

UNIVERSITY OF EDINBURGH

MINUTE OF A MEETING of the Sustainable IT Group held in the Ochil Room,
Charles Stewart House Geography on Monday 16 September 2019.

- Present:** Dave Gorman (Convenor), Director of Social Responsibility and Sustainability
 Fiona Carmichael, Computing Support Officer, Literatures, Languages & Cultures
 Victoria Dishon, IT Liaison Officer, College of Science and Engineering
 Dean Drobot, Head of Energy & Utilities Management
 Sheila Fraser, Head of College IT, College of Medicine and Veterinary Medicine
 Chris Litwiniuk, SRS Engagement Manager
 Euan Murray, Head of Learning Spaces Technology
 Graham Newton, Desktop Services Team Leader, ITI Desktop Services
 Ruaridh Stern-Mackintosh, IT & Systems Manager, Students' Association
 Rosheen Wallace, Students' Association VP Community
 Graeme Wood, Enterprise Services Manager
- In attendance:** Bradley Richards, IT Reuse Assistant
 Sion Pickering, SRS Projects Coordinator
- Apologies:** Michelle Brown, Deputy Director of SRS
 Kate Fitzpatrick, Waste & Recycling Manager
 David Jack, Energy & Utilities Operations Manager
 Jennifer Milne, Deputy CIO, Director Applications Development & Operations
 Fraser Muir, CAHSS Chief Information Officer
 Gemma Stenhouse, Procurement Manager, Information Services
 Tony Weir, Director IT Infrastructure

1 Minute

A

The minute of 11 April 2019 was approved as a correct record.

Matters Arising

The Select PC Group had unanimously approved the recommendation to switch to Solid State Drives (SSDs) as default.

SITG noted problems reusing equipment that hardware suppliers no longer supported, though there may be some opportunities in smaller organisations to reuse and extend the life of these machines (e.g. running Linux). The IT Reuse Assistant had received requests for older machines to run specific software. The risks would need to be weighed against potential savings. Equipment that could not be supported internally could still be cascaded to UoE's social enterprise partner, the Edinburgh Remakery.

Action – BR to review the internal guidance and circulate the relevant section to the Group.

Easysearch had been approved as the default search engine on open access computers, with each search generating income for the Turing Trust. The Group noted an issue with the alternative search engine Ecosia, where search results were not always up to date.

2 Sustainable IT Implementation Plan – Progress Report

B

The Engagement Manager reported on progress against the Implementation Plan.

A. Energy

Work was ongoing to develop an understanding of IT energy consumption, with significant progress adding PUE calculations for each data centre. Estates had hired consultants to check feeds on metered supplies at the ACF, JCMB and Appleton Tower. One meter at JCMB was found to be faulty, and others were waiting to be connected. The intention was to transition to an automated process. Energy use from PCs was going down and would soon reach a point where further improvements would decrease. All-in-one PCs consumed around a third of the power of desktop systems.

The objective to promote the Sustainable Campus Fund to IT practitioners across the University was currently at amber status, with no IT related applications to the Fund since November 2018. It was possible that areas with potential projects were being missed. SITG were particularly keen to identify projects that would have applicability across CSE and CMVM. While the AV equipment in centrally managed teaching spaces was relatively new, there could be opportunities looking at upgrading smaller meeting spaces in Science & Engineering and MVM, which would also impact on emissions from business travel.

Members discussed proposals to replace existing spinning discs with SSDs. Spinning discs were a major consumer of power in the data centres, as well as generating heat. While a lot of areas were adopting SSDs, this was less prevalent in research infrastructure, such as DataStore. Moving to SSDs would have a major impact on energy consumption, but would be very costly to implement.

Members were encouraged to take advantage of the end of contract on older MFDs, as replacing them could result in significant financial and energy savings. Xerox had their own reuse and reclaiming programme for older models.

Action – FC to share documentation on this with VD, once completed.

On energy efficiency, two project proposals had been developed by Estates to scope out pathways to a PUE of 1.1 across all data centres. Current figures were 1.3 for JCMB, 1.48 for Appleton Tower, and 1.2 for the ACF. The aim of getting this below 1.1 was felt to be very challenging. There was potential for funding from the SFC Universities for the Future Fund, though it was unlikely to materialise this year. In the meantime, Estates would develop business cases and get the projects shovel-ready.

The Director of SRS had taken a paper on the Climate Emergency to University Executive in August. Senior colleagues were very interested in what the University should be doing in response, and the Directors of Estates and SRS would draft some proposals to take back to UE, focusing on heat and energy.

Some initial progress had been made on developing a picture of carbon emissions, but this had stalled. Broader scoping discussions were ongoing, focused on boundaries and areas where UoE should take ownership. Upstream carbon associated with the manufacture of its computing hardware would not be included. Outcomes from these discussions would be reported back to the Group in due course.

