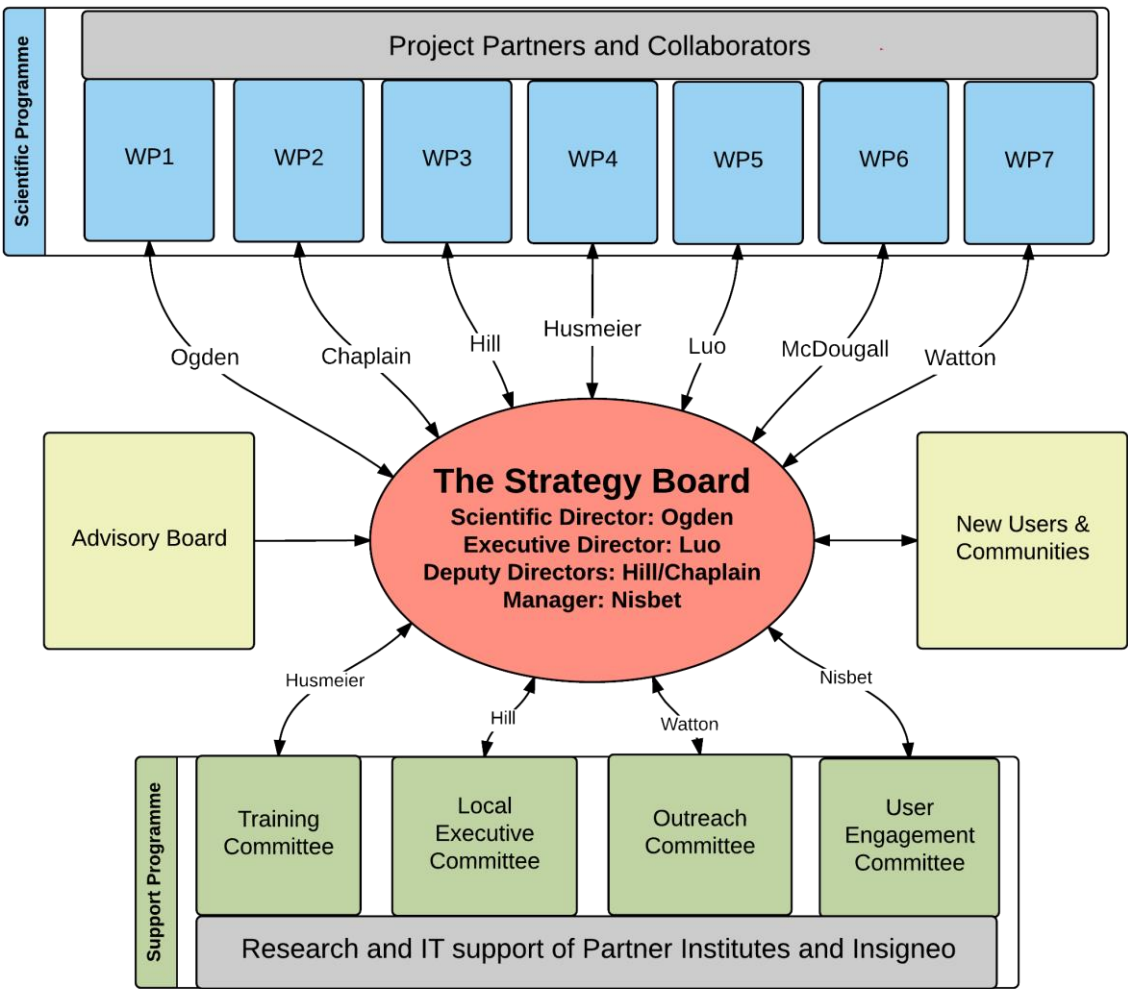


**Support team leaders:**  
 Nisbet (GU)  
 Mcisaac (GU)  
 Pulver (St. A)  
 Moffatt (UoS)  
 Gordon Winton (HW)  
 McCormack (Insigneo)

Novel Maths for Healthcare  
 & Clinical Translation



SofTMech Management Structure

## Governance of SofTMech

### 1. *Management of SofTMech:*

SofTMech will be led by the Scientific Director (Ogden, PI) and managed by the Executive Director (Luo), with the two Deputy Directors (Chaplain and Hill). The role of the Directors is to provide scientific and academic leadership, and to be responsible for the effective management of the Centre. The Executive Director is responsible for Centre's strategic management and budget. The Deputy Directors are responsible for coordinating the work packages and their interactions at all scales, and managing the Centre on the daily basis, with the support of the local executive committee.

