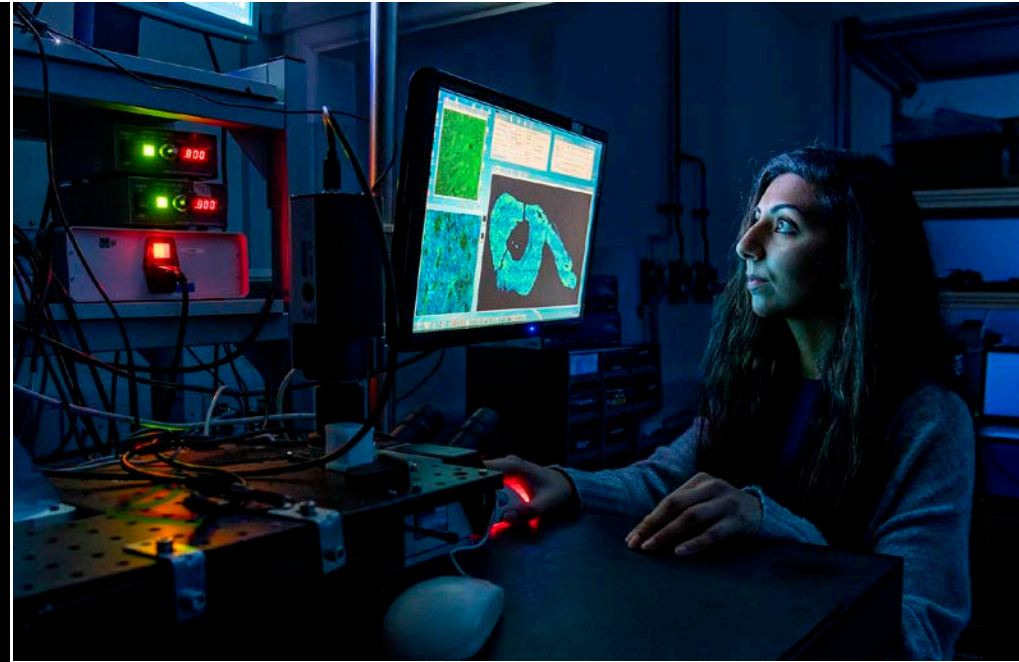
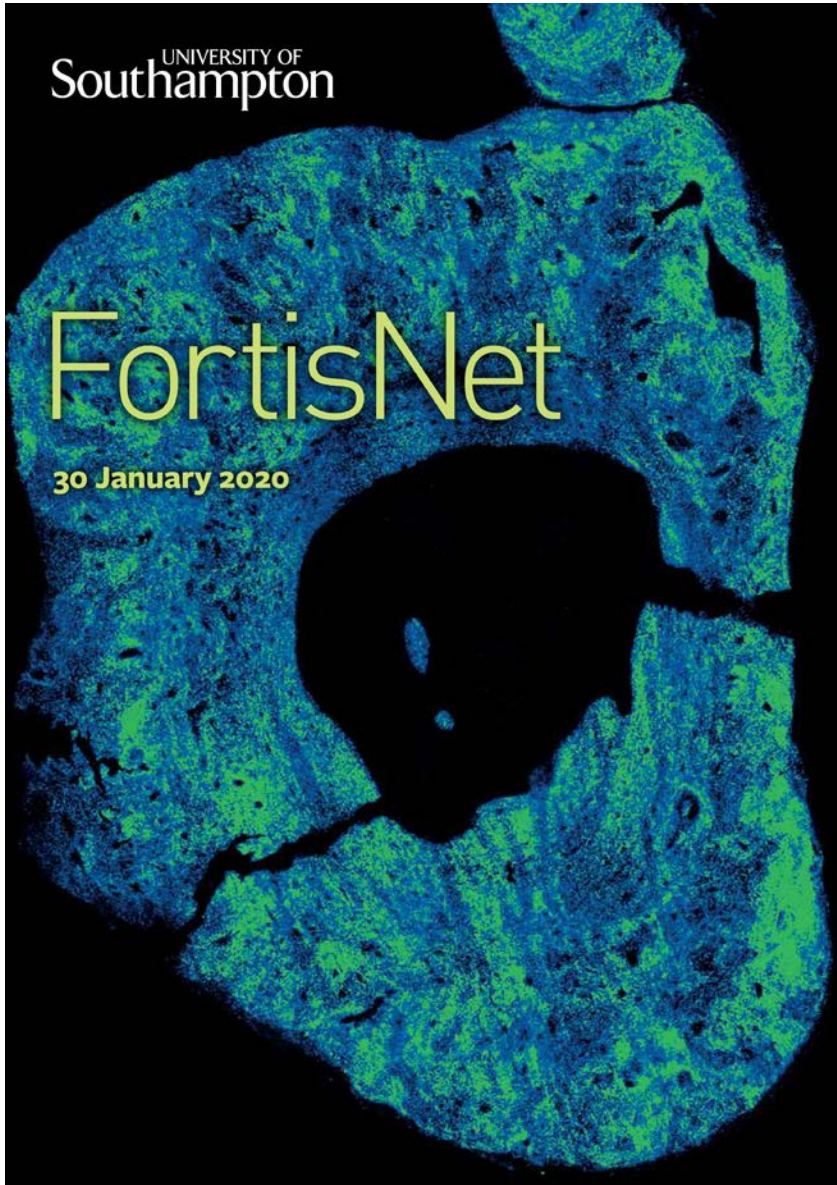


# Fifth Annual FortisNet Meeting

Healthy Ageing

Axis Conference Centre, University of Southampton Science Park,  
30 January 2020

