

UNIVERSITY OF EDINBURGH

MINUTE OF A MEETING of the Sustainable IT Group held in the Cuillin Room, Charles Stewart House on Wednesday 7 September 2016.

- Present:** Dave Gorman (in chair), Director of SRS
 Rab Calder, Energy & Utilities Manager
 Fiona Carmichael, Computing Support Officer, Literatures, Languages & Cultures
 Kate Fitzpatrick, Waste & Recycling Manager
 Jenna Kelly, EUSA VP Services
 Bryan MacGregor, Director of User Services Division
 Caro Overy, Engagement Manager
 George Reid, Procurement Manager
 Ruaridh Stern-Mackintosh, EUSA IT & Systems Manager
 Tony Weir, Director IT Infrastructure
- In attendance:** Bradley Richards, SRS Project Intern, for item 3
 Chris Litwiniuk, SRS Projects Coordinator, for item 6
 Joseph Farthing, SRS Communication Manager, for item 8
- Apologies:** Michelle Brown, Head of SRS Programmes
 Paul Clark, Head of IT for CMVM
 Grant Ferguson, Head of Estates Operations
 Dave Gorman, Director of Social Responsibility and Sustainability
 Simon Marsden, Director IS Applications Division
 Fraser Muir, CAHSS Chief Information Officer
 Euan Murray, Development Team Manager, Learning Spaces Technology
 Bruce Nelson, College Registrar, College of Science & Engineering

1 Minute

A

The minute of the meeting held on 19 May 2016 was approved as a correct record.

SITG welcomed new members Kate Fitzpatrick, Waste & Recycling Manager, and Ruaridh Stern-Mackintosh, EUSA IT & Systems Manager.

2 Energy Engagement in IS

The SRS Communication Manager presented to the Group on the energy communications campaign and ways to increase the number of energy coordinators in IS. UoE emitted more than many of its Russell Group peers, and was currently due to miss targets outlined in the Climate Change (Scotland) Act 2009. The University had responded to this with a variety of programmes to reduce carbon emissions and energy costs (approaching £20M p.a. - equivalent to UK central government research funding, 500 academic staff salaries, or slightly less than total income from postgraduate fees). Reducing energy waste would free up more resource for everything else the institution did. The initial goal was to cut spend by 10% over two years, through an energy saving communications campaign, establishment of a Sustainable Campus Fund, and the Switch & Save campaign (predominantly targeted at reducing staff energy consumption).

There were currently 115 Energy Coordinators across the University, 3 of which were based in ISG. The energy impact of ISG was currently the third highest, behind labs and supercomputer infrastructure. Computing labs were increasingly taking up opportunities to make savings. However, there was substantially less engagement with staff in IS - overall and per head - compared with other non-academic units. The SRS Comms team welcomed feedback on how to modify the approach to better reach these staff. There was a risk of duplication if projects already running in ISG were not being shared, as well

as missed opportunities to collaborate on energy savings. ISG also offered valuable untapped datasets around swipe cards and PC use.

Staff in ISG were broadly aware and supportive of these activities. The key would be finding the correct approach for engagement. The profile of Energy Coordinators within IS needed to be raised. Low numbers did not reflect a lack of engagement with the issues or awareness of the need to reduce power consumption, but rather a lack of visibility of engagement opportunities. It had been recommended that energy engagement be included among the topics covered during staff inductions, but this had not been centralised, and so the recommendation was not always taken up. A potential mechanism to reach non-ISG staff would be through the recently reinvigorated IT Forum. It was proposed that the engagement team come along to IT forum events to promote these opportunities, including the Chief Information Officer's regularly scheduled all staff meetings held at JCMB and George Square, which would give access to at least half of staff overall, as well as representatives from almost every team across all divisions. This would give the opportunity to highlight programmes and initiatives including the Sustainable Campus Fund and PC Reuse projects. School plenaries could be used to give Energy Coordinators a specific locus or building.

Action – BM to reflect further on how to include SRS in ISG events and get back to CO.

Action – BM to ask Abdul Majothi to get in touch with CO on IT in ISG, the Schools and support units.

Action – CO to send TW & BM an email request to nominate Energy Coordinators.

The Communications Manager thanked members for their feedback.

3 ICT in the Context of Reuse

C

The Engagement Manager presented the final output report of the PC Reuse Project, funded by Zero Waste Scotland, which ran from January to June 2016. A Project Intern was hired to develop the process. 174 PCs were reused within this period, as well as 257 other IT items, saving £63K and 39,382KgCO₂e, based on an investment of £25K.

Key recommendations included: securing continuation and expansion of the internal process following strong support for the pilot from CAHSS; adapting the existing policy to incorporate the process; and exploring the possibility of including other IT equipment.

