Think it Sensitive, Make it Smart

Sensing Health

Posture recognition AND MORE!

13 Diciembre UPC Terrassa
Think it Sensitive, Make it Smart
Mission Statement

**Sensing Tex** helps companies successfully deliver innovative **Stretchable Printed Electronics**, to make IoT solutions.
Development, Production and Commercialization of Smart Textiles based on Printed Electronics

Focussed on Large Area Pressure Sensor Textiles

With our proprietary Patented Technology we functionalize the Textiles to feel pressure with multi-contact behaviour. This allows us to monitor Pressure Mapping.
Pressure Maps Raw Data to Data Analytics – Big Data

Biosignals Tracking

Postural Detection

Movement Analysis
Sensing Mat Platform

- Bedding Platform
- Seating Platform
- Flooring Platform

Daily Planet Canada

Think it Sensitive, Make it Smart
Business Model from the Brands

Service Brands

OEM Ecosystem Platform Brands

Tech Brand Stretch Circuits

Think it Sensitive, Make it Smart
From Data Analytics to Services

Sensing Health

Big Data

Services and Alarms

Machine Learning

Algorithms

Pattern Recognition

Artificial Intelligence

Raw Data

Sensing Mat

Think it Sensitive, Make it Smart
Medical Textile Market

Medical Textiles Market Size
Worth $23.3 Billion By 2025 | CAGR: 4.9%

Global Healthcare Fabrics Market Will Reach USD 15.7 Billion By 2025: Zion Market Research

The Global Medical Smart Textile Market is expected to register a CAGR of 7.51% to reach 2,105.32 Million by 2027.

https://www.marketresearchfuture.com/reports/medical-smart-textile-market-1123
Pressure & Falls Injuries are a High Cost for a Health System

Pressure injuries cost the US healthcare system an estimated $9.1-$11.6 billion annually 1

Fall Injuries cost to the UK NHS an estimated £630 million annually 2016 2

1 according to the Agency for Healthcare Research & Quality (AHRQ) 2016
2 according the report The incidence and costs of inpatient falls in hospitals NHS July2017
Pressure Ulcers – The Reality in EU

4M PEOPLE in EU

COST 70,000€/YEAR

a pressure sore or decubitus?
Sensing Health reduces Pressure and Fall Injuries

Our *Sensing Health* by Sensing Mat Platform is a continuous monitoring *Product* and *Service* across the *Care Continuum* that provides early detection to help lower risk and improve patient care while reducing costs.

*Sensing Health* has been designed to address two major group of services that your facility faces every day: *Fall Prevention and Pressure Ulcer Prevention*. The system has an easy-to-use interface and clinical flexibility that allows the system to be integrated into your unique care setting.
The Sensing Health Ecosystem

Sensing Health InfoGraphy

*Sensing Health Services*
- Pressure Ulcer Prevention
- Fall Prevention
- Algorithm Co-creation

Sensing Health Ecosystem
- Hospital
- Rehab clinic
- Retirement home
- Home care setting

"Smart Health prevention to improve patient care"

Bed Monitor

Seat Monitor

Software analytics & services

HL7 Communication devices
- Nursing station
- Room station

Think it Sensitive, Make it Smart
Benefits for the Health Care System

SensingHealth

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced number of patient falls</td>
<td>47%</td>
</tr>
<tr>
<td>Reduced number of pressure ulcers</td>
<td>75%</td>
</tr>
</tbody>
</table>

A Cost-Effectiveness Analysis of a Proposed National Falls Prevention Programme

*Clinics in Geriatric Medicine*, November 2010

Staff’s perceptions of a pressure mapping system to prevent pressure injuries in a hospital ward: A qualitative study

*Journal of Nursing Management*, 26(2), 140-147, 2018
Sensing Health Services v.1.0 Bed Monitor 1.0

PUP Services
Pressure Ulcer Prevention Services
REPOSITIONING ALARM

FP Services
Fall Prevention Services
FALL ALARM

CC Services
Co-Creation New Services
BIG DATA
BIOSIGNALS REPORTS
SLEEP REPORTS
WANDER PREVENTION
EXERCISE REPORTS
EPILEPSIA ATTACKS
DETECTION

Think it Sensitive, Make it Smart
Product Hardware Components Bed Monitor 1.0

Overall Area: 900 x 2000 mm
Sensing Area: 825 x 1800 mm
Sensor Elements: 1056

Bluetooth 2.0
USB 2.0
USB Powered
Electronic Module: 90 x 47 x 17 mm

Think it Sensitive, Make it Smart
Data Analytics Demo Alternating Inflation Mattress
Software Sensing Health v1.0 – App Services

Customization and Integration to Hospital Information Systems
HL7 and Cloud Services
Based on APIs
Our Current CV Vision, Machine Learning and AI

Shape Analysis

Position Analysis

Lying Positions

Machine Learning

Spatial Statistical #

CoS/CoP, Contact Area, etc

Computer Vision

Think it Sensitive, Make it Smart
Our CV, Machine Learning and AI in Progress

Pressure / Gradient Analysis

- Pressure Gradient
- Bone Area Detection
- Machine Learning & Computer Vision

- Pressure Gradient
- Biosignals
- Computer Vision

- Pressure Statistical #
- Gradient – Average
- Computer Vision
What’s Next? AI & New Services

Sensing Health is a complete set of services that improves quality of life and care resources for low mobility and bedridden patients and care systems respectively based on the latest algorithms developed thanks to the Big Data provided by our low cost single sensor pressure mapping system and using latest IT technology of Computer Vision, machine learning and AI.
Thank You!
luis.gomez@sensingtex.com

Contact
SENSING TEX, SL
Ctra. C-251 Km. 5,6 Parc de Belloch,
08430 La Roca del Vallès, Barcelona
SPAIN
info@sensingtex.com