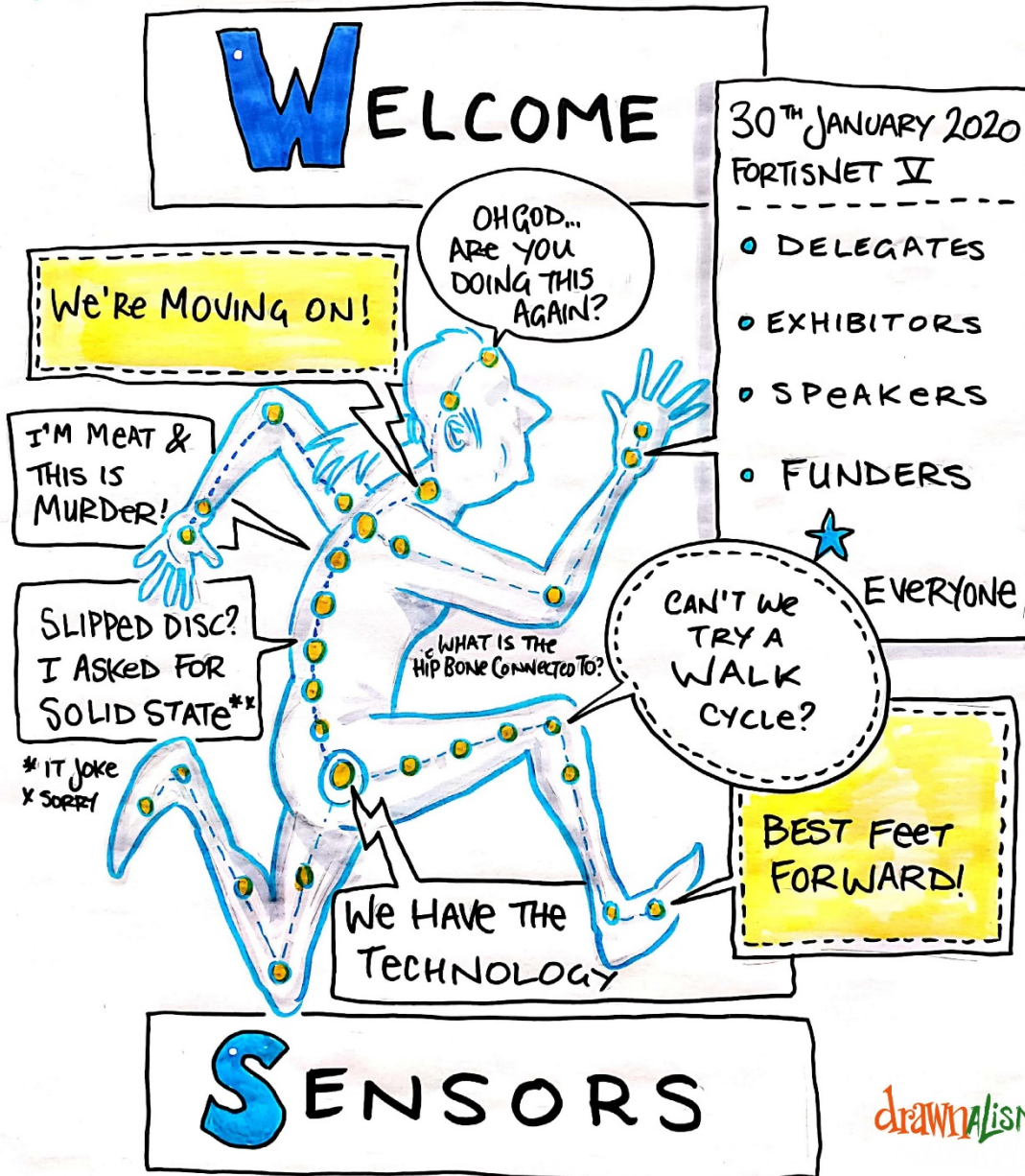
# HEALTHY AGEING



**Above:** Bone is a dynamic tissue that is constantly renewed throughout life. Changes in collagen structure are well-known indicators of bone disease, which can be measured using Raman Spectroscopy and Second Harmonic Generation imaging.

**Cover:** Detail from a label-free, Second Harmonic Generation image of pathological bone, where collagen (cyan) can be distinguished from mineralised tissue (blue).

*Images courtesy of Aikta Sharma, Dr Claire Clarkin, Professor Richard Oreffo and Professor Sumeet Mahajan, University of Southampton*



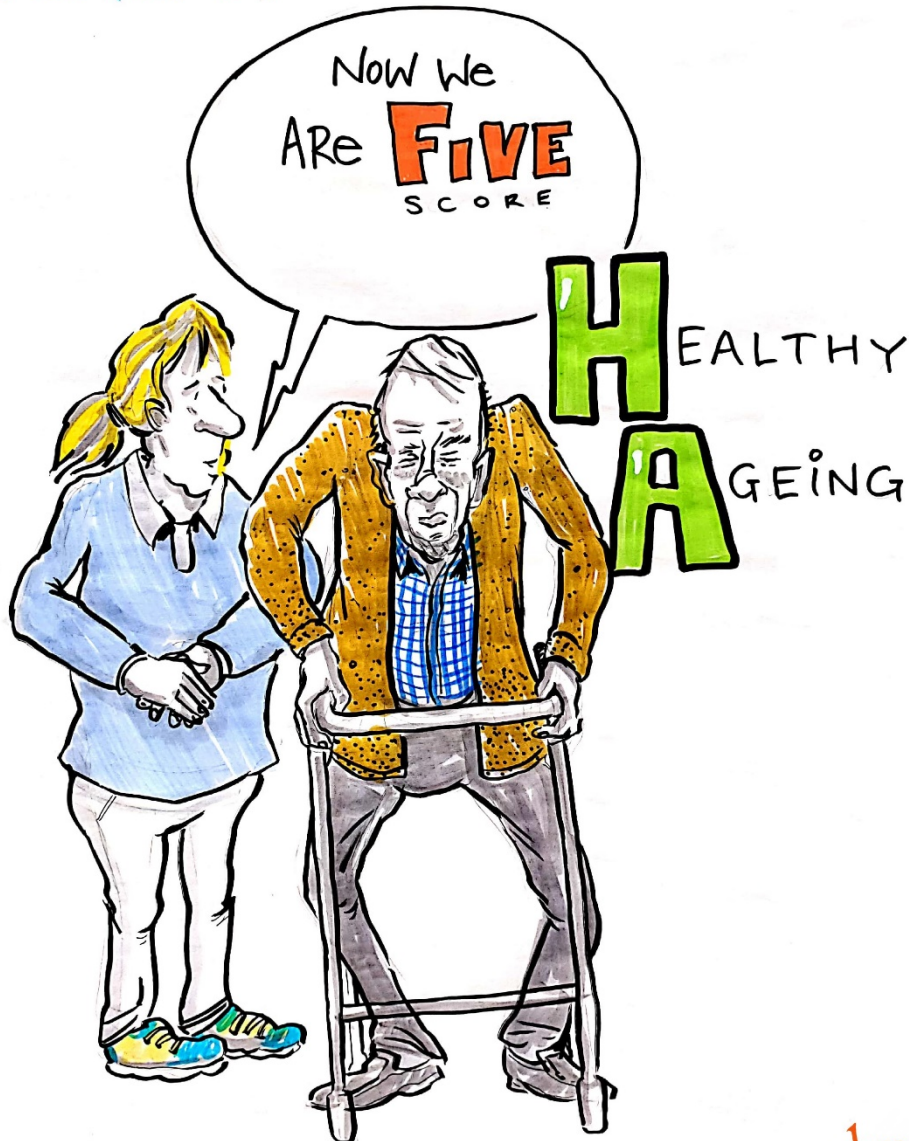
We hope you will enjoy the 'in the moment' art created by 'Drawnalism', summarising our work at the Fifth Annual FortisNet Meeting on 30 January 2020.

