



**graphene  
trace**

**Automated Pressure Ulcer Prevention**

**Dr. Scott Dean**



Each year **54%**<sup>1</sup> of wheelchair users  
**develop a pressure ulcer**

Pressure Ulcers are the **number one**  
**cause of death**<sup>2</sup> in UK Care Homes

**£2bn**

**Cost of Pressure Ulcers in UK  
(5% NHS Budget)**

Cost of pressure ulcers in the UK. Age Ageing UK

**95%**

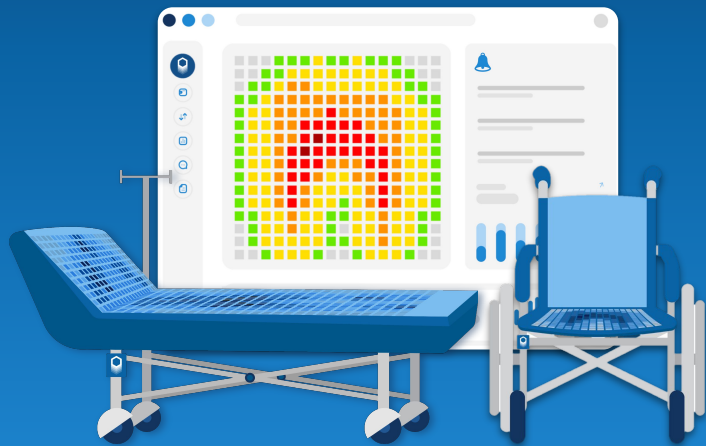
**of Pressure Ulcers are  
avoidable**

National Institute for Health and Care Excellence

1. Annals of Medicine & Surgery, 2021

2. ONS, 2021

Our **flexible fabric pressure sensor** can be sold as a standalone mat or embedded into a **wheelchair seat** or **hospital bed**

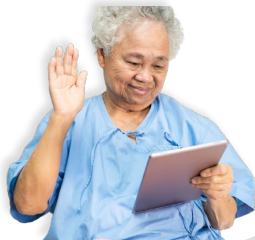


A.I. analyses long-term user data & performs **personalised risk management**

## Value Proposition

### Wheelchair Users

- ✓ Peace of Mind
- ✓ Take control of their own health
- ✓ Prevent life-threatening ulcers



### Care Homes

- ✓ Better Quality of Care
- ✓ Reduced labour intensive manual inspections without compromising safety.



### Healthcare Providers

- ✓ £billions annual savings
- ✓ Prevent up to 95% of ulcers & reduce protracted inpatient stays



# Market Opportunity

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## Global Pressure Ulcer Market

Fortune Business Insights, 2024

6.8% CAGR

£7.8B

## Pressure Ulcer Prevention Devices

Persistence Market Research, 2024

5.5% CAGR

£3.7B

## Wheelchair & Bed Pressure Mapping

Grand View Research, 2023

4.9% CAGR

£400M

## Key Market Drivers

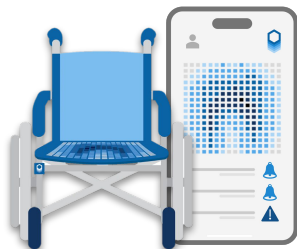
1. **Growing prevalence**
2. Wheelchair users **shift towards privately funding** medical devices
  - a. 95% of device purchases are self funded (up from 50% in 2019)
3. **Policy:**
  - a. **NHS Long-Term Plan:** mobile monitoring & prevention
  - b. **NHS Strategic Priorities:** reduce burden on workforce

## Collaborators



JBCOLE





## v1 Wheelchair Sensor

Early adopter customer group



Seat Sensor



App Subscription  
for Individual Users



Direct Online &  
MedTech Retailers

Long-term  
data

Certification

Feedback



## v2 Medical Device

NHS Trusts & Care Homes



Embedded  
Sensor  
(Mattress + Seat)



