



**Sustainable Laboratories Steering Group (SLSG)
“Supporting World Class Laboratories”
Tuesday 27 January 2015, 9.30am
Balcony Room, Old Moray House**

AGENDA

- | | | |
|----------|---|---------------|
| 1 | Welcome and Introductions | Verbal |
| 2 | Membership and Remit | A |
| | a. Review remit of the Sustainable Laboratories Steering Group and any required updates / amendments. | |
| | b. Review membership. | |
| 3 | Review of Lessons Learned from Previous Sustainable Labs Work | Verbal |
| | a. Overview of previous work in SRS Department (achievements and challenges) - short presentation, including what is planned in 2014/15. | |
| | b. Sharing updates from the Group on other activities that may be happening around the University, including: | |
| | <ul style="list-style-type: none">• Audits / lab awards• Helium recycling• Cold storage study• Refurbishment of fume cupboards• Microscopes• Chillers. | |
| | c. Discussion, Q & A. | |
| 4 | Priorities for 2015 and Beyond | Verbal |
| | a. Input from attendees towards drafting an action plan for 2015. | |
| | b. Priorities on outcomes and outputs for 2015 to 2018 – immediate priorities and a 3 year roadmap. | |
| 5 | Funding Opportunities and External Collaboration | B |
| | a. Update on SFC funding. | |
| | b. Funding opportunities / partner collaboration. | |
| 6 | Agree Dates of Meetings in 2015 | Verbal |
| 7 | Summary of Actions Points | Verbal |
| 8 | Any Other Business | Verbal |

MEMBERSHIP	
Heather Anderson	Senior Technical Officer, CMVM
Andrew Arnott	Programme Facilitator Labs
Graham Bell	Estates Depute Director
Jim Brown	Zone Manager, KB
Michelle Brown	Head of SRS Programmes
Ronald Brown	Deputy Technical Services Manager, School of Chemistry
Rab Calder	Zone Manager, CMVM
Martin Crawford	Controls Manager
Valerie Gordon	Technical Officer, Institute for Education, Teaching & Leadership
Dave Gorman	Director of Social Responsibility & Sustainability
David Gray	Head of the School of Biological Sciences
Davy Gray	EUSA Environmental Coordinator
David Jack	Energy Manager
Andy Kordiak	Equipment Procurement Manager, MVM
Sandra Lawrie	Technical Services & Estates Manager, School of Biological Sciences
Matthew Lawson	Programme Manager
Chris Litwiniuk	Engagement Facilitator
Stewart McKay	Technical Services Manager, IGMM
Brian McTier	Easter Bush Campus Facilities and Services Manager
Lindsay Murray	Health and Safety Manager, CMVM
Janet Philp	School Administrator, School of Biomedical Sciences
Fleur Ruckley	Waste & Environment Manager
Candice Schmid	Health & Safety Adviser
Laura Skinner	College Procurement Manager, Science & Engineering
Anna Stamp	Estate Development Manager, CMVM
David Somervell	Head of SRS Futures
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Sustainable Labs Steering Group Proposal to SOAG

Description of paper

This paper sets out a proposal approved by the Sustainability Operations Advisory Group (SOAG) on 17 September 2014 to establish a Sustainable Laboratories Steering Group (SLSG) at the University of Edinburgh to provide expert guidance and direct the expanding remit of work associated with sustainable laboratories.

By working with colleagues from both academic schools and support groups, there is considerable scope to share knowledge and good practices across campus to support world-class research, contain costs and reduce the environmental impact of the growing research activities at Edinburgh.

Action requested

SLSG is invited to comment on the proposals made, highlighting other relevant strategic or operational issues to consider, and agree the proposed remit and membership, subject to any amendments raised.

Recommendation

Recognising both a need and opportunity to develop a more strategic and holistic approach to embedding SRS within Labs at the University of Edinburgh, the Department for SRS is recommending a Steering Group to provide expert guidance and direct the expanding remit of work associated with sustainable laboratories. It would ensure that work on sustainable laboratories is continued through a coordinated approach.

Background and context

The Department for Social Responsibility and Sustainability (SRS) appointed Martin Farley in 2013, with support from the UK-wide S-Lab project, as Programme Facilitator – Laboratories, to deliver an Environmental Assessment Framework programme for laboratories and provide support to technical and research staff for promoting and implementing efficient practices within University laboratories.

