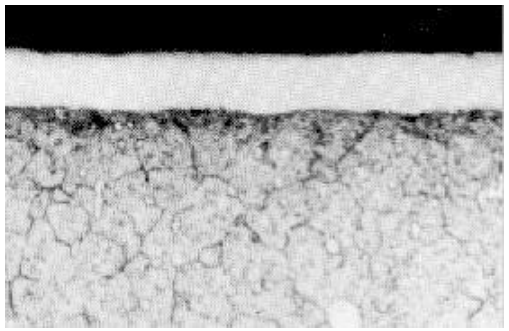
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Global Trends

- Use of smart materials
- New design methods
- Customised products
- Knowledge-based



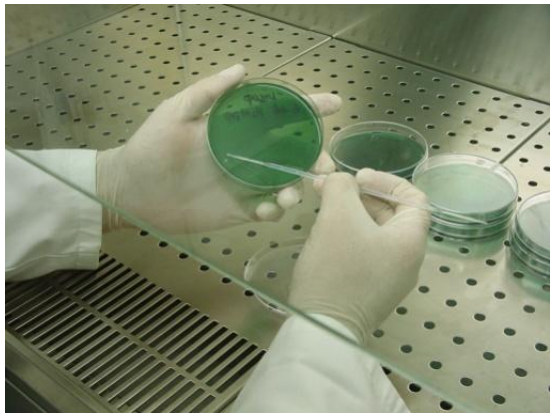




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Global Trends

- Product-service approach
- Creativity demanding
- Safety issues
- Integration of ICT







Trends on Textiles & Clothing

- Second skin concept
- Multi layered
- Multifunctional
- Lighter & Greener
- Fashionable







Alpinism Jacket

- Alpinism jacket (Extreme protection and comfort)