Members continued to adhere to and promote selection of devices with the lowest consumption for the performance required, energy efficiency was considered in kit specification, and the IS Select PC list collated options for users to procure the most efficient device for their needs. The new standard for EPP was much more rigorous. As HP's largest customer in Scotland, UoE was in a strong negotiating position.

B. Resource Efficiency

Objectives B1 to B4 were all on track, and the volume and types of equipment cleared for reuse were increasing. 35% of machines earmarked for waste streams had been reused.

A team in ISU were currently looking at printing use, with SelectPrint and MFDs driving behaviour change, which could be developed into a policy. All Science & Engineering exam boards were now paperless and there was an opportunity to promote and roll this out in other areas.

SITG recognised the logistical difficulties in providing a drop-off point for students' personal electronic waste. There was an issue with space, though pop-ups could be arranged at high demand times, and concerns around data security, though the IT Reuse Assistant could mitigate these using the Blancco software. The Group noted an existing facility at ECA, which turned the waste into art.

Action – DG & RW to continue discussions offline.

There had been no progress as yet on leasing options. This had been investigated at national level and a decision made not to pursue it collectively, but to leave it up to each organisation.

C. Social Responsibility

The University was still a member of Electronics Watch and the Make ICT Fair project was well underway and outputs would be shared with the Group. Fairphone was now on the IS Managed Mobile Service, though there had been delays in procuring devices due to issues in the manufacturing process. The Conflict Minerals Policy and the SPPPT brief on IT were being promoted to IT practitioners across the University. The Turing Trust were among the partners of the Edinburgh Remakery.

D. Communications & Engagement

A [case study on Fairphone](#) was available on the SRS website. Fairphone were currently taking pre-orders to ship in late October. Sustainable IT was included in all staff and student engagement campaigns and materials, though there were opportunities to do more, in conjunction with the new Sustainability Champions network

Action – CL to update the Implementation Plan for 2020, removing historic points.

3 Video Conferencing Tools

C

SITG recognised that while good progress had been made on energy and gas, UoE's emissions from business travel had not yet been seriously addressed. These were projected to increase from 15% of the University's overall emissions in 2015 to 20-25% by 2025, potentially undoing the good work on energy.

SRS Projects Coordinator Siôn Pickering presented to the Group on business travel and the impact of virtual collaboration tools. Initial efforts focused on trying to understand the data. A system had been built to automatically calculate data from journeys. In 2018-19 it recorded over 110,000 journeys, costing over £11M and emitting over 18,000tCO₂e. UoE staff spent an estimated 199,200 hours travelling, not including time spend travelling to and from and through airports, equivalent to 132FTE. While this was not entirely lost time, neither was it fully productive. Over 36,700 taxi journeys had been taken within Edinburgh alone, costing over £1½M and emitting over 117tCO₂e (equivalent to 35 households). Data on bus travel within the city was captured via eExpense claims and shuttle bus journeys. Journeys taken by staff using personal travel cards were not captured. The issue had been raised at the MVM College Strategy Group where attendees welcomed the opportunity to work with SRS to change behaviours around travel.

Virtual Collaboration Tools (VCT) including phones, VOIP, and video technology had advanced significantly over the last ten to fifteen years, becoming a feature of more people's daily lives. SRS were seeing more requests around how to integrate VCT into large scale events. VCT offered good opportunities to save money and time and cut emissions, provided they functioned well and people were willing to use them.

The University currently supported Skype for Business, Blackboard Collaborate Ultra and VOIP Conference Calls, with different teams managing each. UoE also used VScene, an externally managed system, and various locally managed systems (some areas had licences for Zoom or Adobe Connect).

Feedback from focus groups and a survey of CSE suggested that as these technologies were available, UoE should be making use of them as a suitable alternative to business travel for many journeys. It was vital that the systems be easy to access and use, and there be support in place to tackle any technical issues. Respondents recognised that presenting and networking online required a different skillset.

Staff and students' baseline understanding of VCT was a major hurdle, as was ensuring reliability and consistency of equipment. The hardware and software that external contacts were using was also a factor. Initial investigation had found that users preferred existing in-room technology to dedicated VC suites. This should be factored in when providing staff with machines, to ensure they had built-in cameras and microphones. The Students' Association found Skype the easiest to persuade users to adopt, as that was what they were familiar with from personal use.

Options for next steps included continuing with existing VCT systems (establishing how often they were being used, providing training and technical support, and standardising virtual collaboration hardware across the University) or arranging a site wide licence and support for new VCT (e.g. Zoom, Adobe Connect, Webex), if it would complement existing provision.

