

# Briefing Document

## Bringing appropriate, re-purposed, UK computers into Malawi to enhance Digital Learning for Malawian students.

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Many organisations are seeking to bring recycled computer hardware into Malawi, this document outlines the main UK players and their propositions. It also addresses the scaling opportunities for these models and the way to dramatically increase the value of the hardware itself by linking it to Malawi specific digital lessons for the entire school curriculum.

### 1. The Re-Purposing Models for IT equipment in use today

There are two business models being used at present. They are similar in many respects and both share the same important key features:

1. They only send out appropriate hardware (ideally, machines running Windows 10 or above and, as a minimum, machines running Windows 7). Machines are often only three years old and have many years of useful life left.
2. Neither model gives machines away for free. They both have partners on the ground in Malawi who are employing and training Malawians in distribution and hardware and software maintenance. In order to provide this employment computers are distributed at cost.

#### 1.1. Scottish Model

**1.1.1 Turing Trust** (Scottish Organisation) (<https://turingtrust.co.uk/>)

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- Turing organise the collection of surplus IT kit from individual donors, private companies and elements of Scottish Public Sector and Government
- Turing use volunteer IT professionals to secure wipe the hard drives to a professional standard.
- Turing load generic educational software onto the hardware
- Turing re-sell any 'high value' machines on platforms such as eBay to raise funds to pay for shipping costs
- Turing containerise the hardware, prepare paperwork, in conjunction with agents in Malawi, and ship to CYD in Malawi.

**1.1.2. CYD** (Centre for Youth Development Malawian Organisation based in **Mzuzu**)  
([www.cydmalawi.org](http://www.cydmalawi.org))

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- CYD organise the importating and duty-free status for bringing educational IT kit into Malawi
- The hardware arrives as 'free' stock for CYD
- CYD check hardware and software on arrival and store hardware for delivery
- CYD work in Northern region and supply around two thirds of the secondary schools who have electricity in Northern region
- CYD visit schools to ensure the electricity supply is appropriate, the classrooms are suitable and secure and the teaching staff are able to deal with the influx of computers.
- CYD offer schools a one-year lease of a computer for around 12,500 Malawi Kwacha with a warranty
- If a computer breaks CYD will either come and repair the computer or will replace it.
- CYD will visit the schools from time to time to ensure hardware is being used appropriately in the school
- CYD is run by Malawian's and employ hardware and software maintenance people, generating both employment and a valuable skill set in the Northern region
- CYD have repeat business, demonstrating schools value the hardware and are prepared to prioritise funding to pay for it
- CYD ensure hardware stays working and useful within the schools that are part of their program
- CYD have an estimated 1,500-2,000 machines currently in circulation and have delivered approximately 3,000 to date

## 1.2. English Model

**1.2.1.IT Schools Africa** (English Organisation) <https://www.itschoolsafrica.org/>

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- IT Schools Africa organise the collection of surplus IT kit from individual donors, private companies and elements of local government. Their 2017-18 Annual report shows they received >6,000 machines that year.
- IT Schools Africa use volunteer female prisoners to refurbish hardware and they use volunteer IT professionals to securely wipe the hard drives to a professional standard.
- IT Schools Africa load generic educational software onto the hardware.
- IT Schools Africa re-sell any 'high value' machines on platforms such as eBay to raise funds to contribute towards container costs
- IT Schools Africa containerise hardware, prepare paperwork and ship to Computers for Malawian Schools in Malawi.
- IT Schools Africa have built 33 e-learning labs, many of which are in Malawi (<https://www.itschoolsafrica.org/e-learning-labs.html>)
- IT Schools Africa are delivering their computers to a number of African countries as well as to needy local causes, so not all their computers end up in Malawi

## **1.2.2 Computers for Malawian Schools (CFMS)**

(<https://www.facebook.com/computersmalawischools>) based in **Blantyre**

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- CFMS organise the importation and duty-free status for bringing educational IT kit into Malawi
- This hardware arrives as stock for CFMS
- CFMS check hardware and software on arrival and store hardware for delivery
- CFMS market to schools, organisations and individuals in Southern Region
- CFMS will sell a desktop computer for around 75,000 Malawi Kwacha (with a warranty)
- CFMS provide employment for Malawians and also build up skill sets in computer hardware and software maintenance

## **2. Scaling opportunities.**

### **2.1. The issue**

Many UK companies and governmental organisations would be willing to donate IT Hardware for re-purposing. Within the UK most larger organisations will replace their hardware on a three-year cycle, while most UK schools will work on a six-year cycle. Re-using these machines is highly appropriate and almost any 6-year-old machine will run Windows 10, providing appropriate equipment for teaching students IT skills.