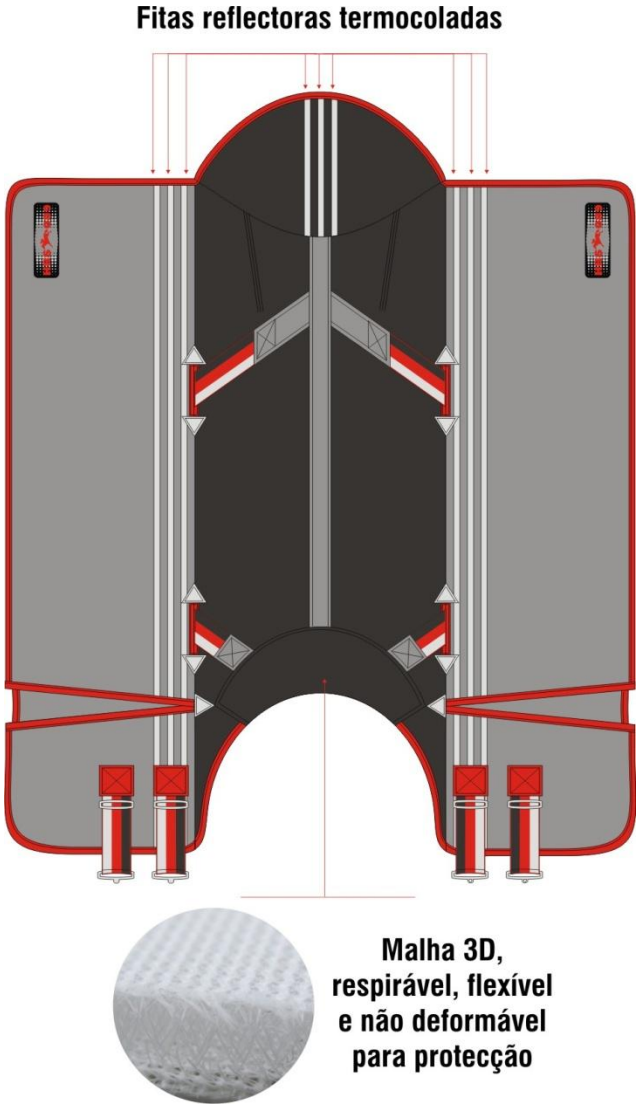


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Horse Rug

- Innovative horse thermo rug with multifunctional properties



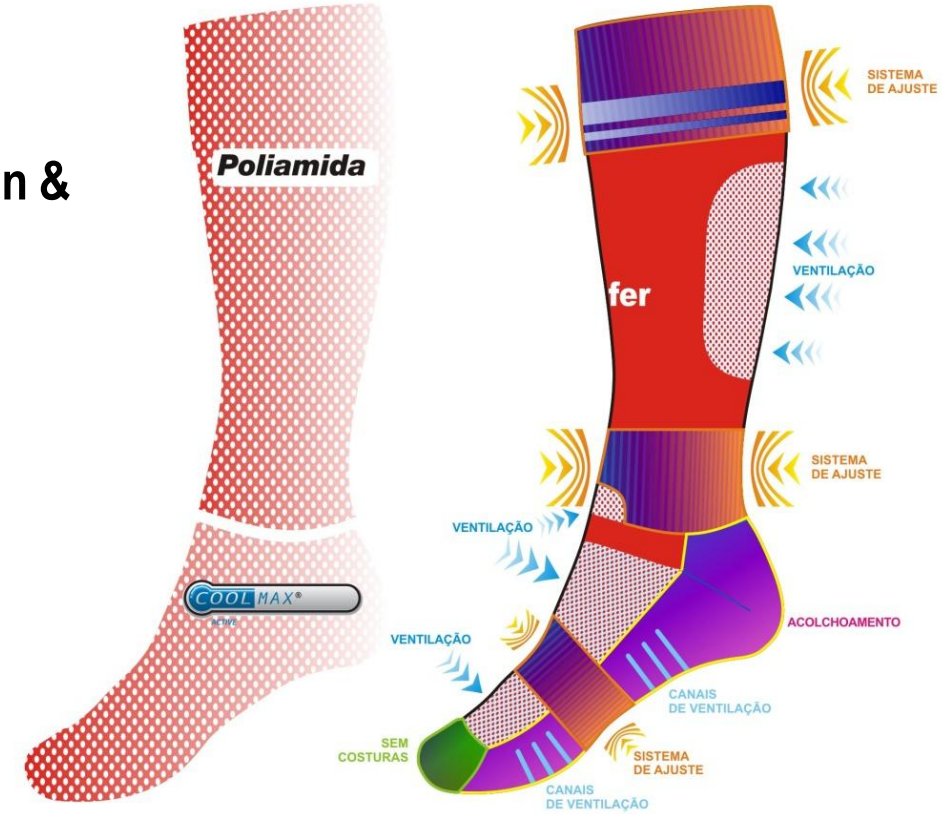


Football Sock

FINAL COMPOSITION

68% Poliamide / 30% Coolmax / 2%Elastan

- **Optimized moisture distribution & management**
- **Excellent fitting**
- **Customized reinforcement**
- **Improved comfort**



