

## **Research Pooling Review – Edinburgh Napier University Response**

### **Section 1: Initial research pooling initiative**

#### **Q1a. What has been the impact of the initial research pooling initiative?**

Research Pools act as inclusive bodies that have significantly improved collaborative research amongst all the Scottish HEIs. This has been particularly of benefit to the less research intensive HEIs where there are groups conducting world-leading research. Participation had opened up new collaborative opportunities and strengthened networks across Scotland. ENU staff currently have a number of roles at a high-level within the research pools, some examples include:

#### **SULSA**

Edinburgh Napier has been an Associate Member of SULSA since April 2018. While we have limited time to engage with some of the existing SULSA activities, we have had a number of positive engagements with SULSA.

- Two SAS postdoctoral researchers (Dr Katarzyna Siemienowicz and Dr Maciej Kaczmarek) attended skills development workshops run by SULSA in June 2018 in Research Leadership and Research Project Management (<https://www.sulsa.ac.uk/skills-training/>).
- Edinburgh Napier was part of a joint submission with SULSA and other institutions and pools for a proposal "Leveraging Scotland's World Leading Research in Optical Imaging for Medicine, Healthcare and Biology" which went forward to the SFC funding call "Leverage of UK funds from UK Industrial Strategy and similar for Scottish HEI/industry collaboration" on behalf of SULSA, SUPA (Scottish Universities Physics Alliance) and SINAPSE (Scottish Imaging Network: A Platform for Scientific Excellence) in April 2018. This project (£110k) was awarded and is expected to bring increased interdisciplinary links and collaborations in the area together with targeted workshops over the next academic year, to which Edinburgh Napier will contribute.
- Staff from Edinburgh Napier attended and spoke at a SULSA Antimicrobial Resistance Workshop in Glasgow. This led to a follow up funding application (£8k) to SULSA although this was not awarded. Other seed funding calls are expected throughout the year.
- Dr Peter Barlow will be part of judging panel for their Early Career Research Prize to be launched in November 2018 and awarded in March 2019. Edinburgh Napier researchers were also afforded the opportunity to apply for this prize.
- Our strategic Scientific Theme advisors have attended a number of meetings hosted by SULSA:
  - Development and Regulation (Prof Mick Rae)
  - Understanding and Treating Disease (Dr Craig Stevens)
  - Ecosystems (Dr Sonja Rueckert)
  - Technology and Analysis (Prof. Ian Singleton).

#### **SICSA**

SICSA acts as an inclusive body that has significantly improved collaborative research in Computer Science amongst all the Scottish HEIs; this has been particularly of benefit to the less research intensive HEIs where there are groups conducting world-leading research. Participation in SICSA has opened up new collaborative opportunities and strengthened networks across Scotland. ENU staff currently have a number of roles at a high-level within SICSA:

- Prof. Emma Hart - Theme Leader – Artificial Intelligence;
- Alistair Lawson; Director of Knowledge Exchange and Impact;
- Prof. Bill Buchanan. Cyber Nexus.

SICSA run events have led to tangible benefits:

- Demofest: (2017) resulted in a recent KTP funded project (£250K, Hart); (2018) – led to industrial contact currently in discussion with SoC re potential project (with N Urquhart);
- PhD Conference: provides excellent training for PhD students in conference organisation, several ENU students have been part of the organising committee over previous years;
- SICSA has committed to financial support and support-in-kind for large collaborative project bids, e.g. to InclusionMatters bid led by Edinburgh Napier to EPSRC 2018;
- Provided funding support for PhD students to extend prestigious international external events that otherwise might not have been possible (e.g. Cedric Petter, Complex Systems Summer School, Santa Fe, June 2018);
- Provided training workshops to facilitate applications to funding bodies, e.g. 2018 EPSRC CDT calls;
- Enabled prestigious international speakers to visit ENU and give talks which benefit staff and students, (e.g. Prof. Darrell Whitley, University of Colorado)

SICSA is seen as a recognised body for external companies etc. to go to for advice/expertise: e.g. Prof. Hart invited to speak recently (2018) at the Scotland Software Engineering Leaders forum; the AI Theme has also responded to a number of enquiries from Scottish companies/journalists seeking expertise

Alistair Lawson, Associate Professor Edinburgh Napier University is Knowledge Exchange Director (and Deputy overall Director) of SICSA, and has had the opportunity of meeting and influencing:

- Heads of Innovation Centres (The Data Lab, Censis, DHI);
- Heads of Organisations including Scotland IS, Innovate UK, Informatics Ventures Interface, Scottish Enterprise

Alistair also represented SICSA at joint POOLs annual Research Advisory Forum meetings organised by Energy Technology Partnership, and attended by representatives from all the other POOLs, with a view to stimulating cross-pool activity

He also attended meetings with Government organisations such as Scottish Science Advisory Council (SSAC), and Industrial Strategy Challenge Fund, which gives the School of Computing a unique opportunity to hear about opportunities in a timely manner, and to influence the above organisations.

