

E-Waste Recycling research project



An exploration of the benefits of e-waste recycling in a London University

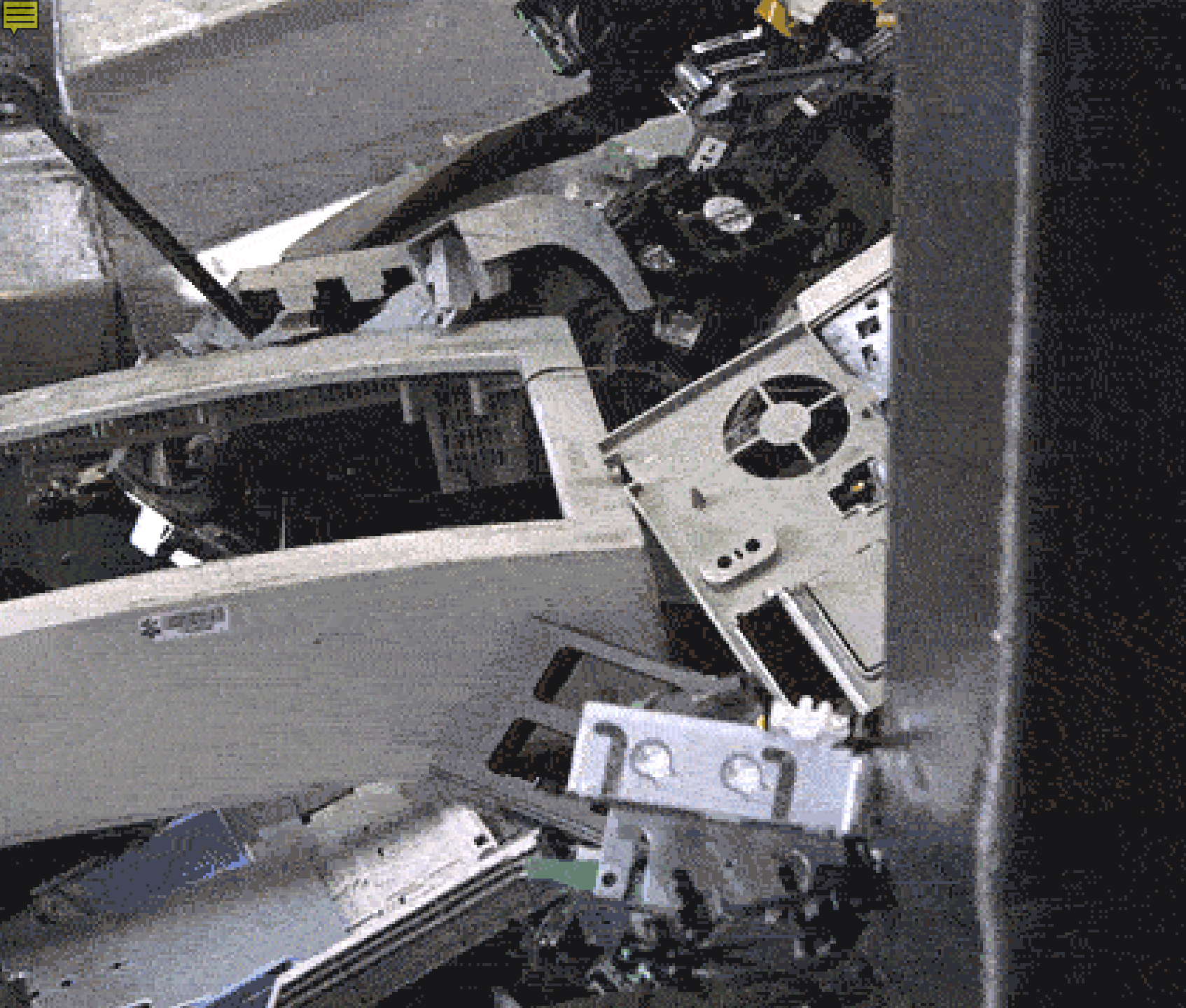
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A university our size has a significant technology footprint