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Football Sock

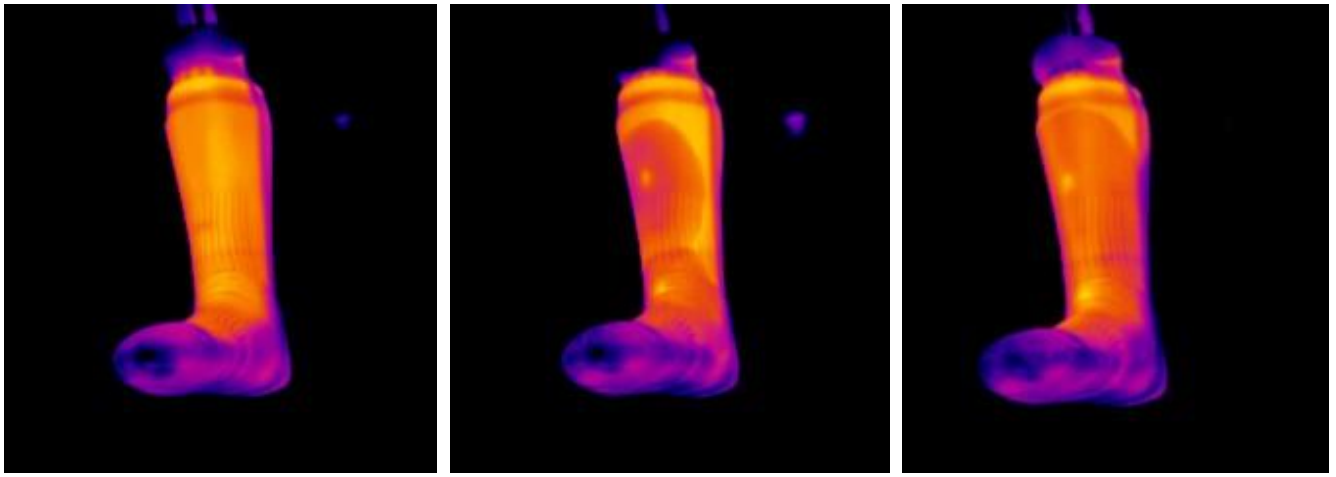




Sweting Animated Thermal feet

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Football Sock



Moisture & Thermal Distribution evaluation using thermographic camera

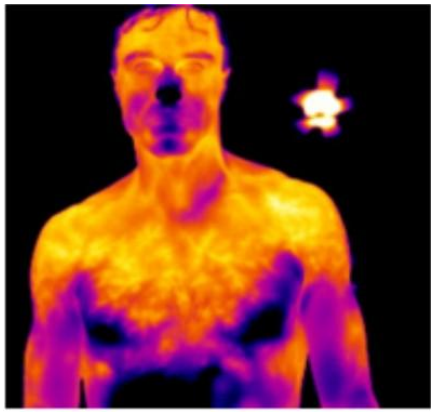
K_1 (% water removed from skin): 51
U_{dry} (average drying speed, g/min): 0.23

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Thermal Sweting Moving Manekin