The Directors will be supported the Advisory board, the Strategy Board, the Local Executive Committee, the Training Committee, the Outreach Committee, and the User-Engagement Committee, as illustrated in the Cover. Ms Chanel Mcisaac is the Centre's Project Manager, supported by Mr. David Nisbet SofTMech-Secretary (TBC). Nisbet will lead the business development and SofTMech-Secretary will provide the general Administration support.

### 2. *Terms of Reference of the boards and committees.*

2.1 Advisory Board - SofTMech has an **Advisory Board** that meets annually and has a majority of members from outside the Centre.

The Advisory Board exists to provide the Director of SofTMech and members of the Strategic Board with an external perspective. The Advisory Board will be chaired Prof. Othmer (University of Minnesota), and consists of a number of international experts in soft tissue mechanics and mathematical biology. Namely, JP Keener (University of Utah), L Keshet (UBC), P Hunter (University of Auckland), RD Kamm (MIT), E Kuhl (Stanford University), D. Gavaghan (University of Oxford), J.Pearson (BHF), and EPSRC representation.

The Advisory Board will provide the forum in which the legitimate interests of the funders of Centre research are represented and will consider issues of strategy and research direction. The Advisory Board must convene at least once a year. Membership terms are for 4 years. Members can be replaced or added as necessary. External representation from funders, research users and other external non-academic bodies may be invited to attend meetings of the Advisory Board.

#### 2.1.1 *Template Terms of Reference for the **Advisory Board**:*

The standard terms of reference of an Advisory Board are:

1. to advise on the general strategy for the Research Centre in order to achieve its objectives
2. to advise on actions to be taken to advance specific agendas of the Centre, including (i) communication plans, especially engagement with and dissemination to potential users of the research, and the impact of research; (ii) areas where the project team identifies a lack of appropriate progress or anticipates future

- difficulties in the Centre's achievement of its objectives,
3. to advise on issues referred to the Board by WP leaders. These may include: (i) proposed modifications to the Research Centre's budget; (ii) specific communication and dissemination activities,
  4. to comment on the draft Annual Report.

2.2 SofTMech's central management will be provided by the **Strategy Board** – which will meet bi-monthly

The Strategy Board will be chaired by the Executive Director (Luo), Deputy Directors (Hill and Chaplain), and comprise all applicants, Ms. Mcisaac, Mr. Nisbet, and SofTMech-Secretary. Project partners may send representatives when invited. External members of the Centre are restricted to research staff collaborating on the Centre's research projects or programs (through a membership scheme), and may attend meetings at the invitation of the Director of the Centre.

The Strategy Board is responsible for setting academic priorities and organizing research programs; for examining the budget; for overseeing recruitment matters; for receiving the WP leader's reports; and for reporting to the Advisory Board.

2.2.1 The standard terms of reference of the Strategy Board are:

1. to establish and provide advice on the overall strategic direction for the Centre and its activities, in accordance with its objectives,
2. to monitor and review the seven work packages' progress and directions.
3. to agree on research plans and budget for the Centre's activities,
4. to assess the applications for the feasibility studies.
5. to review overall management and delivery of the Centre's activities against annual plans and budgets,
6. to monitor activities of the Outreach, Training, User-Engagement, and Local Executive committees,
7. to oversee the Centre's compliance with the EPSRC procedures and policies,
8. to seek new funding opportunities and ensure SofTMech's sustainability.
9. to draft annual reports.

The Strategy Board will meet monthly (via skype if necessary). The meeting frequency will increase during the start-up of the Centre and also during the event-intensive periods.

2.3 The **User-Engagement Committee** – which will meet quarterly.

The User-Engagement Committee will be chaired by Mr. Nisbet, and consists of Dr. Watton, Prof. Chaplain, Prof. McDougall, Prof. Luo, Prof. Olson, Prof. Berry, and SofTMech-Secretary. Project partners may attend meetings at the invitation of the Committee.

The User-Engagement Committee is responsible for will develop new external links and collaborations through a membership scheme; organize major workshops, sandpits, dialogue with clinicians/industries, and report to the Strategic Board.

2.3.1 The standard terms of reference of the User-Engagement Committee are:

1. to set agenda for user engagement events,
2. to devise and maintain the new membership scheme,
3. to identify potential new users through purposely designed activities,
4. to organize SoftMech workshops, sandpits, and Dialogues with clinicians

2.4 The **Outreach Committee** – which will meet quarterly.

The Outreach Committee will be chaired by Dr. Watton, and consists of Prof. Berry, Dr. Simitev, Dr. Stewart, Dr. Papamarkou, Dr. Gao, Prof. Hill, Mr. Nisbet and SofTMech-Secretary.

