

# MDVSN<sup>PLUS</sup> Funding Call Dec 2016

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# What funding is available?

- The original MDVSN (2014-2017) had modest funding for small proof of principle studies (£10k \* 3)
- MDVSN<sup>PLUS</sup> (2016-2019) has more substantive funding ~£240k to support a series of feasibility studies.
- Three funding calls will be announced during MDVSN<sup>PLUS</sup> (Dec 2016, May 2017, 2018).
- Each call will have a slightly different focus and scope.

# The Funding Remit

“Our remit is broad but focused on feasibility studies which offer the potential to spawn more effective designs and performance of medical devices which will minimise trauma to vulnerable skin tissues. This will inevitably involve joint applications encompassing different sectors.”

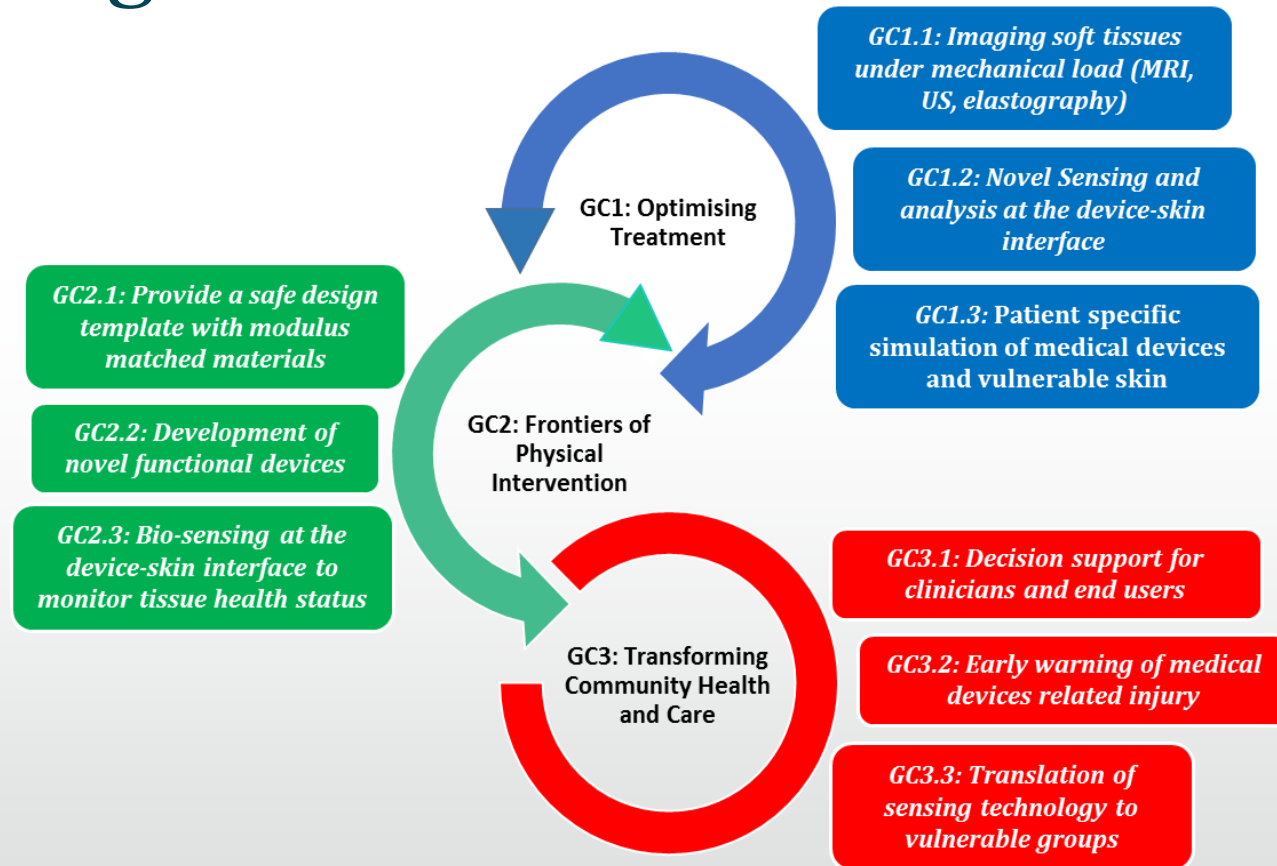
Applications should also cover the following:

- Research Novelty
- Deliverable Milestones
- Dissemination strategy
- Future funding plans

