

## UNIVERSITY OF EDINBURGH

**MINUTE OF A MEETING** of the Sustainable Information Technology Group held in the Cuillin Room, Charles Stewart House on Thursday 18 February 2016.

- Present:** Dave Gorman (in chair), Director of Social Responsibility and Sustainability  
 Fiona Carmichael, Computing Support Officer, Literatures, Languages & Cultures  
 Paul Clark, Head of IT for CMVM  
 Simon Marsden, Director IS Applications Division  
 Fraser Muir, CHSS Chief Information Officer  
 Euan Murray, Development Team Manager, Learning Spaces Technology  
 Bruce Nelson, College Registrar, College of Science & Engineering  
 Caro Overy, SRS Engagement Manager  
 George Reid, Procurement Manager  
 Tony Weir, Director IT Infrastructure
- In attendance:** Myles Ewen, Senior Computing Officer, standing in for Bryan MacGregor
- Apologies:** David Brook, Acting Head of Estates Operations  
 Michelle Brown, Head of SRS Programmes  
 Bryan MacGregor, Director of User Services Division  
 Fleur Ruckley, Waste & Environment Manager

**1 Minute**

The Convener welcomed attendees to the second meeting of the Group. The minute of the previous meeting on 2 October 2015 was agreed as a correct record.

Action – JR to invite the EUSA VPS to join the Group as student representative.

**Post-meeting note:** *EUSA VPS will join SITG from its May meeting.*

**2 Climate Strategy Review & ICT Contribution**

The Convener updated the Group on the progress of the Climate Strategy review so far. Despite considerable effort and investment, UoE was not on track to achieve the targets set in 2010. The new strategy, which would be presented to the Principal's Strategy Group (PSG) in April, advocated a whole institution approach and ambitious but achievable targets that took into account future growth of the estate, staff and student numbers. Decarbonisation of the grid with wind and solar coming on stream was expected to have a major impact on emissions figures. The new strategy proposed returning absolute carbon emissions to baseline year 2007/8 levels, as well as halving relative emissions per £1M turnover against 2007/8 figures by 2025. The new strategy did not assume any additional savings from SITG activities or IT generally, but the Convener hoped the Group's work could assist over time in identifying reductions in expected IT related emissions growth.

**3 Energy & Utilities Programme Brief**

The Utilities Programme Brief outlined in Paper C included a notional energy saving from IT of £100K from business as usual. The overall target of a 10% saving could not be achieved without the establishment of a Sustainable Campus Fund as a mechanism to support various parts of the University in taking action to deliver energy savings. The SCF proposal would be submitted as a business case to the Capital Projects Group and subsequently Estates Committee in March. It called for funding of £750K in the first year, rising to £1M in the second and third. There may be opportunities for SITG to identify projects that would benefit from SCF funding that would not normally receive

funding from the Colleges or ISG. IT had been identified as a growth area and associated electricity use was expected to increase. Initial work would focus on better understanding the baseline, including possible consultancy work and investment in infrastructure and metering.

SITG was in favour of setting a stretch target, but had some concerns as to whether £100K was achievable. With the growth of renewables, energy storage was becoming more important at national level, and members recommended liaising with experts in the School of Engineering to better understand the significance of energy storage to the University in terms of future investment and business continuity. Energy saving plans would need to take account of the distributed nature of IT across the University, with responsibilities lying with IS and the Colleges. SITG would reflect further on the target figure and timeline.

#### **4 Sustainable IT Implementation Plan**

**D**

Outputs from the workshop and discussion at October's meeting had been captured in the draft Implementation Plan circulated as Paper D. The Plan was split into four main themes: data and evidence building, energy efficiency improvements, resource efficiency improvements, and contribution to wider SRS themes (beyond energy and waste).

**Action – TW** to feed in on points A2 and A3 on establishing baseline metrics, with SRS providing overall ownership and coordination.

Section B focusing on energy efficiency improvements aligned with SRS planned deliverables.

**Action – All members** to feed in B2, aiming to compile a body of evidence and case studies relating to utilities efficiency IT actions undertaken at other institutions.

The Senior Vice Principal had directed the SRS Department to assist in capturing and telling the story of existing SRS activity across the University. Once momentum around green IT had built up, successes in this area would also be celebrated. Members supported the proposal to host an event to share best practice, as the necessary networks were in place and this could raise the institution's profile in the sector.

**Action – CO & JR** to come back to the Group with thoughts for the event, tying in with FM as Convener of an EAUC-Scotland sustainable IT community of practice.

Members raised security concerns associated with investigating intelligent power consumption agent software to switch off machines out of office hours, as these machines could not be patched, becoming more vulnerable, and drew very little power in standby mode.

Members advised revising timelines in the draft Plan to reflect the lack of visibility of data beyond direct IS control. It was unlikely that SITG would have a full understanding of the baseline by April.

**Action – TW** to reflect on the data and report back.

**Action – JR** to update Implementation Plan timelines accordingly.

SRS were working with Procurement on resource efficiency and opportunities around circular economy. Members preferred 'PC reuse' to 'cascading', as better reflecting the nature of the project. Work around printing and imaging would be hampered by the absence of baselines in this area. There was potential for action mapping out energy efficiency from centralised versus distributed printing. This was already in place for multifunction devices and, if consumables for desktop printing were being charged to

the correct codes, the reduction in moving to MFDs could be demonstrated. There were already good news stories in this area, including double sided printing by default.