The Outreach Committee is responsible for the overall outreach and impact activities including maintaining/developing the SofTMech website, organizing the SofTMech e-news, school visits, events at Glasgow, Science Festival and museums, and reports to the Strategic Board.

2.4.1 The standard terms of reference of the Outreach Committee are:

1. to set agenda for, and to organize outreach events,
2. to setup and maintain the SofTMech website, and oversee SofTMech e-news
3. to manage clinical/Industrial Training days, engage with schools, and museums
4. to engage with the Insigneo on software development and develop open-source code sharing via VPH-share and Github
5. To engage with funding bodies and policy makers.
6. To organize/nominate potential TED talks.

2.5 The **Training Committee** – which will meet quarterly.

The Training Committee will be chaired by Prof. Husmeier, and consists of Prof. Ogden, Dr. Yin, Prof. Insall, Prof. Smith and SofTMech-Secretary. PG tutors may attend meetings at the invitation of the Committee.

The Training Committee is responsible for organizing RA/PhD training, and carry out other internal training events, and report to the Strategic Board.

2.5.1 The standard terms of reference of the Training Committee are:

1. to set agenda for, and to organize, training events,
2. to liaise with SMSTC and Master Level lecturers on training elements required for the Centre funded PhD students.
3. to liaise with the PG tutors.
4. To organize appropriate training events for SofTMech RAs, PhD students, and early career researchers.

2.6 The **Local Executive Committee** – which will meet fortnightly or as necessary.

The Local Executive Committee will be chaired by Prof. Hill, and consists of Profs. Ogden, Luo, Husmeier, Ms Mclsaac will be invited when necessary.

The Local Executive Committee is responsible for running SofTMech on a daily basis, and reporting major issues to the Strategic Board.

2.6.1 The standard terms of reference of the Local Executive Committee are:

1. to support the User-Engagement, Outreach and Training committees,
2. to liaise with the partner institutions on event co-organization,
3. to make arrangement for visiting PhD students, PDRAs and academic members at the Centre,
4. to liaise with the School of Mathematics and Statistics, the College, and the University.
5. to act as the first academic contact for the Centre.

### 3. The structure of the Work Packages (WP)

3.1 WP teams are responsible for undertaking the research projects detailed in the proposal; the WP leaders organize regularly meetings of the WP teams, and report the progress and issues to the Strategy Board. The WP team members and PhD supervisors are listed below, subject to necessary adjustment by the Strategy Board. The PhD and PDRA supervisors also follow the standard institutional regulations.