# Medical Devices and Vulnerable Skin



# Aligning Applications to the EPSRC Grand Challenges



# Review Process

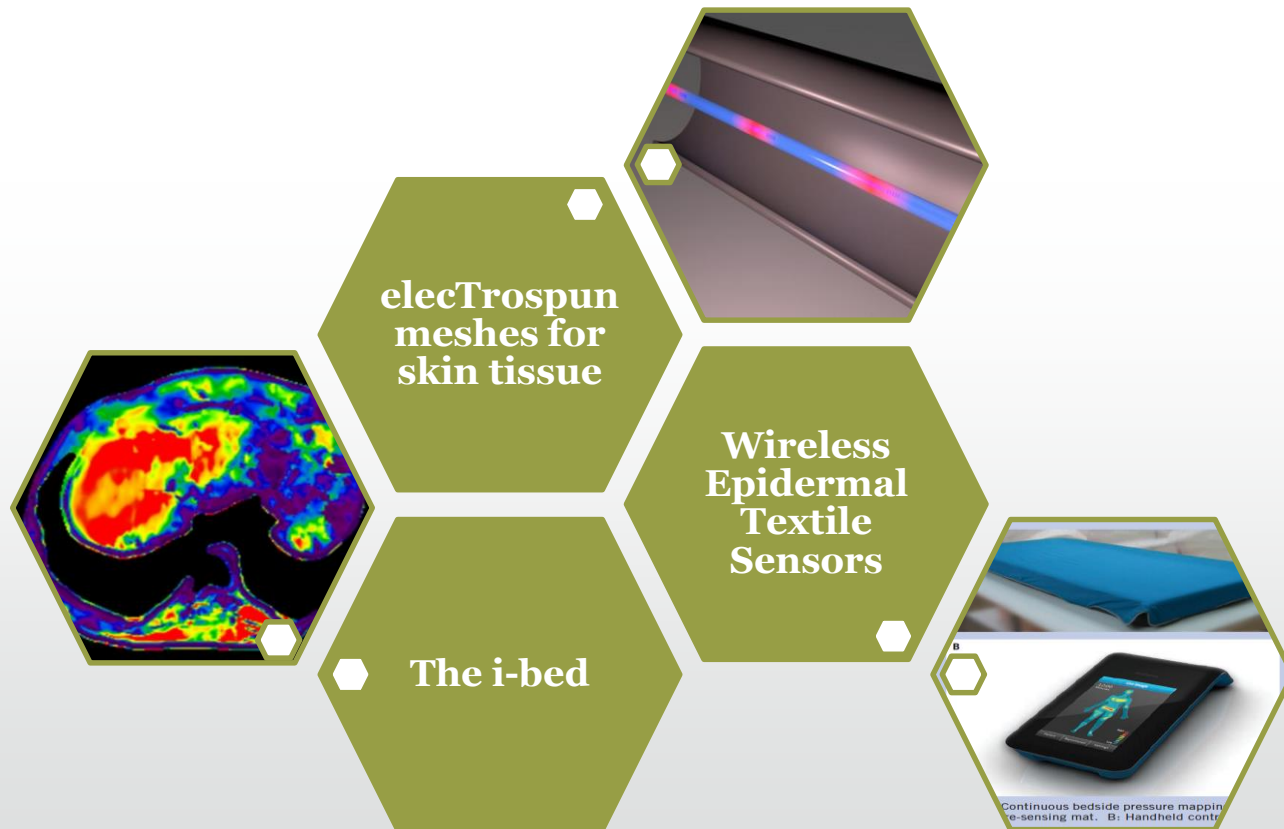
- Both internal (MDVSN<sup>PLUS</sup> team) and external reviewers scored each proposal
- A number of criteria were used to rank each application:

Novelty and Relevance	Research Quality	Methodology	Value of Outputs
1 - The proposal has no significant novelty  5 - This proposal has exceptional novelty and/or relevance	1 - The proposed research is scientifically flawed  5 - The proposed research is excellent	1 - The methodology is technically flawed  5 - The methodology is excellent in scope and planning	1 - The research outputs are unlikely to develop any further opportunities  5 - The research outputs will generate exceptional opportunities



# Dec 2016 Call

Applications covered a wide variety of clinical challenges and technological innovations



# Feedback from the 1<sup>st</sup> Call

- Nine applications were made in Dec 2016
- The overall quality was very high
- Some ineligible costs were included e.g. PhD studentship funding
- Some applications required more detail in the methodology regarding what was being measured.
- Projects cannot be led by industry (EPSRC rules)
- Some applicants did not explicitly describe the alignment to the grant challenges.