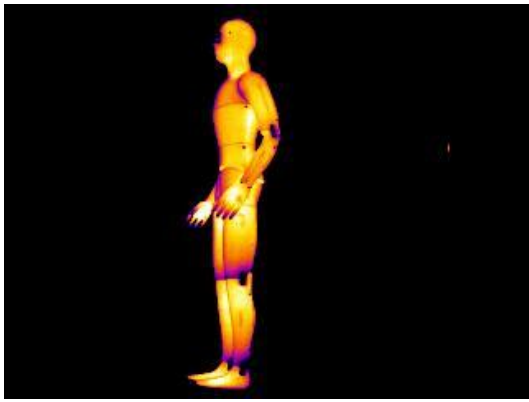










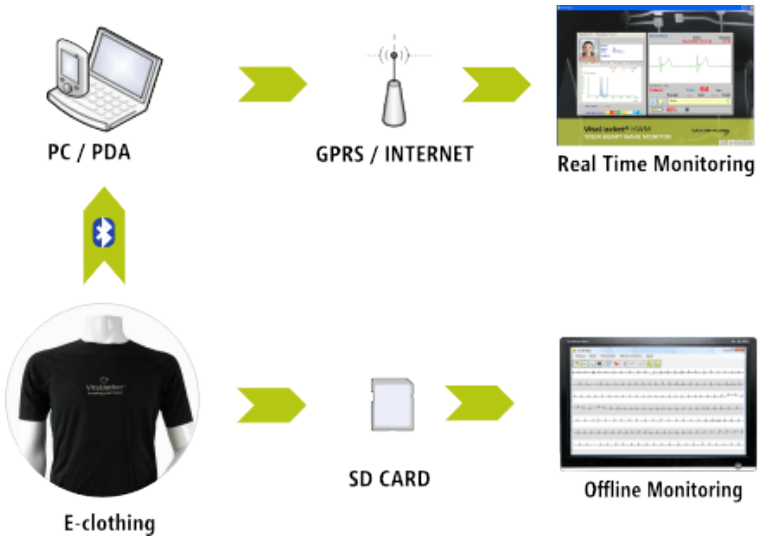


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Vital Jacket ©Biodevices



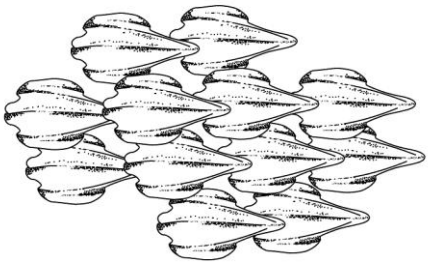
- T-Shirt on-line for remote ECG

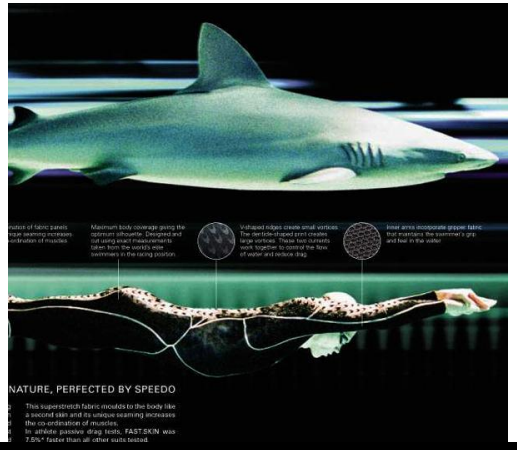


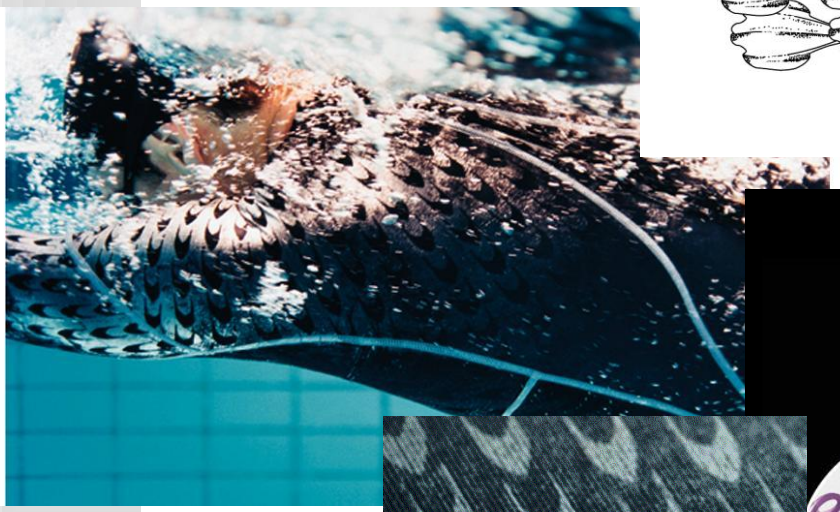
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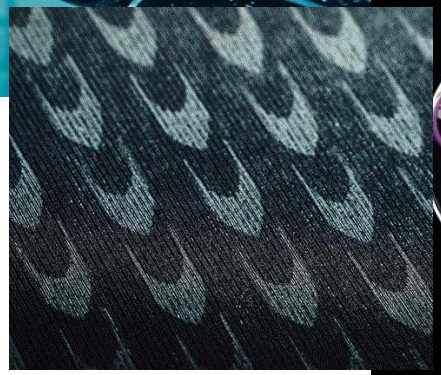
Speedo© Fast Skin