Achievements this past year include developing policies and materials for induction and exit procedures; securing funding for improved efficient LED systems for microscopes; increasing the number of laboratories taking part in the Sustainability Awards; identifying opportunities for investment to improve energy efficiency and strengthening linkages with national networks such as HEaTED and S-Lab.

Further opportunities have been identified to reduce costs and improve the environmental impact of laboratories through:

- helium recycling,
- set up of a cold storage study,

- audits of fume cupboards,
- reuse of lab equipment and utilisation of space
- normalising lab inductions and exit-policies.

The original scope of this work has expanded considerably and progress is reliant on successful partnerships with operational, technical, academic and senior management staff. The priorities and agenda of this work are determined mostly by the Department for SRS, and responding to ad-hoc requests by technical and senior management.

Discussion

The main purpose of the Steering Group would be to provide expert guidance and direct the expanding remit of work associated with sustainable laboratories. It would ensure that work on sustainable laboratories is continued through a coordinated approach. The proposed Steering Group would:

- Provide expert guidance to the Programme Facilitator – Laboratories
- Contribute towards setting future objectives and monitoring progress
- Identify funding opportunities to support sustainable laboratories work
- Achieve buy in from academic schools, support groups and research centres
- Link sustainable laboratories agenda with University-wide strategic plans and objectives.

The Steering Group would aim to bring together colleagues from across university academic schools and support groups with expertise in laboratory practices and systems. A convenor and vice-convenor would be appointed to set the agenda of meetings, supported by the Programme Facilitator – Laboratories. Membership would be between 6-8 colleagues (although could vary depending on agenda for particular meeting and availability).

In addition, the Steering Group could serve the purpose of providing members to the core audit group for laboratories, who would conduct the lab audits, review results, and recommend improvements. The Group membership could be expanded for the biannual lab audits only, which participating staff have indicated they are intent on doing. When audits are not being run, SLSG's membership would return to the 6-8 membership. It would be ideal to have co-leadership of the proposed group with a trusted partner from within CSE or MVM.

Below is a long list of colleagues who do have an interest in sustainable laboratories, and could be considered for membership of a core working group (following further guidance from SEAG Ops)

David Jack, Energy Manager	MVM Representative
Martin Crawford, Control Systems Mgr.	Science and Engineering Representative
Rab Calder, MVM Premises Manager	Brian McTeir, Campus Facilities Manager EB
Andy Kordiak, Equipment Purchasing Manager	Janet Philp, School Administrator
Jim Brown, Premises Manager (KB)	Lindsay Murray, MVM Health and Safety Manager
Health and Safety Office	Bioquarter Representative
Heated Network	Student Representative
Estates Development	Sandra Lawrie, Technical Services Manager
Representatives from main lab sites (LF, KB, etc.)	

Recommendations would be invited from key stakeholders from across the University. A convenor would need to be selected from senior management, ideally from College of Science and Engineering or MVM. Representatives from the Department for Social Responsibility and Sustainability would also attend as required.

Resource implications

It is proposed that the Steering Group would meet quarterly throughout the year, with the first meeting taking place in either October or November 2014.

The first meeting will align with the planning stage for the baseline audits of laboratories, providing an opportunity for Steering Group members to highlight aspects of laboratory practice, systems and behaviours that the audits should focus on. This would help familiarise members with the auditing process for the Sustainability Awards.

The steering group would initially be resourced by the Department for SRS, with future costs shared out between key stakeholders. Support would include covering catering costs, room booking, developing web pages and administrative support (sending agendas / papers and minute taking).

Risk Management

Full analysis of risks has not been undertaken. In such a rapidly developing field there is a risk that laboratory research staff work in isolation and fail to benefit from knowledge share and promotion of best practice, which such a network will facilitate. The risk is that the University fails to capitalise of the world-class expertise in some areas – which could be effectively shared. A potential risk includes lack of buy in from key stakeholders which this paper is attempting to mitigate.

Equality and Diversity

Due consideration would need to be given for equality and diversity within the group and the objectives and activities defined in line with University requirements.