**Action – JR** to add a further action for initial investigation of a model to use around printing, including routes through Finance or Procurement to establishing metrics.

Members recommended commissioning a student visual survey – walk round audits had been successful in the past in securing management information. Members proposed requesting a licence for Xerox software capable of producing a MI report detailing savings from migrating to cloud printing. This tied in to discussion at SOAG in January about reframing environmental language to focus more on resource efficiency and cost (e.g. giving the financial savings rather than number of tonnes diverted from landfill).

CHSS had accounted for all fixed IT, with work in progress inventorying mobile devices. The discovery phase was key, with the aim to develop a model that could be reused elsewhere. A sustainable IT project carried out in 2008/9 did develop an Excel model that could provide a starting point. Network discovery tools could also be used, though it would be harder for desktop printers. Members agreed on the general approach to getting a baseline and how to maintain it, though the evidence was lacking.

**Action – CO** to liaise with FM and others to follow up on establishing a baseline that could be used to project figures.

## **5 EAUC: Green ICT Update**

SITG noted the update.

**E**

## **6 ICT in the Context of Reuse**

The Chief Information Officer CHSS updated members on progress of the PC reuse project since the paper presented at October's meeting. The paper had highlighted three barriers to uptake in CHSS: space to store equipment prior to reuse; data security and secure wiping; and minimising the overall burden on Schools and Colleges in order to make it happen. Inroads had been made to tackling all three. Space in High School Yards had been allocated for the life of the project. A tool to wipe devices had been identified and approved by Records Management and could help with projects elsewhere. A £2.5K site licence for the software had been secured for a year initially and a decision would then be made whether to continue.

Zero Waste Scotland funding had been secured for the project for six months and an intern was due to start in late February, in post until July, focusing on enhancing the capacity for reuse in the institution. The intention was to develop a case study as well as additional documentation. ECCI were on board to look into the carbon side and implications for energy usage. The target was to reuse at least 100 PCs. Within the University, central support groups were the most likely recipients, having an older fleet of machines than the Colleges which were on a four-year replacement cycle. While the WARPit reuse portal could provide indicative figures, this project should provide more robust evidence. The group favoured a tighter, local reuse loop where practical. The ability to improve machines, for example by adding memory cheaply, meant that a decent level of usability could be assured.

**Action – JR** to invite the project intern to report at the next meeting.

## **7 IT Energy Footprint**

The Director of ITI presented collated data on power usage for IS hosted or managed infrastructure, including total draw for the data centres.

**Action – TW** to circulate the data to members following the meeting.

Certain areas of the data centres had no metering (e.g. water supply), making up part of the draw of a combined feed. Based on what IS is charged, a yearly cost had been calculated, including managed Windows desktops. The calculated power draw for desktops was based on an assumption of how long they were left in stand by and how long in use. The estimated total draw was 9Mkwh per year, or £800K. This did not include laptops or mobile devices and an assumption would need to be made about how often these were charged onsite.

The previous Climate Strategy lacked rigour on the boundary, not including gas or electricity offsite, ARCHER or the UK Research Data Facility. While UoE had operational control, it was not responsible for making the strategic decisions that would impact on energy use. There was also significant other research computing not IS-run that IS managed on behalf of, or in partnership with, various research groups. ARCHER was the only facility within UoE that was directly charged. There were lines of enquiry into how to reduce the other two. 1.7 was the global average for data centres. ARCHER accounted for 7% of overall electricity consumption.

Members requested a table of all exclusions to be taken out of the University's footprint, such as national infrastructure, taking a consistent view of the University's tendency to co-locate kit (e.g. SRUC). Next steps were to sharpen estimates or replace them with meter readings, include laptops and macs, and take a view on co-located and national service power usage. The Group acknowledged a wide expanse of activity that IT Infrastructure did not see or manage. Desktop was easier to establish, network and storage harder. It should be possible to find big pockets to consolidate. As there was direct charging and metering for national services these figures were readily available. The question was whether the current membership was able to fill in the blanks for those areas that sat with the Colleges and Support Groups. Figures for AV were also missing, as traditionally IT did not include AV. Telephones drew very little power. Mac addresses from Eduroam could give the number of unique devices, including student laptops, and modelling could be carried out based on an assumption of how often these would be plugged in. Overall, members felt there were opportunities for savings, but stressed the need to only gather data for those areas where action could be taken and to bear in mind business needs before energy savings, particularly around business aviation and the University's internationalisation strategy.

**Action – All members, once TW had finalised his initial draft and circulated, to assist in collating a fuller footprint in time for the next meeting.**

## **8 Sustainable ICT Procurement & Supply Chains**

Following a paper to SOAG in January, the Procurement Manager updated members on the Sustainable Procurement Prioritisation Tool (SPPT) and risks and opportunities in supply chains for ICT.

SRS and Procurement were working together on testing the new tool which would go out for wider consultation in May or June. UoE was a member of [Electronics Watch](#), an independent monitoring organisation working to achieve respect for labour rights in the global electronics industry (e.g. on child labour, maternity rights, and collective bargaining) through socially responsible public purchasing in Europe. SITG would receive regular updates as the network developed.

Members had received the draft Conflict Minerals Policy for comment, and were broadly content. The Policy would be submitted to CMG for formal endorsement on 1 March.

Once the new fair phone agreement with the Scottish Government and Vodaphone was in place the Group could work on a strategy to promote it.