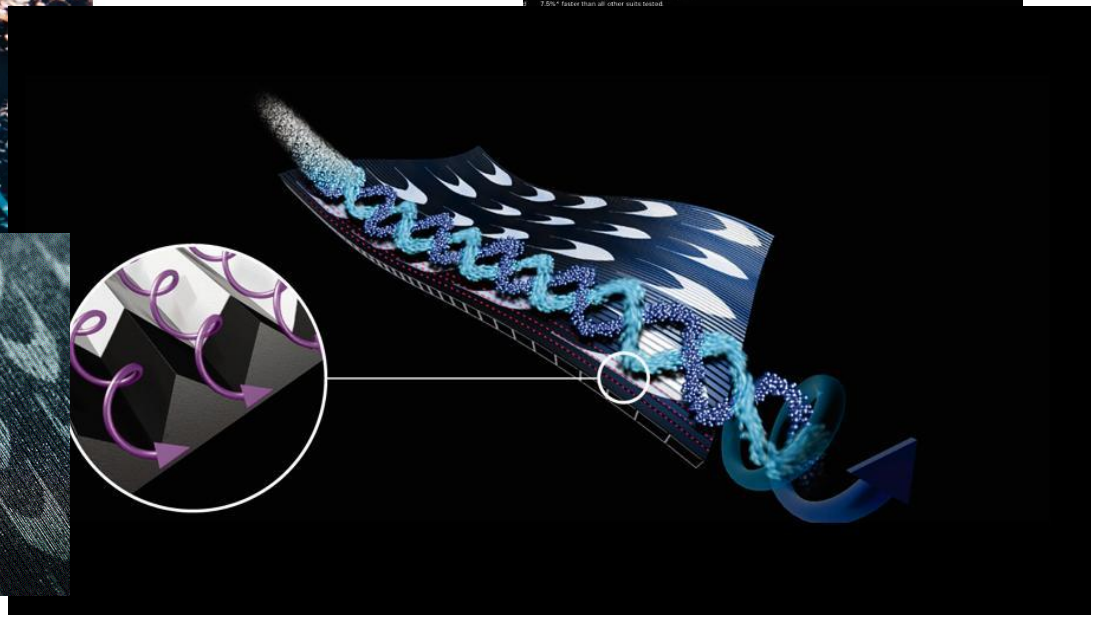
Biomimetics











SPEEDO© FASTskin TM

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ISPO Brandnew YKK Sportswear Award



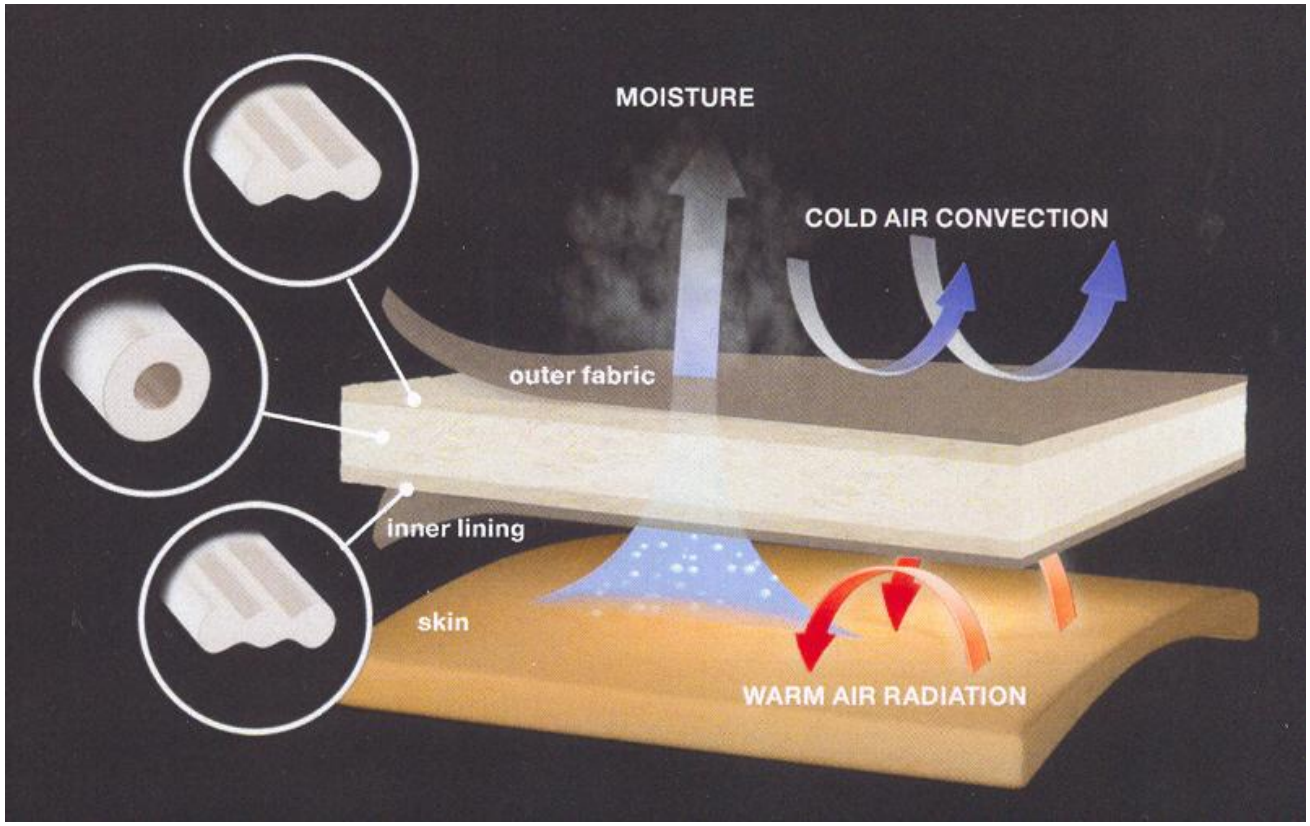
- made of 80% air for intense isolation and high breathability
- made of fabric instead of foam rubber, does not retain water
- the core is made of hundreds of micro springs to absorb shocks
- the patented material comes from the space research