The reuse process only included PCs that were less than 5 years old, eliminating immediate concerns about elongating use beyond the useful lifetime. Older machines were sent to CCL North or Remade in Edinburgh. Once received, machines were checked for faults, stress tests were carried out on 1 in 10 using Blancco, and they were then uploaded to Warpit, where there was a strong market for PCs. Overall, the project achieved what it set out to do, exceeding the set targets.

The Engagement Manager outlined three options to operationalise activity. SITG recommended securing funding for a dedicated PC reuse post at UE04 to provide a centralised service, which would be absorbed by Information Services. Additional costs to factor in would include the Blancco software and secure storage space. The projected annual saving was £120K in avoided spend, in addition to considerable savings in staff time. There was some discussion on the exact calculation of the savings- with a need to write off the savings on a new purchase over the life of the asset, lowering savings calculated compared to what was presented, but then factoring in staff time savings from not having to collect, fit out and install new equipment. Savings were based on one model of desktop, and there was natural progression to other IT infrastructure such as printers. While savings went outwith the University when machines were passed on to Remade, this gave a community engagement return.

Action – BM to reflect on how best to integrate the initiative into IS. Meantime SRS will explore potential to extend current intern contract to February for continuity.

Members discussed approaches to extending engagement within CMVM and Science & Engineering, which was more sporadic due to the lack of a single point of contact. Reuse would be included in the new contract with CCL North. The Group stressed the need for due diligence in identifying a full range of partners. Further work was needed on resale, looking into liability and legal status.

The pilot had demonstrated that serious issues around process, waste, energy and regulation could all be resolved, and members agreed on the need to preserve momentum and not lose what had been gained. The Engagement and Waste & Recycling Managers were working with the Sustainable Business Initiative in the Business School on PC reuse business models.

4 Draft Climate Strategy & ICT Contribution

D

The Convener presented the Climate Strategy agreed by CMG on 30 August 2016, which would remain in draft form until approved by Court. SITG discussed what the contribution from IT would look like for future targets, assumptions about growth, opportunities, and new technologies. A Renewables Group chaired by the Director of Finance would meet in the autumn. While the targets may not appear to be the strongest in the short to medium term, the strategy demonstrated that UoE was working to get the necessary mechanisms in place in terms of its energy management, building standards, and approach to IT, as well as its first ever commitment to long term carbon neutrality. Underlying this was much more significant action than in many other institutions.

5 IT Energy Footprint & Prioritised Projects for Energy Savings

E

The Director of ITI updated SITG on progress toward establishing baseline IT energy consumption. Members acknowledged the need to hold off on making significant interventions until this was fully understood. There had been a strong focus on reducing the energy usage of IT equipment in ISG over the last seven years (alongside the move to virtualisation). Work over the first 6 to 9 months had focused on refining measurements. Representing 60% of power consumption, the data centres would be monitored to make them as efficient as possible, offering the greatest benefit, recognising that national and international facilities were outwith UoE control.

The data centre at JCMB was designed for enterprise workloads; its PUE of 1.32 was based on actual monitoring. Appleton Tower, also for enterprise workloads, had a PUE of 1.4 – 1.5, based on best estimates. Additional monitoring would be put in place to confirm the actual PUE. The flow meter installation order had been issued. By November multiple temperature sensors would be installed in the data centres to refine cooling in-room. Plans in the medium term were to look at cold aisle containment, minimise bypass and circulation, reduce cooling and raise the chilled air temperature. The ACF, designed for research computing workloads, had a PUE of 1.2 – 1.3. The average PUE for a data centre was 1.7, and it was extremely difficult to get a figure below 1.15. PUE increased with the different facilities and redundancies in place. The focus would be on ACF for research computing, with the most growth expected in this area, and on reducing PUE in ISG data centres. There was a possibility of consolidating School and College infrastructure into the ISG data centres. IT Committee had been approached regarding running assessment of wider energy usage for IT across the University. Partial figures had been obtained, with data still outstanding. The first step in terms of improvements would be to develop a full University Data Centre strategy.

Desktops accounted for around 20% of consumption, with network around 15%. Only ISG managed infrastructure was included. Standby policies were being investigated on managed desktops and investigations were ongoing into different Select PC options. By

January 2017 Mac managed desktop services would deliver an auto-standby policy. Agents were in place on Windows managed desktops to collect real energy usage data. While some data centre projects should come forward in time to contribute to the 10% saving, gains would be marginal as so many efficiency measures had already been implemented. While consumption data was partial and there remained concerns about its accuracy, it played a valuable role in supporting outreach.