E-waste = electronic and electrical waste

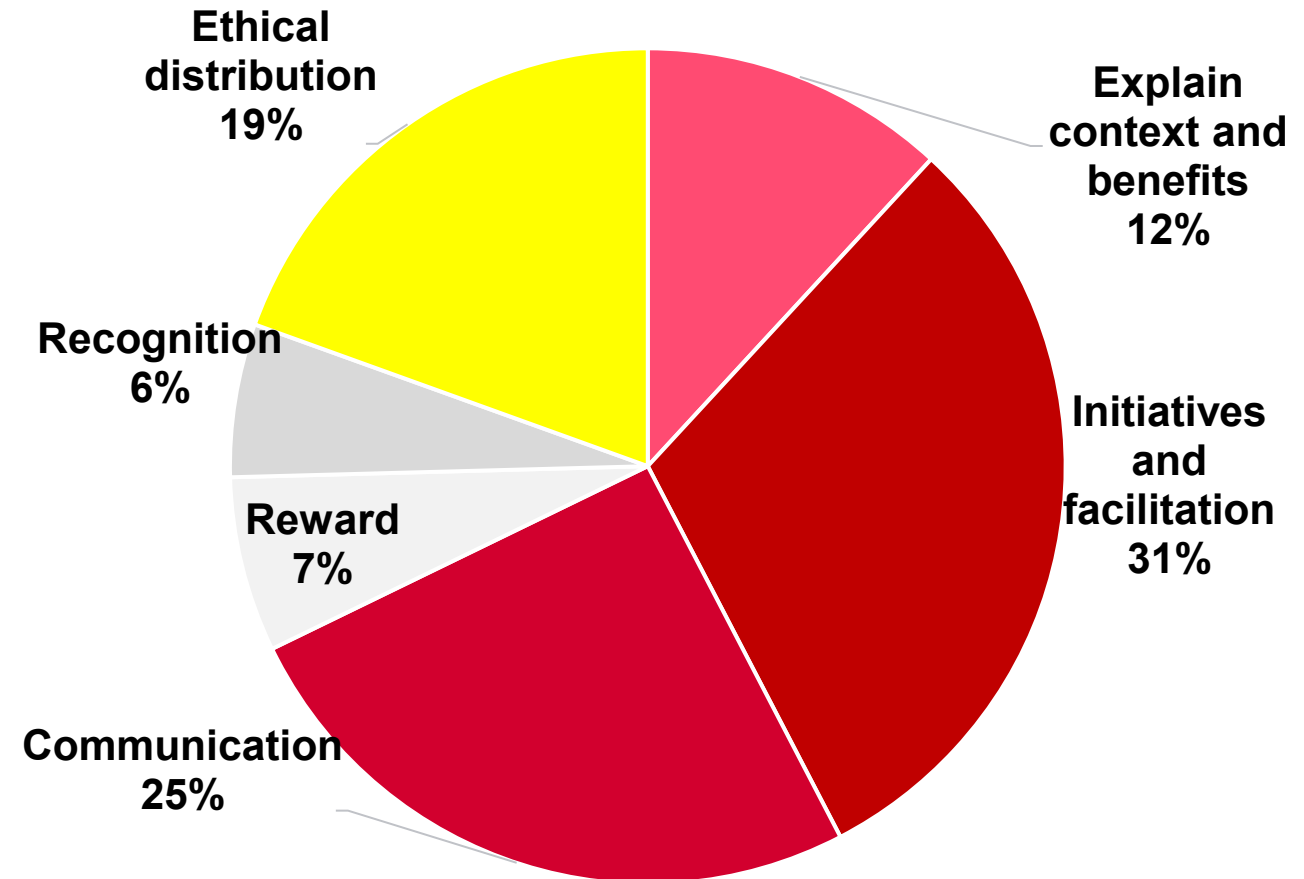
- E-waste = fastest growing pollution problem
- The UK = top-ten e-waste generator (Forti et al, 2020)
- A university = 200 tons of e-waste annually (Saldana-Duran and Messina-Fernandez, 2020)
- E-waste disposal = toxic processing



Driving awareness - results

- Majority of students and staff unaware of recycling efforts and activities
- Equivalently, most did not find education nor communication increased their knowledge

How can the university help improve e-waste recycling?