Following discussion with Heads of IT for the Colleges, a proposal was developed to initiate a short-term working group, chaired by the Deputy Director of SRS, to investigate whether current VCT were suitable, and if so, how to increase uptake, or whether additional VCT would increase usage and reduce requirement to travel. The group would report its recommendations back to SITG by Q4 2020.

Members recognised the work done by Learning Spaces Technology on the lecture recording project, which was on a similar scale, and would value input from the Head of Learning Spaces Technology on the way forward for VCT.

Action – All members to send their suggestions for membership to Siôn, as well as any other groups or committees that should be consulted.

Members noted that the Travel and Aviation Working Group, chaired by the University Lead on Climate Responsibility & Sustainability, had now been set up. There had been recognition at senior level that the University needed to address the rising costs and carbon emissions associated with flights. One option would be to introduce a levy to act as a price signal, which would be recycled back into offsetting or technological interventions.

SITG discussed why business travel was increasing at a much higher rate than overall staff numbers. This may in part be due to a change in the ratio of research-active academics to support staff. Students were also being encouraged to travel more as part of their studies. One potential application for VCT would be to allow students to take electives that were currently not possible due to travel times between campuses. For carbon emissions

associated with overseas students travelling to Edinburgh to study, the only answer was to offset.

4 PC Reuse Project Update & Blancco Case Study

IT Reuse Assistant Bradley Richards reported on the performance of the project to date. It had generated just under £400K in cost savings, with 1137 machines reused this year, 49% of which were cascaded internally and 51% donated to the Edinburgh Remakery. At present it was not possible to donate equipment directly to the Turing Trust, as it lacked the required exemptions.

Action – BR to circulate full project figures to the Group.

This was in addition to IT equipment reused through the [WARPIT](#) equipment exchange portal. 47.9% of items on WARPIT were IT related (mostly desktops). There had been a sharp increase in the amount of AV equipment going through WARPIT, though, due to concerns about reliability, the Head of Learning Spaces Technology recommended this not be redeployed.

Action – EM to follow up with BR on AV reuse.

Much more equipment could be retained within the University if the project had dedicated storage space. Lack of space was the main hurdle to further project growth.

Action – VD to ask CSE Estate Manager to follow up with BR on storage.

Action – BR to pass contact details to VD, to send on to a new potential charity partner for the Remakery.

Project processes were solid, and the IT Reuse Assistant met regularly with the CAHSS Chief Information Officer to verify them. The IT Reuse Project used Blancco software, the industry standard to mitigate dangers of data leakage. UoE had been approached by Blancco to participate in a case study and findings would be shared with the group in due course.

SITG welcomed the update, noting the progress made, and recommended that the scheme be promoted more widely.

Action – BR to share the article on the project currently being drafted with SF & RSM.

5 Sustainable ICT Procurement - Cloud Services & Solid State Drives

The Enterprise Services Manager updated the Group on developments. Possible procurement questions were being drafted to use when going out to tender for services hosted remotely. While noting feedback received on the relative weighting, it was not possible to guarantee how members of staff running a procurement exercise would choose to weight the individual elements. Discussions between the Energy Office and Procurement were ongoing, looking to move from a separate section of sustainability questions, to integrating these throughout.

Action – DG & SRS to get back to GW on changing the weighting.

Members discussed potential interventions in the data centres, noting that while UoE could look to implement these in its own centres, it would not be able to influence research IT. It was felt that there were major savings to be made, in terms of power consumption and reducing cooling requirement. Discussions would continue at December's meeting.

6 IT Energy Footprint & Prioritised Projects for Energy Savings

IT Infrastructure were following up with colleagues and hoped to have the data by the end of September, with a view to presenting it at the next Data Centre Steering Group meeting

in October. By the next SITG meeting it should be possible to share a picture of energy use across the University. Currently about 50% of the data had been returned, with notable gaps in CSE, and with data for the Western General still to come from MVM.

7 Personal Computing Policy

The Vice-Principal and Chief Information Officer had consulted widely on the draft policy which would be presented to University Executive on 23 September. The overall aim was to reduce the number of devices staff were using. Proposals had been put together in consultation with local IT teams who understood staff requirements. The policy would not include research, or provision for reasonable adjustments. Standardisation of device choices and centralised purchasing using procurement hubs would improve UoE's purchasing power, as well as provision of support, and facilitate hardware asset management. The policy also had service benefits, as standard devices could be supplied promptly, generally within 2 to 3 days, and financial benefits as UoE would be buying fewer devices.

SITG recognised a potential clash between the new policy and CSE's ongoing commitment to reuse and extend the life cycle of its devices. A balance would need to be found between replacing devices more frequently to keep within the parameters of the support provided by manufacturers (particularly in terms of security patches), and minimising the number of devices that had to be bought and disposed of. The Students' Association were also committed to making their devices last as long as possible.