# Session 1

Chair: Professor Jo Adams  
Health Sciences, University of Southampton



#FORTISNET



## Introduction:

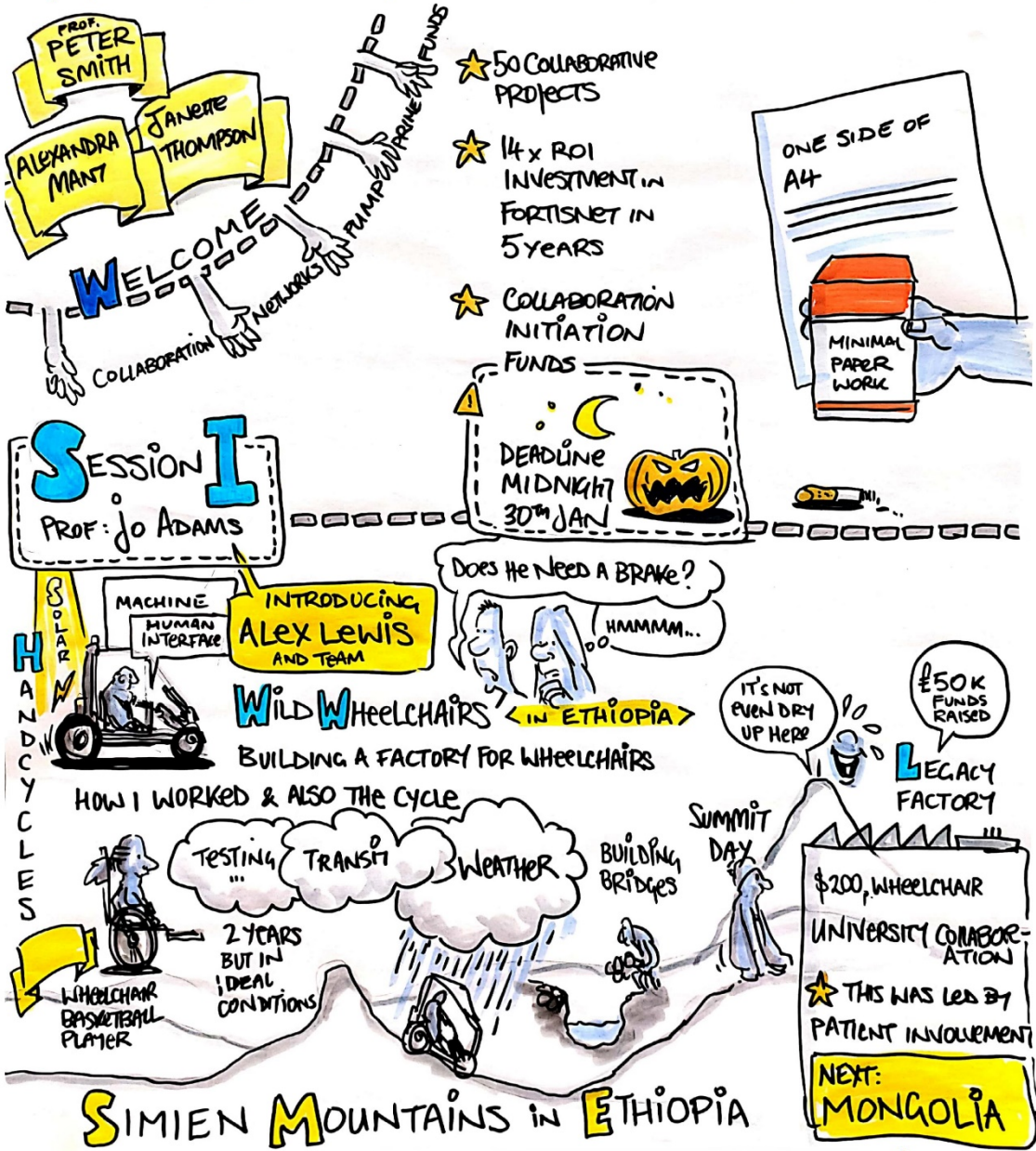
- Professor Peter JS Smith, FortisNet Director



Find out more:

[https://twitter.com/hashtag/fortisnet?src=hashtag\\_click](https://twitter.com/hashtag/fortisnet?src=hashtag_click)

# #FORTISNET



## Speakers:

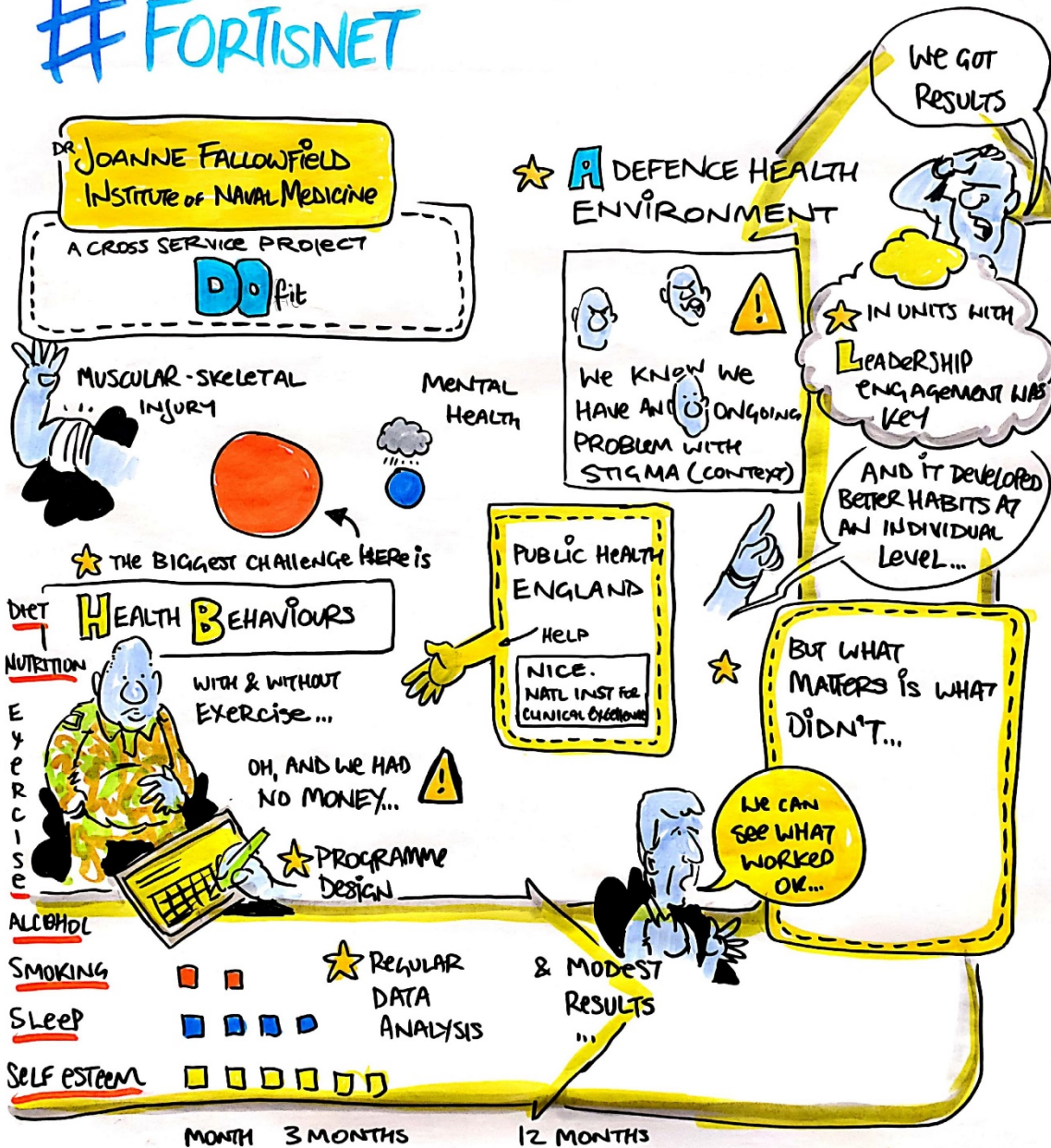
- Alex Lewis, Alex Lewis Trust
- David Collinson, Wild Wheelchairs Project