#### The WP leaders and memberships are:

##### **WP1 – CONSTITUTIVE MODELLING FOR A WHOLE CELL**

**Ogden** (leader), Yin, Olson, Chaplain, Insall, Husmeier, Luo, PDRA1, PhD1

PDRA1 – supervisors: Ogden (1st), Chaplain, Yin

PhD1 – SUPERVISORS: Yin (1st), Olson, Ogden

##### **WP2 – MODELLING CELL-CELL, CELL-ECM, CELL-FIBRE INTERACTIONS**

**Chaplain** (leader), McDougall, Ogden, Yin, Olson, Insall, Husmeier, Luo, PDRA2, PhD2, PhD3

PDRA2 – supervisors: Chaplain (1st), McDougall, Insall

PhD2 (St. Andrew) – supervisors: Chaplain (1st), McDougall

PhD3 (Sheffield) – supervisors: Watton (1st), Ogden, Yin

##### **WP3 – UPSCALING TECHNIQUES FROM CELL TO TISSUE, RESIDUAL STRESS, GROWTH AND REMODELLING**

**Hill** (leader), Ogden, Chaplain, Stewart, Watton, Yin, Olson, Luo, Husmeier, PDRA3, PhD4

PDRA3 – supervisors: Ogden (1<sup>st</sup>), Luo, Watton

PhD4 – supervisors: Stewart (1<sup>st</sup>), Hill

##### **WP4 – PARAMETER INFERENCE AND MODEL SELECTION**

**Husmeier** (leader), Papamarkou, Ogden, Yin, Luo, Berry, Chaplain, Insall, Smith, PDRA4, PhD5

PDRA4 – supervisors: Husmeier (1<sup>st</sup>), Papamarkou, Chaplain

PhD5 – supervisors: Husmeier (1<sup>st</sup>), Berry, Insall

##### **WP5 – MULTISCALE HEART MODELLING**

**Luo** (leader), Ogden, McDougall, Hill, Smith, Berry, Watton, Simitev, Chaplain, Husmeier, PDRA-Gao (80%), PhD6, PhD7

PDRA-Gao supervisors: Luo (1st), Ogden, McDougall

PhD6 – supervisors: Smith (1<sup>st</sup>), Simitev, Berry

PhD7 – supervisors: Hill (1st), Luo, Chaplain

##### **WP6 – MULTISCALE SOLID TUMOUR MODELLING**

**McDougall** (leader), Chaplain, Ogden, Luo, Husmeier, Yin, Olson, PDRA6, PDRA-Gao (20%), PhD8

PDRA6 (St Andrew) – supervisors: Chaplain (1<sup>st</sup>), McDougall

PhD8 (HW) – supervisors: McDougall (1<sup>st</sup>), Chaplain

##### **WP7 – USER ENGAGEMENT AND PATHWAY TO IMPACT**

**WATTON, NISBET** (LEADERS), ALL OTHER CENTRE MEMBERS.

## **5. The Centre Management Support**

### Centre Admin support:

- Overall responsibility (Mcisaac)
- Support the Strategy Board and Committees' meetings (minutes and actions) (SoftMech-Secretary)
- Liaison with project partners and partner institutes (SoftMech-Secretary)
- Liaison with advisory group (SoftMech-Secretary)
- Finance management (Mcisaac)
- Recruitment support (SoftMech-Secretary/Mcisaac)
- Visiting and exchange arrangement (SoftMech-Secretary)

### IT support:

- Overall responsibility (Ritchie)
- Liaison with University web team (IT support team)
- School T4 support and website maintenance (IT support team)
- owncloud server for all to share data (IT support team)
- HPC support, two new Euclids, use of ARCHER (IT support team)
- VPH\_share support and liaison with Insigneo (IT support team)
- Data management and liaison with University DMP (IT support team)
- SoftMech membership scheme (IT support team)

### Events and Training support:

- 4 SoftMech workshops (SoftMech-Secretary)
- 8 sandpits (SoftMech-Secretary)
- 8 training sessions (SoftMech-Secretary)
- Non-academic user engagement (Nisbet)

### User-engagement support:

- KE/User-engagement policies (Nisbet),
- Outreach policies and activities (Nisbet)

### Outreach support

- Centre bi-monthly e-news (linked to sharepoint, or owncloud)
- SoftMech membership scheme (SoftMech-Secretary)
- College and University publicity (David Nisbet)
- Feasibility study (SoftMech-Secretary)
- School visits (SoftMech-Secretary)

### Centre progress & output support

- Annual report (inc. year 2 major review) (Nisbet)
- Liaison with EPSRC (Nisbet)
- ResearchFish output and Liaison with enlighten (Nisbet)
- Forge new collaborations (David Nisbet)
- New Grant application support (David Nisbet)
- Liaison with College Research & Business development team (Nisbet)
- Impact activities (Nisbet)

### Recruitment support:

- Liaison with HRs of partner institutions (Mcisaac/SoftMech-Secretary)
- Advertisements (Mcisaac/SoftMech-Secretary)

### **Key support Mechanisms from partner institutions:**

#### Heriot-Watt University

- School of Energy, Geoscience, Infrastructure and Society support team led by Philippa Burrell, Director of Administration
- Support team specific to the Institute of Petroleum Engineering. Primary contact Dr Caroline Brown, Deputy Director of Administration.
- Petroleum Engineering Business development team led by Dr Gordon Winton
- Research and Enterprise Services University team led by Dr Tony Weir

#### Sheffield University

- Ms Lucy Moffat: Research support on grant applications and bid preparation.
- Dr Keith McCormack (INSIGNEO Institute) first point of contact for advice on Partnership development and engagement with Clinicians.
- INSIGNEO is a collaborative initiative between University of Sheffield; Sheffield Teaching Hospital NHS foundation Trust which involves 139 academics and clinicians collaborating to develop computer simulations of the human body and its disease processes that can be used directly in clinical practice to improve diagnosis and treatment.

#### St Andrews University

- Pre-award first point of contact is Dr Joanna Pulver - Business Development Manager.
- Post Awards Finance Advice and Support teams has a dedicated sub team supporting School of Mathematics & Statistics