Next steps / implications

- Seek input from the Advisory Group and other stakeholders
- Identify convenor and members
- Finalise remit for the group
- Arrange and facilitate first meeting

Consultation

This paper was developed based on lessons learned in the last year and through consultation with various stakeholders. The purpose of bringing this to SEAG Ops is to widen the consultation and seek feedback.

Further information

Author

Martin Farley
Programme Facilitator, Labs
SRS Department

Presenter

Michelle Brown
Head of SRS Programmes,
SRS Department

Freedom of Information Open paper

Appendix 1 – Updated Membership, January 2015

MEMBERSHIP	
Heather Anderson	Senior Technical Officer, CMVM
Andrew Arnott	Programme Facilitator Labs
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Funding Opportunities and External Collaboration

Description of paper

This paper provides background information on the S-Labs project.

Action requested

SLSG is invited to *note* and *comment* on the paper.

Discussion



**Proposed Laboratory Improvement Programme
for Scotland's Universities & Colleges 2015-2016**

Executive Summary

This proposal is for support for an 18-month multi-institutional programme to enhance efficiency and effectiveness of laboratories in Scottish Universities and Colleges, in support of the objectives of Universities Scotland's Working Smarter Efficiencies Taskforce and related initiatives.

It reflects two conflicting realities. On the one hand, there is a growing awareness that modernisation agendas are relevant to, and feasible within, laboratories and that current pressures do require more integrated and strategic actions by institutions to achieve them.

At the same time, the complexity and cross-functional nature of laboratory improvement action, and the autonomous nature of Universities and their faculties and departments, means that change is more likely when there is great pressure to drive radical improvement and when clear models for enacting such changes are readily available and shared among peers.

Such sharing of good practice has not been sufficient to date but the situation could change. This small scale bid seeks to quickly build capacity for fundamental change in three areas:

1. Creating momentum for laboratory improvement in areas that have been identified in a pilot project: e.g. sample storage, space efficiency, technical skills
2. Making the case for, and helping institutions to prepare and implement, strategic approaches to laboratory improvement

3. Develop networks and partnerships – both within Scotland and with the rest of the UK and other countries – that can support these objectives.

The project will create tangible improvements in laboratory operations, and raise strategic awareness of the need for, and feasibility of, step change in how laboratories are designed and operated. By strengthening technical support, and encouraging more efficient use of technical resources and space, the project will enhance the quality of Scottish STEM research and teaching.

The proposal will be project managed by the University of Edinburgh, in conjunction with S-Lab (a UK-wide multi-stakeholder initiative for HE laboratory improvement that has been mainly funded by HEFCE, but also SFC). It will have four designated work streams:

1. *Improvement of laboratory operations*

This will focus on practical improvement measures in Scottish universities, with emphasis on achieving two or more of financial / research / teaching / performance benefits. Led by the University of Edinburgh it will build on initiatives identified and partly implemented by postgraduate interns and employees over the last two years. Their brief with academics, estates and technical staff was to develop operational improvement in areas such as cold storage, equipment purchase and operation and fume cupboard use. Outputs from this work stream will be original and significant in a world context, and enhance the global reputation of Scottish science.

2. *Space efficiency and management issues with regard to science facilities*

Led by the University of Aberdeen, this will focus on space issues in teaching laboratories but will also be helpful to research laboratories. There is considerable anecdotal evidence that laboratory space frequently has low utilisation rates, is often not well suited to modern STEM teaching methods, and is inflexible in terms of class sizes. A number of recent developments have responded to this by creating larger and more flexible spaces which allow larger and better supported class sizes and / or multiple classes to be taught within the same area.

3. *Addressing the capacity of laboratory staff, especially those in technical support roles, to support improvement, through enhanced career pathways and professional development*

This work stream will:

- Develop awareness amongst technical staff, their managers, and HR professionals of the importance of, and opportunities for, professional development
- Assist Scottish universities in reviewing technical skills and career pathways, implementing improvement actions e.g. training, assessment structures / protocols, succession planning
- Increase the numbers of Scottish laboratory staff achieving Registered Scientist and Registered Technician status
- Strengthen laboratory technical networks, both within and between Scottish universities.