## Find out more:

- <https://www.facebook.com/pg/NaeahTheHandcycle/posts/>
- <https://www.southampton.ac.uk/engineering/news/2019/10/16-wheelchair-adventurers.page>
- <https://www.alex-lewis.co.uk/wild-wheelchairs-project/>



# #FORTISNET



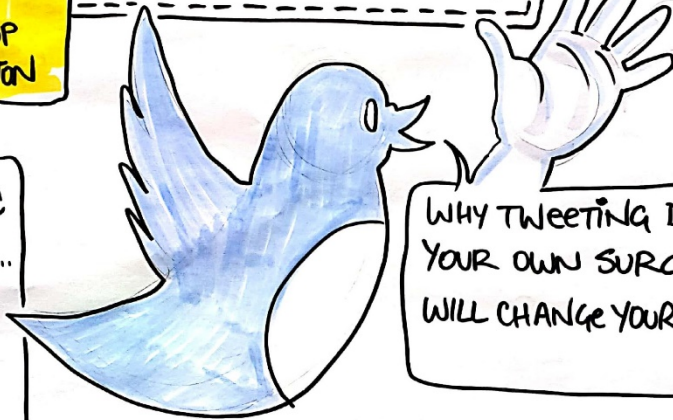
## Speaker:

- Dr Joanne Fallowfield, Institute of Naval Medicine

# #FORTISNET

ALISTAIR  
PHILLIPS  
UNIV HOSP  
SOUTHAMPTON

WALANT. SURGERY  
FOR YOUR WIDE AWAKE NEEDS



I GRIEVE  
FOR THIS...



YOU WOULD  
WOULDN'T  
YOU...

★ IF I CAN  
BE AWAKE,  
I'D LIKE TO  
BE  
#PARAPHRASE

WHY TWEETING DURING  
YOUR OWN SURGERY  
WILL CHANGE YOUR OUTCOME

★ SHOW YOUR WORKING, IF YOU CAN



YOU ARE  
OPERATING  
ON ME...  
I WANT TO  
ESTABLISH  
TRUST WITH  
YOU

& I'LL BE TURNING UP FOR REHAB

★ NOTHING ABOUT ME WITHOUT ME

★ [https://  
WALANT.SURGERY](https://walant.surgery/)

Next...  
BUILDING A BRAND

## Speaker:

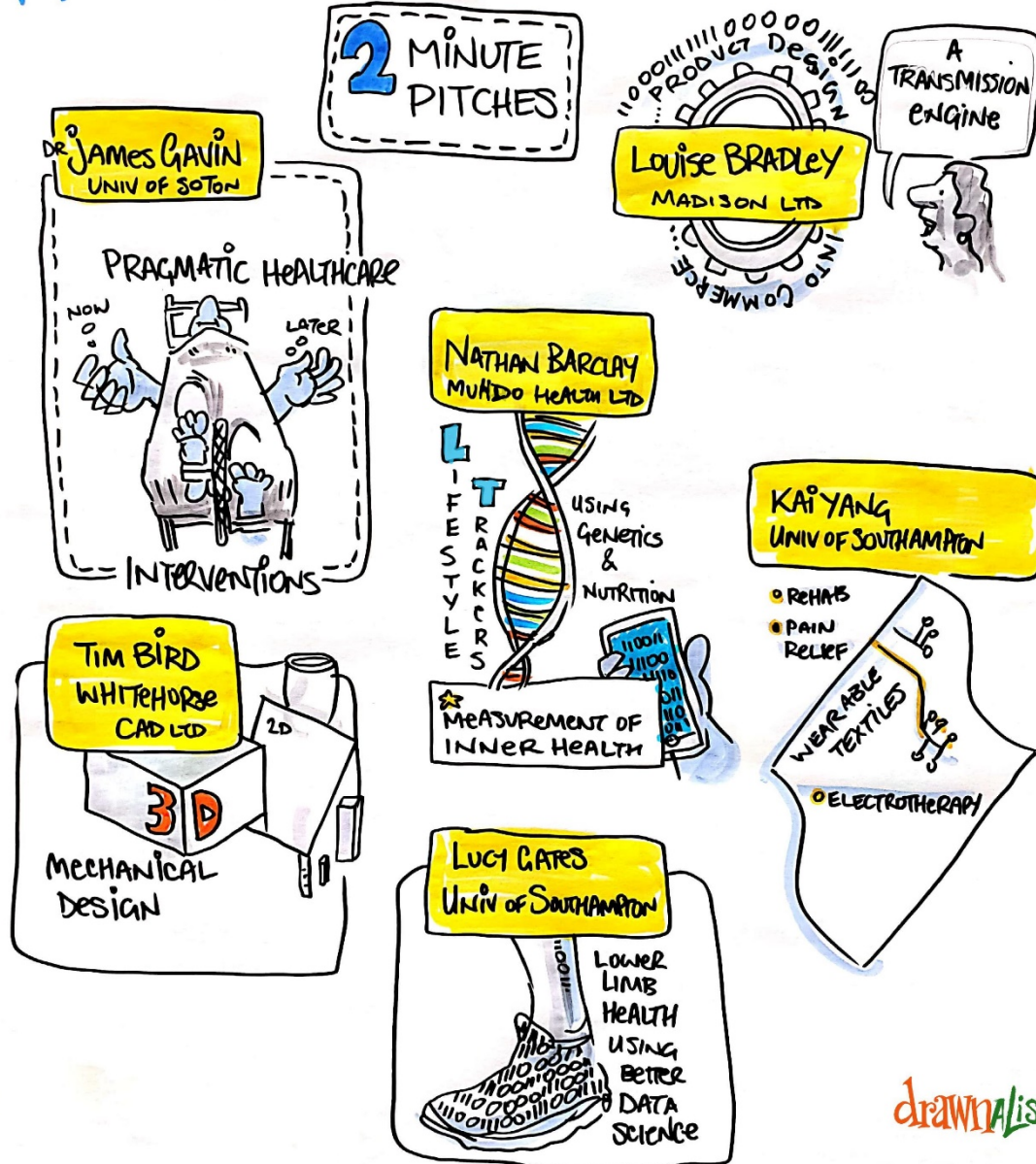
- Mr Ali Phillips,  
University Hospital  
Southampton NHS  
Foundation Trust

## Find out more:

- <https://walant.surgery/>



# # FORTISNET



## Two minute pitches: Who am I and why am I here?

- Dr James Gavin, University of Southampton
- Louise Bradley, Maddison Ltd
- Nathan Berkley, Muhdo Health Ltd
- Tim Bird, White Horse CAD Ltd
- Dr Lucy Gates, University of Southampton
- Dr Kai Yang, University of Southampton