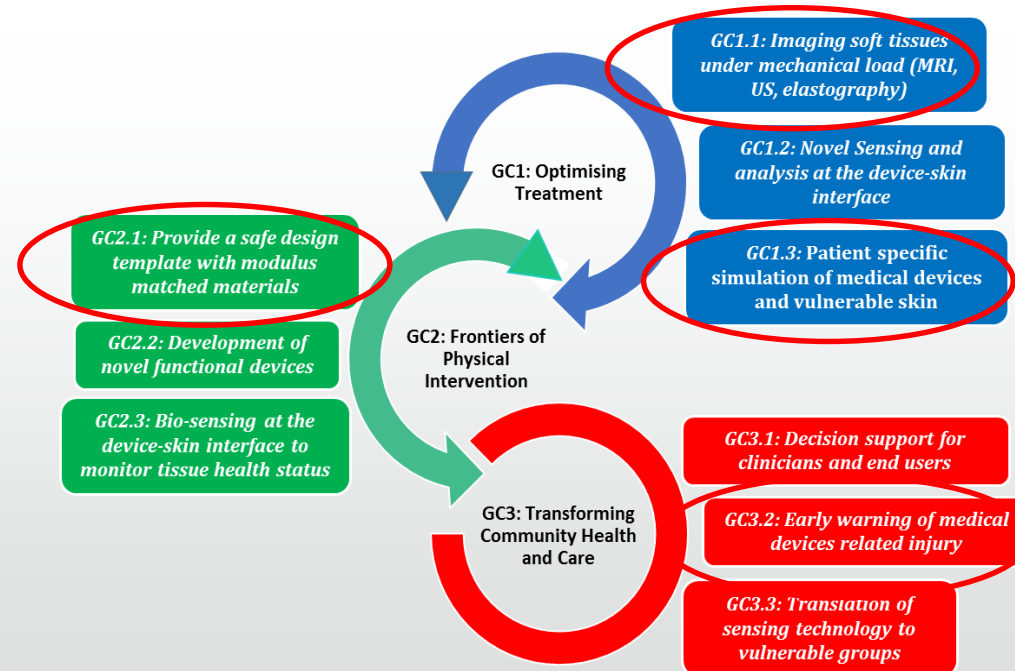


# Those that were Funded

## Imaging the mechanical properties of the vulnerable skin during medical device loading (Sinkus KCL)

### Objectives

- 1) To develop a transient 1D MRE approach that yields the biomechanical properties of vulnerable skin tissues
- 2) To validate our approach in phantom studies and numerical simulations
- 3) To apply the method to a cohort of senior people to study normal skin biomechanics as a function a age
- 4) To test our method on a cohort of pressure ulcers patients

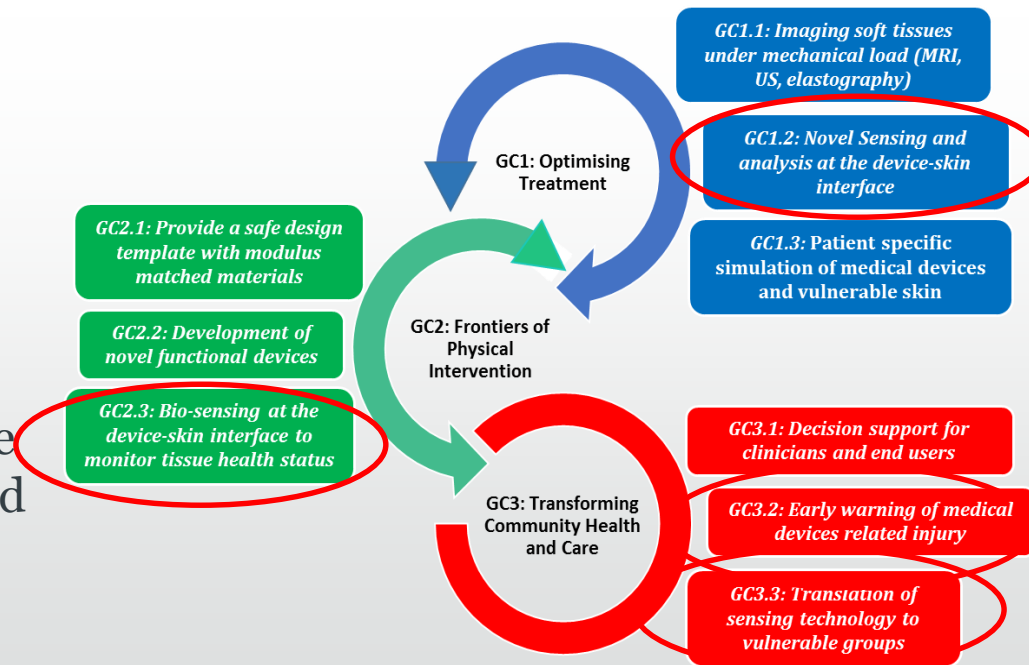


# Those that were Funded

## Optical fibre sensing at the interface between tissue and orthosis or prosthesis (Morgan UoN)

### Objectives

- 1) Develop and characterise a shear stress optical fibre sensor (OFS)
- 2) Integrate OFSs into a sock to enable in-shoe measurements of multiple parameters
- 3) Conduct in-shoe study where multiple parameters are simultaneously measured and validate against standard measures.
- 4) Specify requirements for next generation device.