Centralised Dashboard  
for Nurses & Carers



Distribution Partners

# Traction & Roadmap



Nov  
19

**Founded**  
Graphene Hackathon

June  
20

**£50k Eli Harari**  
Enterprise Award

Dec  
20

**Proof of Concept**  
& Patent Filed

Current Status: **Pending**

Patent covers textile  
pressure mapping using  
printed electronics

May  
23

**ICURE** Market  
Validation

**Innovate UK ICURE**  
Program: 6-months  
full-time market research  
and customer discovery

May  
24

**NHS** Engagement

Formal collaboration with **ALAS**  
**Rehabilitation Engineering** at  
Cardiff & Vale UHB

20  
26

**MVP to Market**

July  
25

**Demo Prototype**

**User tested prototype**  
ready to demonstrate  
to end users.

Collaborators ready to  
trial product

Jan  
25

**Seed Round Opens**

**Raise £1m** to reach  
market with v1 sensor

Nov  
24

**conceptionx** Pitch

**Raise £100k** for  
**customer trials &**  
**enhance prototype**  
**development**

**[XTX]**  
MARKETS




July  
24



**Innovate**  
**UK** **Grant**

**£300k grant** for  
12-month project to  
develop demo  
prototype

Our patent pending sensor technology **breaks pressure mapping out of specialised clinics** and into continuous everyday use

	 XSENSOR <sup>®</sup> Technology Corporation Innovators in Pressure Imaging	 BodiTrak BioMetrics	 graphene trace
Cost	£20k - 30k	> £10k	<b>£300 - £500</b>
Continuous Monitoring	✗	✗	✓
Automated AI Analysis	✓	✗	✓
Data Set	Snapshot	Snapshot	<b>Live &amp; Real-Time</b>
Usability	Requires Clinical Input	Requires Clinical Input	<b>Accessible UI built for users</b>



# Our Team

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**Dr. Scott Dean**  
Founder & CEO

PhD in Graphene Coatings,  
University of Manchester

StartupX, Impulse Cambridge,  
ICURe

Co-Founder Graphene Hackathon



**Dr. Daniel Melendrez**  
Senior Electronics  
Development Engineer

PhD in Nanomaterials,  
University of Manchester

7+ years in graphene sensors

Co-Founder Atomic Mechanics



**Joshua Sandat**  
Embedded Systems  
Engineer

Electronics Engineering  
Apprentice from BAE  
Systems

## Our Advisors



**Geoff Holt MBE**  
Disability Ambassador

Wetwheels &  
Disability Sports



**Alastair Williams**  
Certification & Regulation

Lucid Group



**Dr. Stephanie Wentworth**  
Clinical Pressure Mapping

Rehabilitation Engineering  
Cardiff & Vale UHB



**Peter Roberts**  
Health Economics

M.A.A.R.S

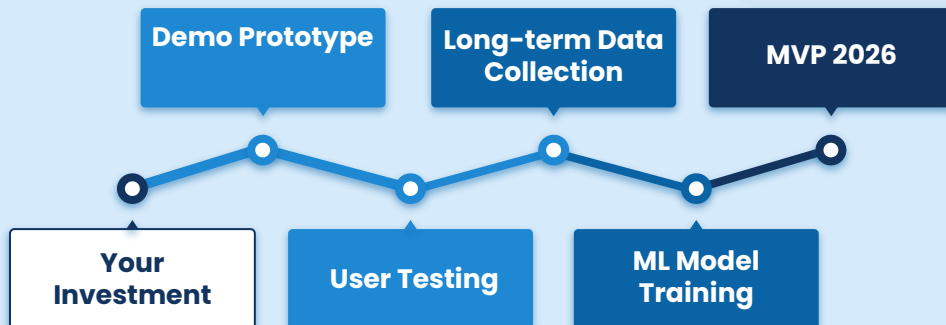


**Ian Horobin**  
Business & Operations

Rahko, Blue Prism,  
Omniscision, SWIFT, ConceptionX

# £1m

Seed Round



Join our **seed round**  
opening in January.



Find Out More

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