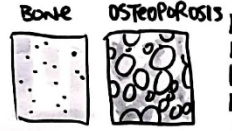
# Session 2

Chair: Professor Richard Oreffo  
Centre for Human Development, Stem Cells and Regeneration  
University of Southampton

PROF RICHARD OREFFO **SESSION II**

DR CLAIRE CLARKIN  
UNIV OF SOTON

**INTERDISCIPLINARY COLLABORATION**



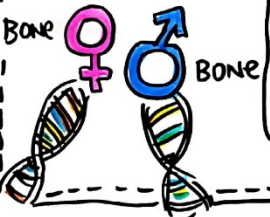
IS CONNECTED TO THE VASCALATURE



COLLABORATION HELPS US FIND OUT

- TO START
- MEET
- 1/2 YRS
- £20K
- PHDS
- HAVE FUN
- BEING SCARED IS OK!
- SO IS IGNORANCE

SEXUAL DIMORPHISM OF BONE



! COSTS ABOUT £4bn p.a.

PROF NICHOLAS HARVEY  
UNIV OF SOTON

OSTEOPOROSIS & INCREASED RISK OF FRACTURE IN OLD OR VERY YOUNG AGE



Q. HOW TO HELP BONE MASS PEAK IN EARLY LIFE?

LARGE COHORT RESEARCH

- o SOUTHAMPTON
- o OXFORD
- o SHEFFIELD



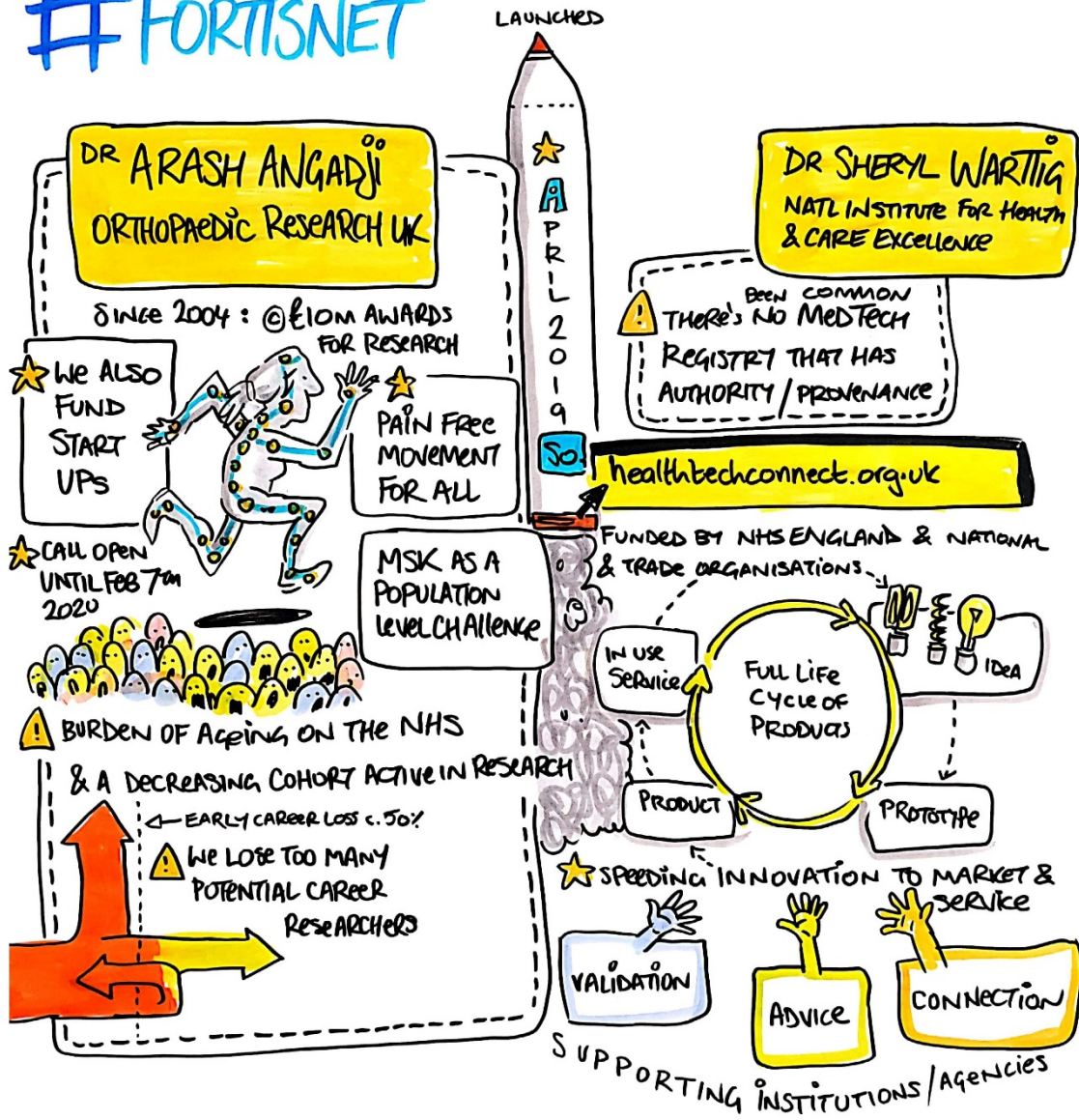
★ REDUCING FRACTURES IN COMING GENERATIONS

Speakers:

- Dr Claire Clarkin, University of Southampton
- Prof Nicholas Harvey, University of Southampton & University Hospital Southampton NHS Foundation Trust



# #FORTISNET



## Speakers:

- Dr Arash Angadji, Orthopaedic Research UK
- Dr Sheryl Warttig National Institute for Health and Care Excellence