The issue faced by companies and organisations in the UK is one of Data Protection. Rules are both strict and well understood. It requires all sensitive personal data to be completely erased from a computer's hard drive before it can be re-purposed. There are a number of companies (e.g. Blancco <https://www.blancco.com/>) who supply software to clean hard drives to required standards but these are commercial organisations and require to be paid for the use of their software. Many organisations in the UK simply give their old hardware to 'cleaning' organisations who are often paid by the organisation to take away the old hardware, clean it and then re-sell it. Additionally, many organisations simply remove the hard drives and crush them to ensure no data can be retrieved. These regulatory challenges have led many organisations to simply duck the issue of re-purposing as it is deemed too hard.

### **2.2. Creating Breakthroughs**

We recognise the best way to break this cycle is to create a repeatable process that has been signed off by appropriate risk committees and executive teams. A process which is available to be shared and repeated with organisations that have scale. The largest organisation in the UK is the National Health Service (NHS) which employs over 1 million people, so this has been our initial target.

The NHS is divided into 13 Health Boards in Scotland and 135 Clinical Commissioning Groups (CCGs) in England.

In Scotland we have worked with Lanarkshire Health Board to build a process to re-purpose IT hardware. Lanarkshire Health Board has around 30,000 pieces of IT equipment in circulation among its staff. It upgrades hardware on a three-year cycle. It used to send its hardware to a crusher.

Working with Lanarkshire Health Board we have now created a pathway for hardware to be returned to the central IT department where data is securely wiped by IT department volunteers to a controlled standard. Health Board IT staff are giving their time for free so the machines can be re-used and the necessary risk committees and Executive Boards have signed off the process. This process has delivered its first 20 computers to Turing Trust for shipment to Mzuzu.

Corporate Social Responsibility is a key issue for all UK organisations and we believe many more NHS organisations will be receptive to re-using the Lanarkshire pathway, allowing them to re-purpose their hardware. Not all hardware will end up in Malawi as many NHS organisations will want to support the needy in their own communities, but it does open the door to the opportunity for significant scaling.

Publicity for the Lanarkshire pilot is building and it would be hugely helpful to receive messages of thanks or acknowledgement from senior figures in Malawi. This could significantly strengthen the story and would be extremely influential in persuading other NHS and public sector organisations to follow suit.

### **3. Adding Value – are we in the business of providing computers or providing education?**

Computers on their own are valuable, but a computer in a school will be made much more powerful if it is loaded with digital lessons that follow the Malawi curriculum.

The opportunity for students to learn their own curriculum through digital media is a strong motivator as it demonstrates the real relevance of technology to the student. Malawian specific content is also significantly beneficial for teachers as it helps give them ideas of how to deliver the curriculum and can support the teacher's own continuous professional development.

Padziwe ([www.padziwe.org](http://www.padziwe.org), contact: Flata Nyirenda [flata.nyirenda@padziwe.org](mailto:flata.nyirenda@padziwe.org) +265 881207778) is a Lilongwe based digital education company who have now produced over half the entire Malawi curriculum in a digital format. The ability to bring animations, video, audio as well as text to students can be a powerful way to enhance the learning experience. Having both Primary and Secondary (MSCE and IGCSE) content available as digital lessons creates an opportunity to significantly boost the value of the hardware being deployed in schools. Padziwe has worked closely with the Ministry for Education in Malawi to quality assure the lessons and is a long way down the process, having already re-submitted materials for final review. Following sign off, the firm intends to complete the digitising of all outstanding lessons, driving toward full curriculum coverage.

Licences for the digital content already created are available from Padziwe, and pricing can be adjusted to take account of significant volume discounts.