Morpho (Woman Sailing Suit)

- Extremely light
- High protection and movement freedom



Thermocool ©



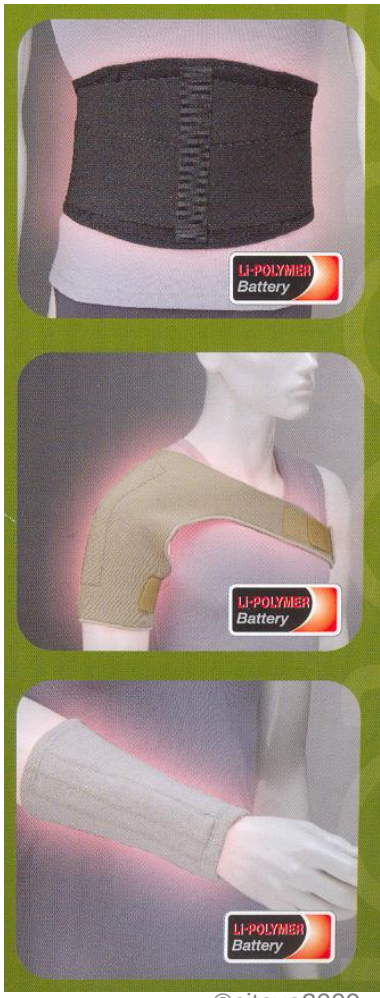
-Thermocool – Performance insulation (multichannel fibres (Coolmax®) and hollow fibres (Thermolite®) ADVANSA.

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Asiatic Fibre Corporation ©

- Warmcare – Hea-x (overcoat, gloves, insoles)
- Warmcare – Heapro Tepid protector series
- Warmcare – Heapro