## Find out more:

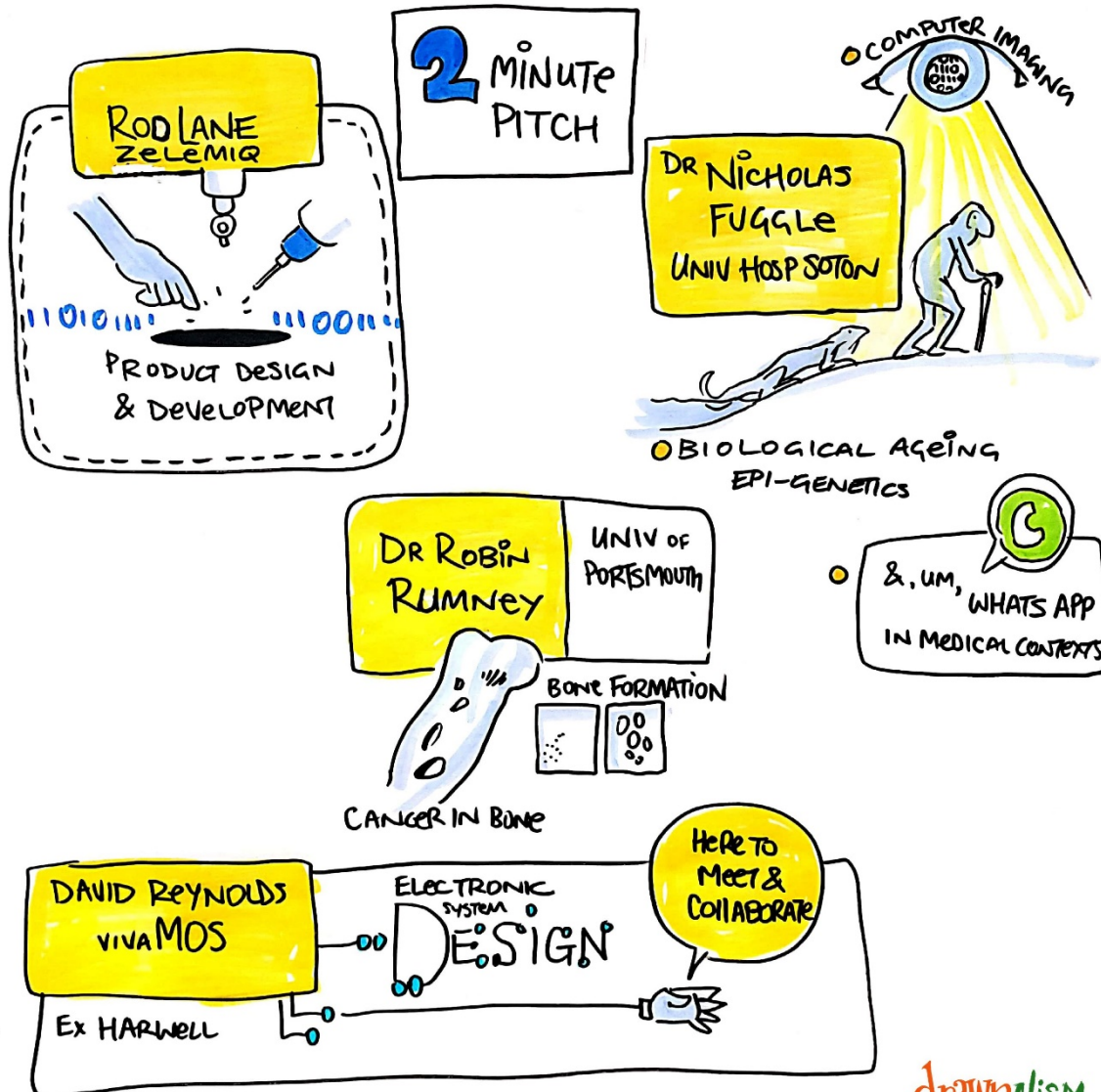
<https://www.oruk.org/>

<https://www.healthtechconnect.org.uk/>



# Session 3

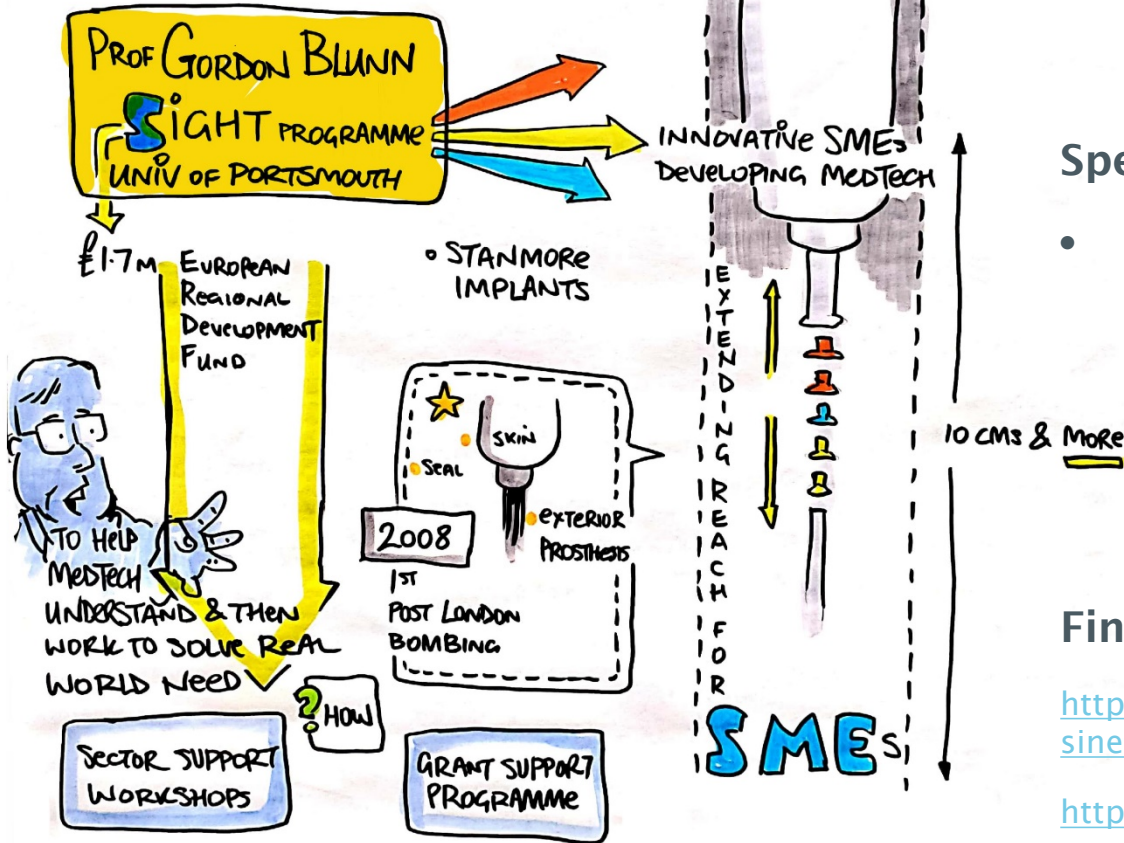
Chair: Professor Peter JS Smith  
Institute for Life Sciences Director & FortisNet Director  
University of Southampton



## Two minute pitches: Who am I and why am I here?

- Dr Rod Lane, Zelemiq Ltd
- Dr Nicholas Fuggle, University of Southampton & University Hospital Southampton NHS Foundation Trust
- Dr Robin Rumney, University of Portsmouth
- David Reynolds, vivaMOS Ltd