Driving awareness - analysis

- Disappointing result in an organisation with educational focus
- Policy has not driven awareness, deviating from Vaughter et al. (2015)
- Operationalisation of principles through campus initiatives and facilities could help (Arain et al. 2020)
- Lack of basic understanding of e-waste recycling concept

‘I have very little knowledge of what e-waste and e-waste recycling are.’ (Respondent quote)

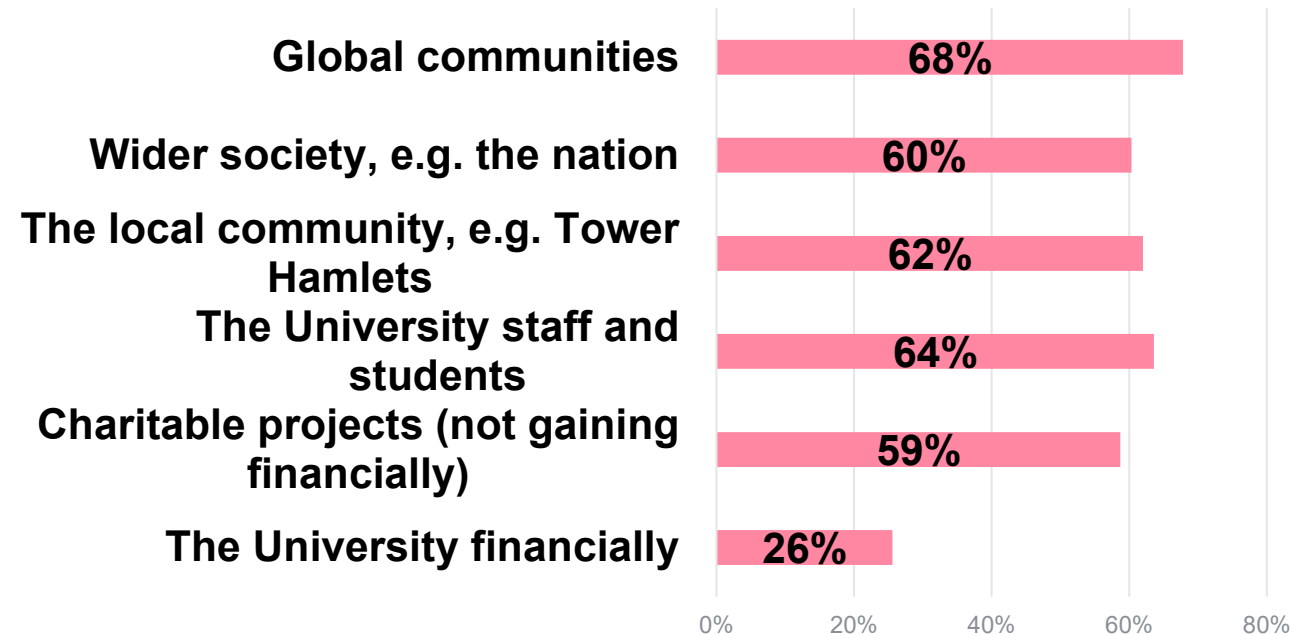


Financial advantages and disadvantages

- results

- £2000 gain in return for recycling over 3000 devices
- Participants did not consider financial gain important, preferring communities and themselves to benefit

Who should benefit from e-waste recycling:





Financial advantages and disadvantages

- analysis

- Recycling processing costs mean no profit
- Support for charitable ventures indicated opposition to financial gain
- Short term financial gain detracts from recycling activity for longer term advantage (Hornik et al., 1995)
- Reuse - saves funding for teaching materials and computing facilities – charities pass financial benefits to local schools

University sustainability ratings (Times Higher Education, 2021): Attract students and staff



Conclusions and recommendations

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Conclusion

Recycling awareness **insufficiently induced** to benefit students and staff:

- Policy needs *embedding in operational activity* engaging students and staff
- **Improve sustainability leadership** through education and communication for a competitive edge to sustainability strategy
- **Promote recycling** innovation and activity through stakeholders

Financial advantage was not obtained:

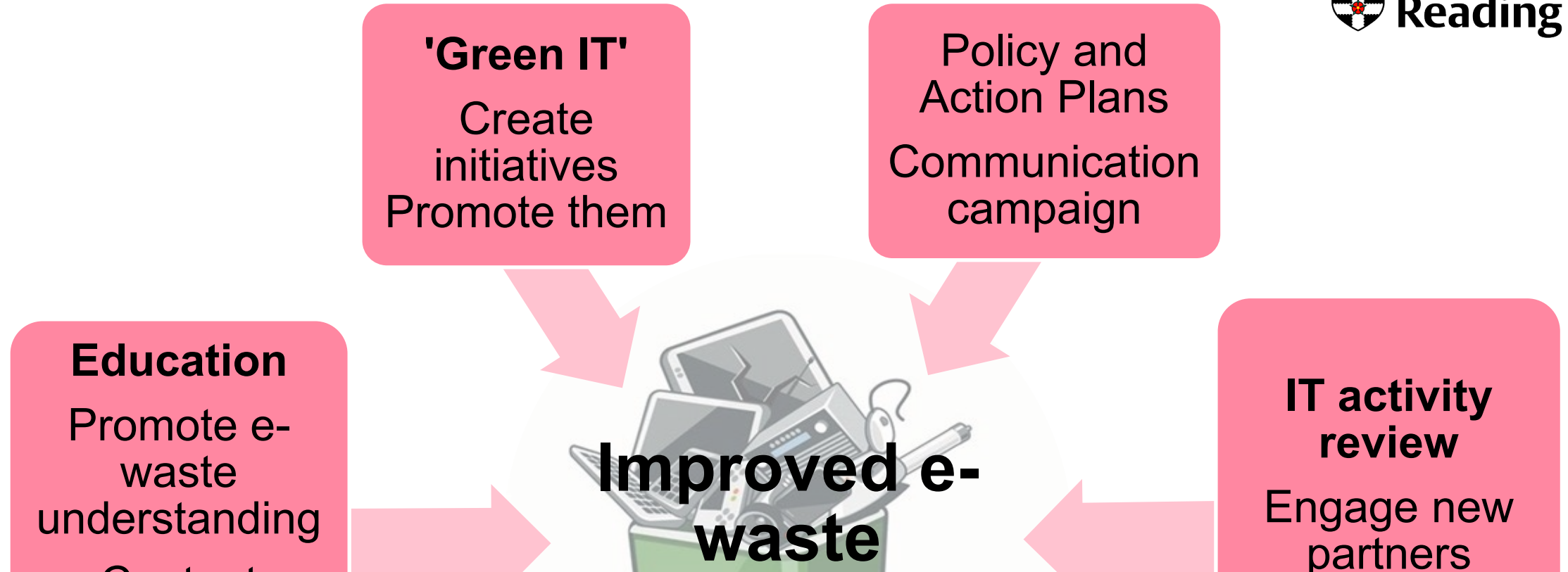
- **Include stakeholder perspectives** to improve e-waste management
- Financial benefits are *not seen as important*: benefit by allocating resources to sustainable causes
- **Set a stronger sustainable agenda** for economic benefits and promote good practice

Notable findings:

- Policy creation insufficient in driving awareness
- Study highlights problem of financial fixation



Recommendations



- ✓ Outdated computers **reused for education** in Computing Science
- ✓ Old monitors, mice and keyboards **given to students** at Reuse Fair
 - ✓ Improved **recovery of IT assets** from Leavers
 - ✓ **Sustainability a key principle** in policies and projects
- ✓ Co-found the **UCISA Sustainability Committee – Join our community!**

Thank you

*Image shows
rise in
average
global
temperature
since 1850*

‘If we create any kind of waste, we need to deal with its consequences’ (Survey respondent quote)

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