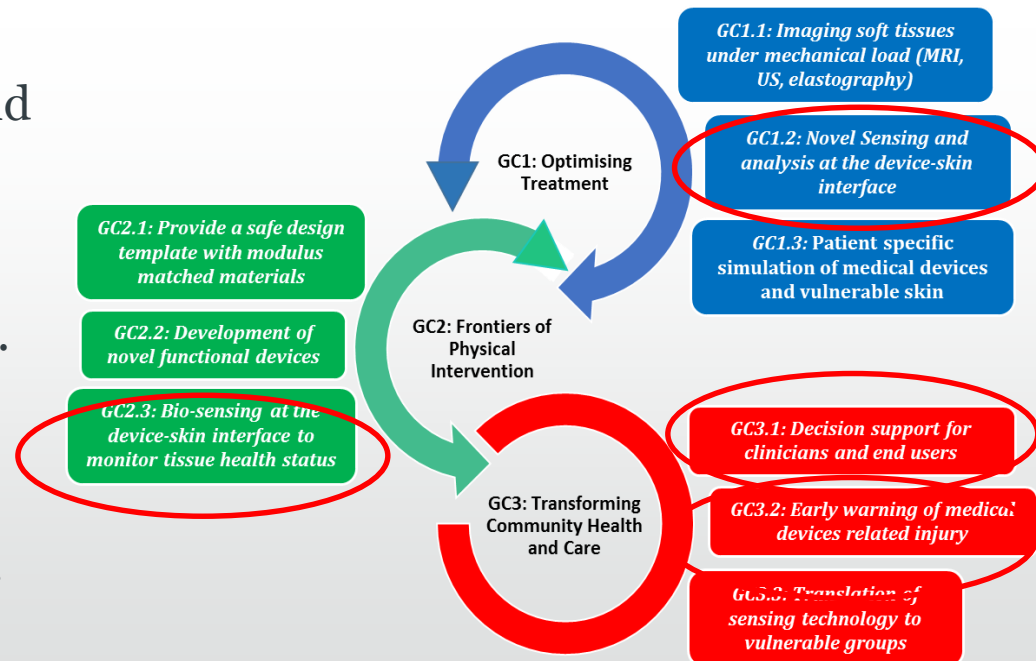


# Those that were Funded

## Early Detection of Pressure Injury Using Novel Wireless Epidermal Textile Sensors in Wheelchair users Living with Spinal Cord Injury (Hao QMUL)

### Objectives

- 1) Develop the portable non-invasive textile sensor to image human tissue, and monitor dielectric density changes.
- 2) Develop new signal processing techniques for detecting pressure injury.
- 3) Realization of an “open source” wireless medical system to serve as a platform for cognitive clinical diagnosis.
- 4) Database of bio-signals acquired from health volunteers..

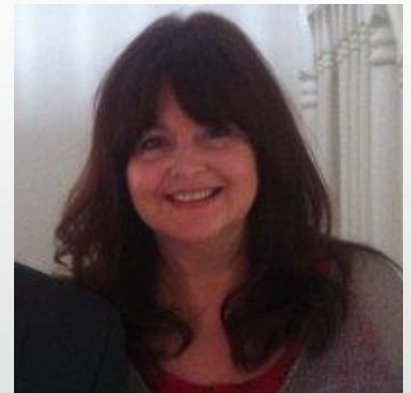


# Common Strengths

- Each project had a strong partnership with academic institutions, clinicians and industrialists.
- Each were able to demonstrate a high level of novelty in their proposed research
- Very clear dissemination and sustainable funding strategies
- Clear fit to the Grand Challenges aligned to MDVSN<sup>PLUS</sup>

# How our Network will support their activity

- MDVSN<sup>PLUS</sup> Network Manager – Luciana Bostan
- MDVSN<sup>PLUS</sup> Network Administrator – Fiona Brewer
- Shared dissemination events – workshops, sandpit meetings and conferences
- Access to our wider collaborators e.g. D4D, WoundTech HTCs
- Disseminate relevant RC calls and support applications.



# Summary

- Fantastic response to the first call
- We have funded three exceptional projects
- We urge those that were not funded to re-apply
- Our Network will support applicants to deliver their projects
- We welcome collaboration from all sectors – healthcare, academia and industry.



Any Questions?