**MASTS**

MASTS has had multiple far reaching impacts through meeting its stated objectives to enable Scotland to compete effectively for funding research staff and PhD students; and to provide a more attractive research environment. Masts:

- Has significantly increased the visibility of Marine Science and Conservation in Scotland, the UK and internationally, within and beyond academia, including that of Edinburgh Napier University (publications, grant success, media outreach).
- Represents Scottish Marine Science at a national level on the UK Marine Science Co-ordination Committee, the Marine Management Organization and National Oceanography Centre Association.
- Represents Scottish marine science internationally as a member of the European Marine Board, and currently chairs the European Marine Biological Resources Centre.
- Was instrumental in recruiting over 40 academics in the field of Marine Biology/Ecology to Scotland, including high calibre international staff, and over 80 PhD students.
- Academic members have generated > £45m pro rata research income between 2009 and 2017 (from UK Research Councils, EU, Industry, Charities).
- Academic members, including PhD students, have received ~ 200k of small grants and research theme grants through MASTS, often involving researchers from multiple MASTS institutions. These grants have facilitated subsequent external grant income.
- Has recruited/funded over 40 Visiting Fellows and Visiting Early Career Researchers to Scottish Universities.

MASTS has also very positively influenced collaborations between its academic members, and between the latter and Scottish Government, Industry and other stakeholders:

- Through joint projects and PhD students of its members, MASTS has seeded many long-term collaborations and partnerships.
- Collaborations with e.g. SNH, SEPA, JNCC, NTS, St Abbs Marine Station (many now are MASTS members) has assured impactful, societally relevant research. Information exchange between academia, industry, charities, government facilitated through Annual Science Meeting.
- Through the recent NERC grant success for a DTP - The Scottish Universities Partnership for Environmental Research (£5mill over 5 yrs), a proposal prepared by MASTS members (Universities Aberdeen, Edinburgh Napier, Heriot-Watt, Highland and Islands, St Andrews, Stirling, Strathclyde, West of Scotland, partnered by over 40 non-HEI partners.
- Through playing a key role in setting up FIS (Fisheries Innovation Scotland) on behalf of Scottish Government and the fishing industry.

MASTS has had a very positive influence on Scottish HEI:

- Edinburgh Napier University (ENU), for example, has greatly benefitted from MASTS who facilitated contact to the private St Abbs Marine Station [www.marinstation.co.uk](http://www.marinstation.co.uk). Napier now is (with Heriot-Watt University) the formal HEI partner of the Marine Station, and has part-time seconded one staff member as Co-Director of Research. This partnership between academia and the private sector is hugely beneficial to the University, increasing student recruitment and satisfaction.
- ENU, through MASTS is now part of a competitive NERC Doctoral Training Partnership (i.e. SUPER).

- ENU has secured 4 competitive MASTS matched funded PhD studentships (as primary institution), plus three as co-supervisor.
- A sense of community has arisen through MASTS for Scottish Marine Science.

#### **Q1b. What lessons can be learnt from the research pooling initiative?**

- Working together is far more beneficial and impactful than not doing so (or even working against each other).
- Building a collaborative environment based on mutual trust takes time (and money).
- Transparency and having a say is key to success.
- The graduate school of SICSA has been particularly successful in offering opportunities for wider collaboration for graduate students.
- 'Demofest' within SICSA is an event that provides an opportunity to show off our research to industry. This is a model which could be replicated across other Research Pools.
- In our view, collaborations work best when opportunities for bottom up collaborations are encouraged such as specific research workshops.

### **Section 2: Pooling now and in the future**

#### **Q2a. In the current research landscape, what is the perception of, and role for, the pools?**

We believe that membership of Research Pools represent good value for money and allows our institution to have a nationally visible presence and role in contributing to research and research strategy across Scotland and more widely:

- Horizon-scanning for opportunities.
- Increasing grant success through merging strengths (collaborative proposals).
- Performing societally impactful research, not only in the Scottish/UK context, but also internationally (collaborations with international partners, knowledge exchange, knowledge transfer).
- Graduate training and Early Career support.

#### **Q2b. Should research pools have a continuing role in the Scottish research base?**

A definite Yes, for the reason/evidence presented above; they will continue to provide good value for money with real tangible benefits.

These benefits include leveraging of additional funds. For example, according to their highlights document, SULSA has leveraged over £400M for Scottish Life Sciences, and on average Scottish bioscience research income is proportionately greater than expected (20% research income of UK versus 8.3% of population).

In the case of MASTS, - Marine systems are becoming ever more important as evidenced by the forthcoming United Nations Decade of Ocean Science Development (2021-2030 <https://en.unesco.org/ocean-decade>), therefore the role of MASTS will become ever more important (and funding should not cease).

### **Section 3: Anything else**

The SFC could consider funding to support cross-university PhD provision, which would strengthen the pools and encourage collaborative research.

There should be a mechanism introduced which would allow pools to apply (and encouraged to apply) for research funding. This would foster collaboration and cross university research.

More funded networking events among the different pools to encourage multidisciplinary working.