4. *Additional Activities: Estates and Facilities / ICT / Procurement / Shared Services*

As this project is breaking new ground, it requires a level of interaction between key stakeholders that will be achieved once it begins. This will highlight additional opportunities. Hence, a small proportion of the total budget is being reserved for aspects to be defined within six months of start. This would be subject to a formal approval basis with SFC, and would of course be based on the general project approach of measurable outcomes and a 50% resource match from institutions.

In addition to possible extensions of the laboratory improvement and career / professional development streams to other institutions, it would aim to include professionals working outside laboratories but nonetheless impacting their operations – e.g. Facilities Managers, Procurement, IT – as their involvement is vital to an integrated approach to laboratory improvement.

To develop knowledge exchange and networking, and to help disseminate project results and other good practice actions in Scotland to an international audience, the project will also work with S-Lab to hold a conference in Scotland during the lifetime of the project.

Further work streams on laboratory design, procurement and shared services are under discussion. The project will also engage with relevant professionals working outside laboratories but nonetheless impacting their operations – e.g. facilities managers, procurement, IT – as they are vital to an integrated approach to laboratory improvement.

Peter James, Director of S-Lab and Dave Gorman, Director of SRS, University of Edinburgh
18 December 2014

Objectives and Approach

The project would have the following principal objectives:

- Raise awareness of the potential for improved laboratory efficiency and effectiveness, and the relevance of Smarter Working and Modernisation agendas
- Stimulate and support concrete improvement actions in partner institutions
- Strengthen networks of practitioners, managers, and other stakeholders in laboratory improvement to discuss common experiences and issues and to share best practice
- Develop capacity within both estates and technical staff to support excellence in the design of new and refurbished laboratories, and in their operation and management
- Assist sector bodies in responding to the challenges of laboratory improvement.

Projected Benefits

The project will provide both tangible and intangible benefits including:

- Improved STEM space efficiency and utilisation
- More efficient use of equipment and resource in Scottish laboratories
- Improved technical capacity to support Scottish science and technology
- Reduced carbon emissions.

The University of Liverpool's Central Teaching Lab reports a doubling of space utilisation compared to facilities it replaced. As laboratory space costs up to £400/sq.m annually this is an opportunity to save millions of pounds of operating costs if student numbers remain constant; or to greatly reduce space costs per student. Student feedback on developments such as those at Liverpool and St Andrews has been extremely positive.

The same points also apply to Research Laboratories, although there may be less scope to increase space utilisation as rapidly as more has already been done. For example, the University of Warwick report space and operational efficiency of the new £20 million Materials and Analytical Science Building was achieved in large measure through following the Labs 21 / S-Lab design principles that staff and architects absorbed from attending S-Lab workshops over the last 5 years.

The UUK Diamond report, the Wakeham Review, the practical work of S-Lab have identified scope for improved laboratory effectiveness through measures such as shared services, better use of equipment, and reduced use of energy, water, chemicals, materials and other resources.

Guidance, assessment schemes and other actions now address these issues and this project will help increase their take-up, and refine them further. S-Lab estimates that UK HE lab energy costs are around £200 million a year and detailed audits identify cost-effective opportunities to cut this.

Indeed this bid would be paid back by a single Chemistry Laboratory reducing its consumables and utilities consumption, and increasing its equipment utilisation, by 10% over a 2-3 year period.

A number of UK and Scottish institutions have identified the importance of enhanced technical and related skills in maintaining and strengthening the scientific and technical base. Experience shows that motivated and skilled technical staff are a vital element in achieving innovative laboratory design, and making it work in practice, and in driving actions such as equipment sharing, chemical management and energy efficiency in laboratories.

In addition to practical enhancements to operational research efficiencies the project will also contribute significantly to achieving the Scottish FHE carbon targets, e.g. through the energy savings it will create. Such invest to save opportunities identified with finance staff will develop the capacity to make good business cases for action by technical and estates staff.

Risk Management

The programme is an inherently low risk extension of existing activities. A more developed assessment will be undertaken to identify appropriate strategies to minimise risk and ensure success factors are properly identified and managed.

Equality and Diversity

Due consideration would need to be given for equality and diversity within the group and the objectives and activities defined in line with University requirements.

Further information

Author and Presenter David Somervell, Head of SRS Futures
20 January 2015

Freedom of Information

This is an open paper.