Significant savings were anticipated from cloud printing now that all Xerox models were set up to do this, enabling the CAHSS Chief Information Officer and Service Delivery Manager to get an overview of the current position.

The group congratulated the Director of ITI on progress made and agreed to assist with local data and insight where possible.

Action – FM to circulate a progress report on printing before the next meeting.

6 Sustainable Travel & Videoconferencing

F

SITG welcomed SRS Projects Coordinator Chris Litwiniuk, in attendance for this item. CMG had requested updated sustainable travel advice, particularly around aviation, which was presented to the Group in May. This would not lead to a centrally managed solution, but act as information on alternatives to consider, with cost, carbon and time implications. With the rising cost of flights, a 10% saving would be very worthwhile.

CMG had agreed while this was worth pursuing, not to launch a programme until reassurance could be made that the technology to support alternative solutions was in place and was reliable. An exercise would be carried out across the University to see what the videoconferencing needs were in each area, map this against infrastructure in place, and assess the cost of additional equipment and support. Members were asked to support this exercise, feed in their ideas, and work with Chris to implement it.

Members noted a general trend for staff to prefer either travelling to meetings in person or remote access and the need to support staff in working out how to use both methods effectively. The University's three main VC suites (at the Main Library, KB and Holyrood) needed to be better promoted to enhance user awareness. User Services were working to update guidance on how to book and use these facilities. Increased use could cut Edinburgh to London travel, for example by alternating digital and face-to-face meetings. It would be cheaper to pay for a technician to provide support in the VC suite for each meeting until staff had confidence in the facilities, rather than cover the cost of travel. The Group noted SRUC's experience of the benefits of using Skype for Business. Technical staff were already using Skype in a local sense, and this could be widened. CAHSS had success setting up small tutorial rooms for remote interviewing. Work could be done to investigate which units had their own facilities and were willing to share, to produce an interactive map for the campus, and look at standardisation, as existing facilities varied significantly according to budget. Members recommended concentrating efforts around support groups rather than going into the Colleges.

Action – FM & BM to run workshops to gather views and put a business case together.

Action – BM to provide CL with the appropriate contacts in Information Services.

7 Utilities Programme Update – Pathways to 10% & Sustainable Campus Fund

£2.75M of funding for the SCF had been secured over 3 years. While progress to date was around 2-3% of the targeted 10%, an energy saving culture was beginning to be developed. Building understanding and getting the necessary measuring structures in place would take time. The Sustainable Campus Fund had also been useful in terms of signal value and in flushing out projects that, while not suitable for the Fund itself, could be redirected elsewhere. Funds would need to be put aside this year to invest in the data

centres. Projects were ongoing to make power consumption visible in buildings, with the Meterology system as a starting point. It was anticipated that IT projects would form a significant component of Year 1 spend.

Action – RC to follow up with FC on data for 50 George Square.

8 Sustainable ICT Procurement & Supply Chains

The Procurement Manager updated the Group on the sustainable procurement tool, ICT workshops and Fairphone. The team had met to go through the tool, look at priorities, and identify next steps. London Universities Purchasing Consortium (LUPC) had made a single use tender for Fairphone (which was not available through the Vodaphone agreement) and investigation was ongoing into its potential use at the University, including a trial in CAHSS which would look into the actual cost and benefits. Though more expensive than a standard phone, a discount was available as part of the deal with LUPC. There had been significant press interest in the University's Conflict Minerals Policy and adoption of Fairphone could have a positive reputational impact. Salary sacrifice options for personal use were also being investigated.

Action – FM to bring a progress report to the next meeting.

Action – DG to consider running a Fairphone trial in SRS.

9 Sustainable IT Implementation Plan

B

The Engagement Manager updated SITG on developments. While not every planned action had been completed, useful progress had been made - particularly around PC reuse and conflict minerals - and not all relevant activity was captured in the Plan. The Group had been set up, membership was in the right place, and progress had been made on sustainability metrics and data centre strategy. Materials were available around energy efficiency improvements, and more could be done using the Be Sustainable guide, existing videoconferencing facilities, further investigating intelligent power consumption and standby policies, and to link in to the Waste strategy. It may be that a shorter, more focussed plan was needed for 2017.

Action – CO to meet with members individually, update the Plan and apply RAG status, and report back at the next meeting.

10 Any Other Business

The Group noted the role of the SRS Department in capturing and promoting University research, such as work on gold reclamation from WEEE.

A bid for £7M had been made to the SFC, which could cover a lot of Estates-related work around CHP, IT and videoconferencing.

The SRS Department had raised £100K over the last 3 years, without a dedicated resource. A post had been agreed for one year at grade 7 to try to bring in £½M in external funding, working in partnership with ERI.