# #FORTISNET



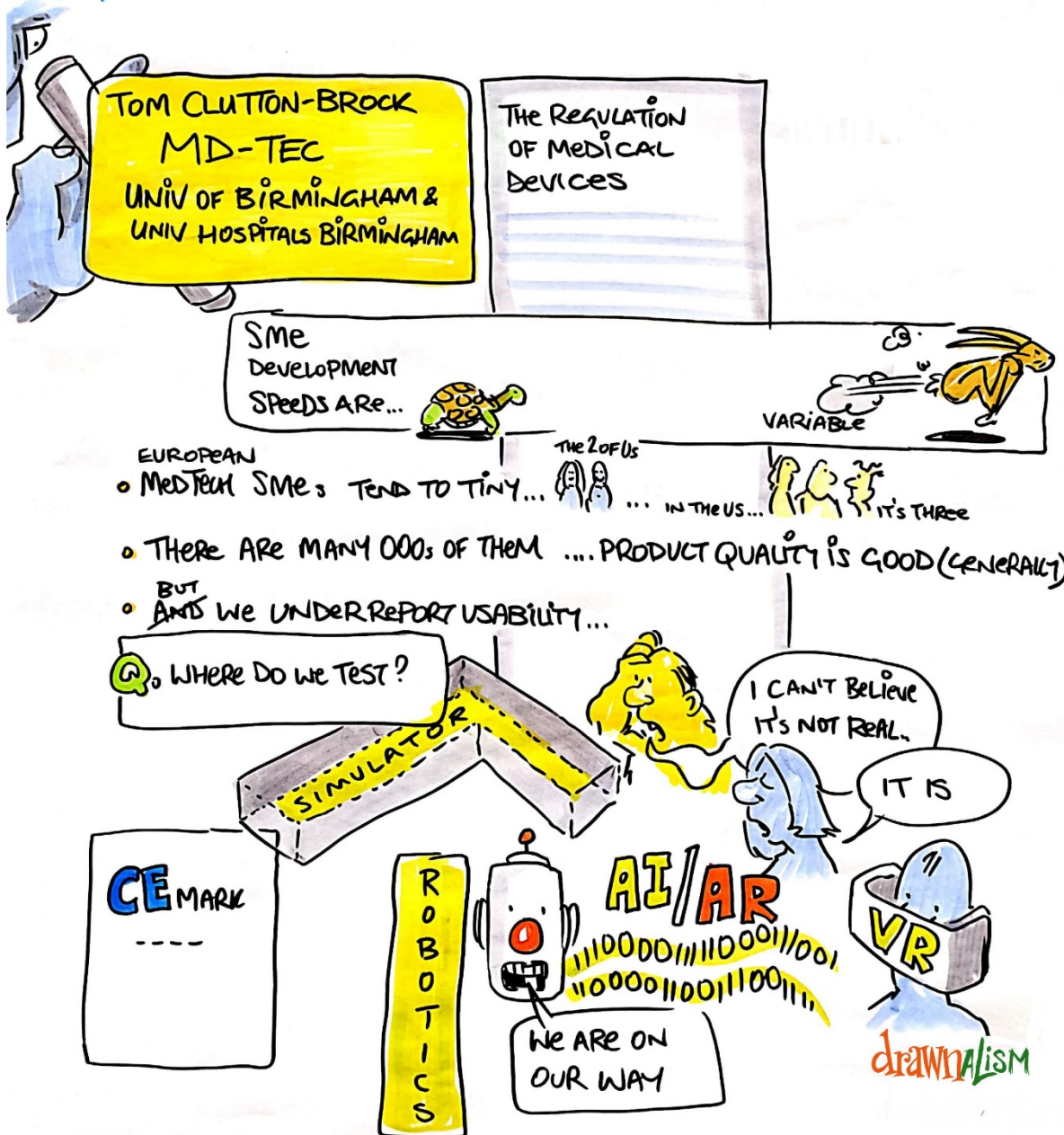
## Speaker:

- Prof Gordon Blunn, University of Portsmouth

## Find out more:

<https://www.port.ac.uk/collaborate/business/business-services/sight>

<http://portsmouthtechnologiestrialsunit.org.uk/>



## Speaker:

- Dr Tom Clutton-Brock, Medical Devices Testing and Evaluation Centre & NIHR Trauma Management MedTech Co-operative, University of Birmingham & University Hospitals Birmingham NHS Foundation Trust

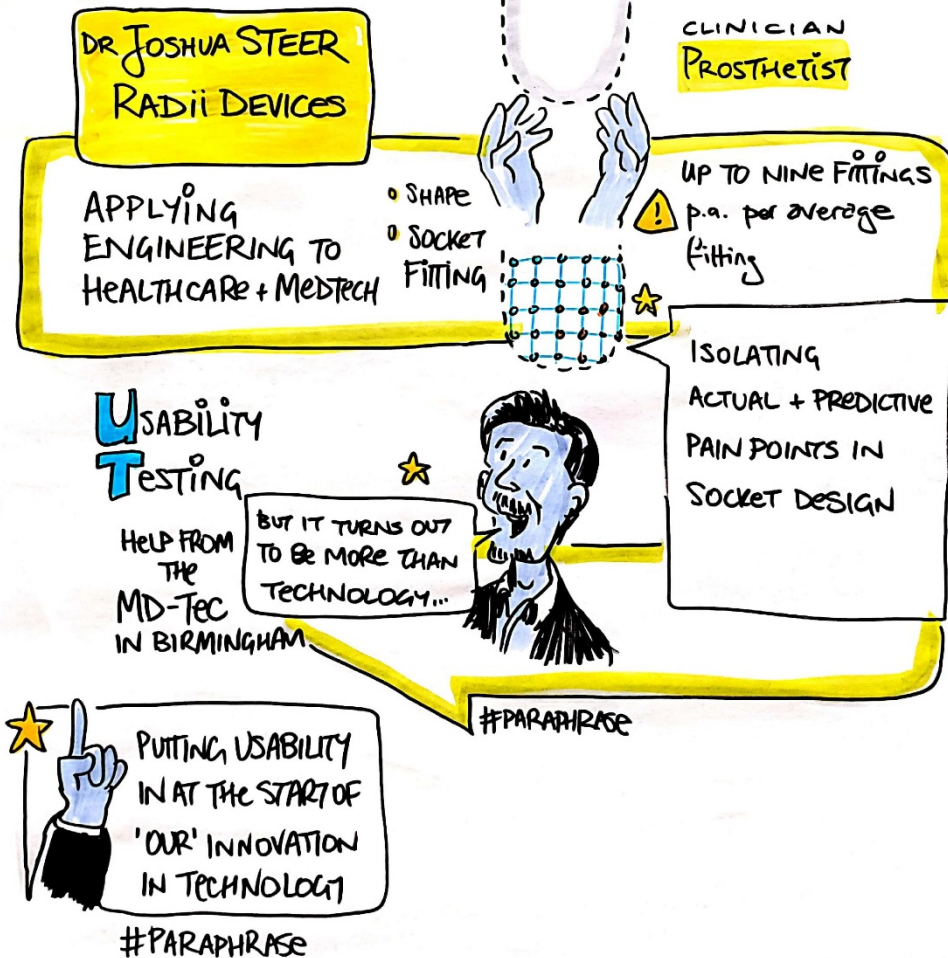
## Find out more:

<https://www.md-tec.com/>

<https://www.traumamic.nihr.ac.uk/>



# #FORTISNET



## Speaker:

- Dr Joshua Steer,  
Radii Devices

## Find out more:

<https://www.radiidevices.com/>

**RICK ROWAN**  
NUROKOR LTD

**2 MINUTE PITCH**

BEHAVIOUR CHANGE FOR  
RECOVERING SERVICE MEMBERS  
★ WE REFLECT SOCIETY + SOCIAL CHALLENGES

LESS TIME GIVES FOCUS

**BEN FISHER**  
UNIV OF SOTON

AND YOU KNOW WE DON'T NEED MONEY

◀ PROGRAMMABLE ▶  
BIOELECTRONICS  
ELECTRIC!  
WEARABLE WELLNESS  
WOUND CARE

**VIRGINIA HODGE**  
HERON ASSOCIATES

LONG EXPERIENCE IN REGULATION

30 ENGINE-YEARS

DEVELOPMENT POWERHOUSE

- WHO
- WHAT
- WHEN
- WHERE

100 BUSINESSES  
1000 EMPLOYEES

**DR ROBIN CHAVE**  
UoS SCIENCE PARK

- HOW

## Two minute pitches: Who am I and why am I here?

- Rick Rowan, NuroKor Ltd
- Dr Robin Chave, University of Southampton Science Park
- Ben Fisher\*, Defence Primary Healthcare & University of Southampton
- Virginia Hodge, Heron Associates

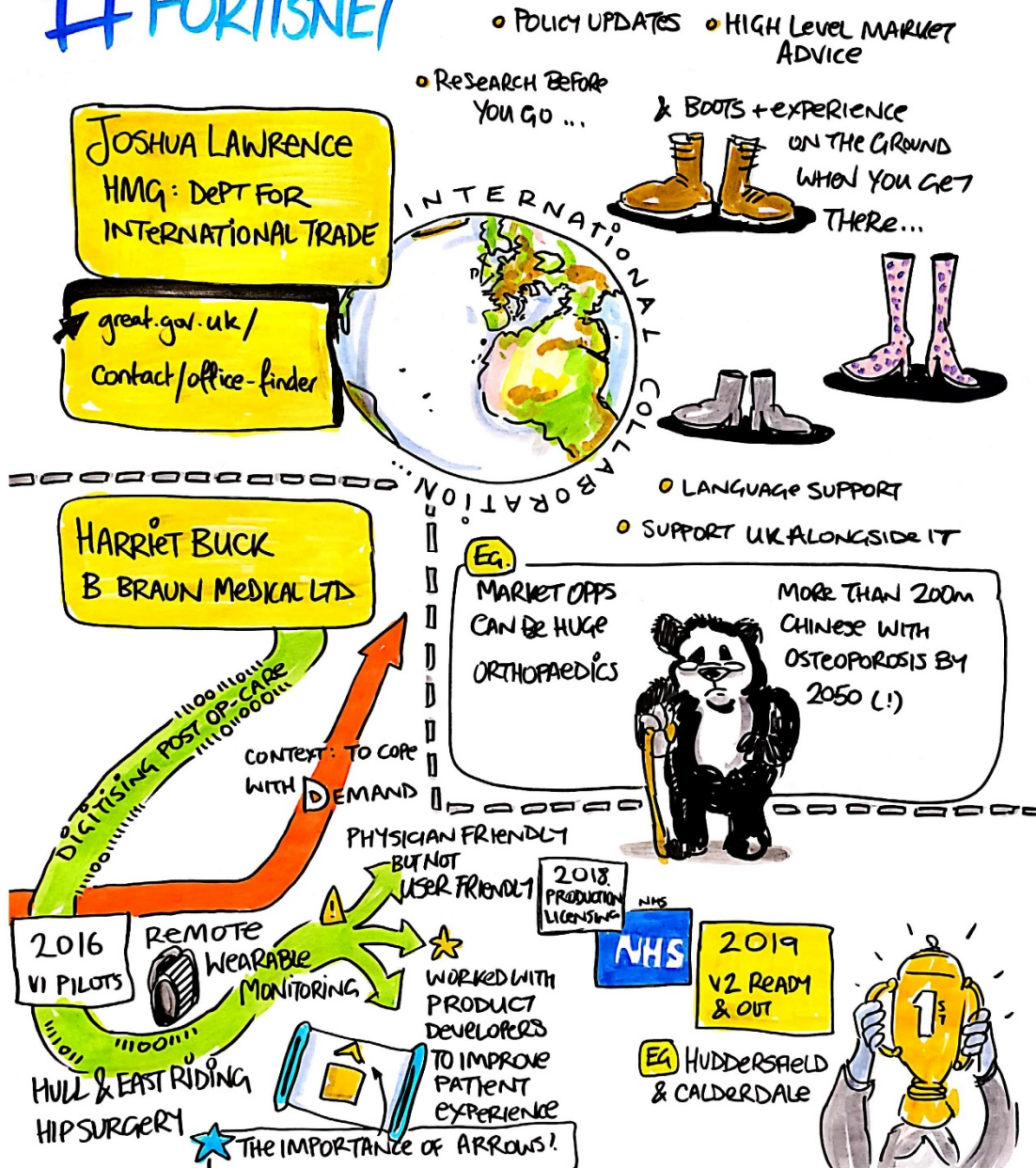
\*Winner - best pitch

# Session 4

Chair: Mr Jeremy Latham  
Latham Hip Surgery







## Speaker:

- Joshua Lawrence, Department for International Trade
- Harriet Buck, B Braun Medical Ltd

## Prize giving

- **Best two minute pitch:** Ben Fisher, Defence Primary Healthcare & University of Southampton
- **Best lay abstract:** Nicholas Fuggle, University of Southampton
- **Lay abstract runner up:** Camille Parsons, University of Southampton

# FORGING NEW COLLABORATIONS

We have supported collaborative pump-priming projects in enterprise engagement in research, skeletal biology, prosthetics & orthotics, podiatry, assistive technology and rehabilitation.

These represent new, interdisciplinary collaborations, all of which are with partners external to the University of Southampton, including stakeholders, small-to-medium-sized enterprises, University of Portsmouth and an NHS Trust. Projects will report at the end of April 2020.

We are grateful to the Higher Education Innovation Fund for financial support for this event.

# THANK YOU FOR YOUR ACTIVE PARTICIPATION

- 79 Participants; 56% external to University of Southampton
- Universities: Birmingham, King's College London, Portsmouth, Southampton
- Dstl, MoD, Institute of Naval Medicine
- 15 Companies
- University of Southampton Science Park
- Department for International Trade & Knowledge Transfer Network
- Portsmouth Hospitals NHS Trust, University Hospital Southampton NHS Foundation Trust, Dorset County Hospital
- National Institute for Health and Care Excellence
- Hampshire County Council
- 2 Charities



*Image courtesy of Belle Creith and Dr Claire Clarkin, University of Southampton.*



# HELP US TO HELP YOU...



- Please tell us if FortisNet has helped you in your work
- We can apply for more funding to support events and activities

*Image courtesy of Dr Alex Dickinson, Dr Peter Worsley, Dr Maggie Donovan-Hall, Dr Cheryl Metcalf, University of Southampton.*

[www.southampton.ac.uk/fortisnet](http://www.southampton.ac.uk/fortisnet)

To give feedback or find out more about FortisNet, contact the Institute for Life Sciences Collaboration Manager, Dr Alexandra Mant:

[a.mant@southampton.ac.uk](mailto:a.mant@southampton.ac.uk)  
023 8059 4441