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Technical Underwear

- Seamless
- Moisture managemnt
- Temperature regulation

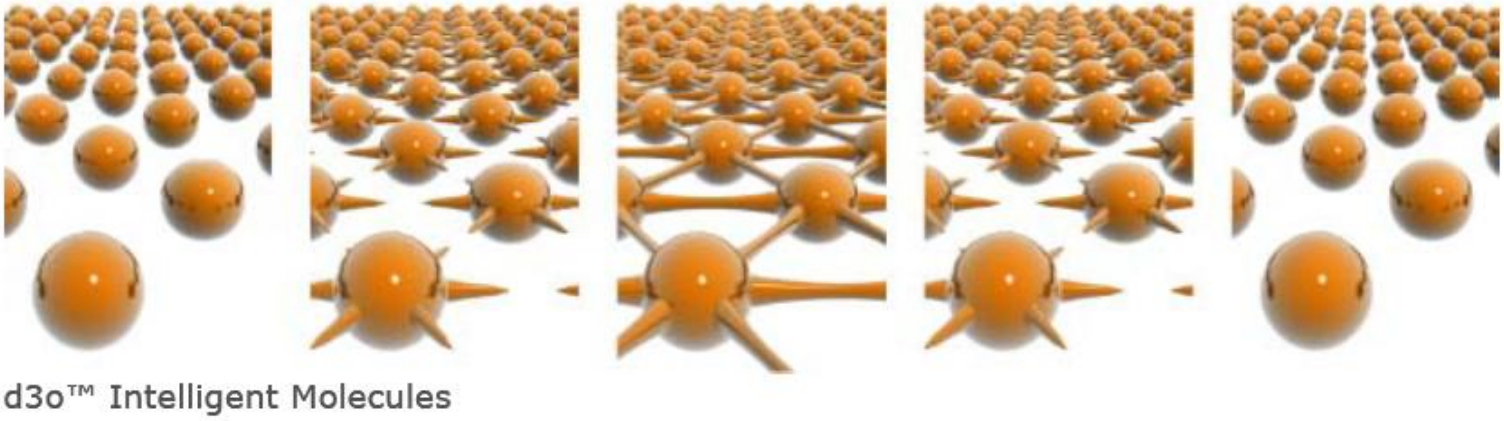


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d3o© Intelligent Molecules







d3o™ Intelligent Molecules

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Product certifications













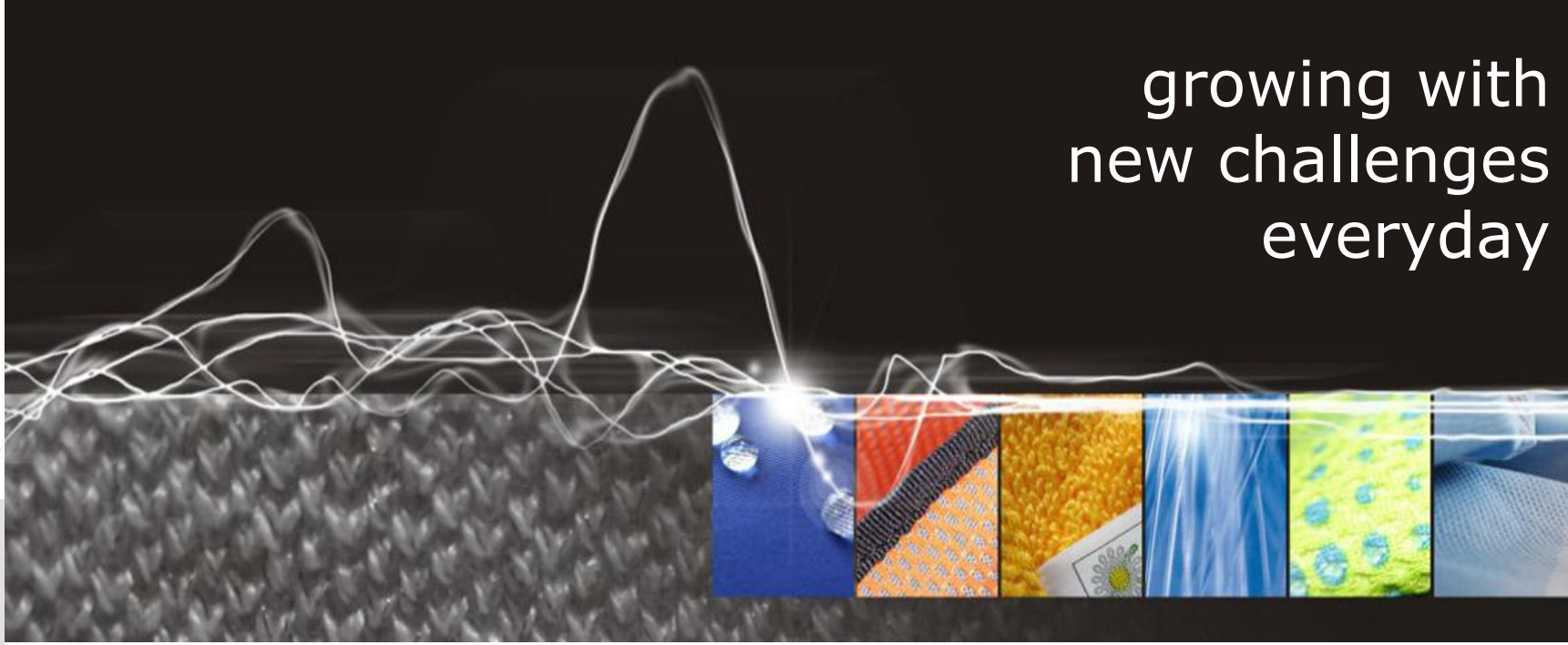


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Discussion

- The role of athletes and end users in R&D ?
- Which new functionalities or properties are still missing in the market?
- Which sports are more attractive for innovative product development?
- Does product communication matches users expectations?
- ……..

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