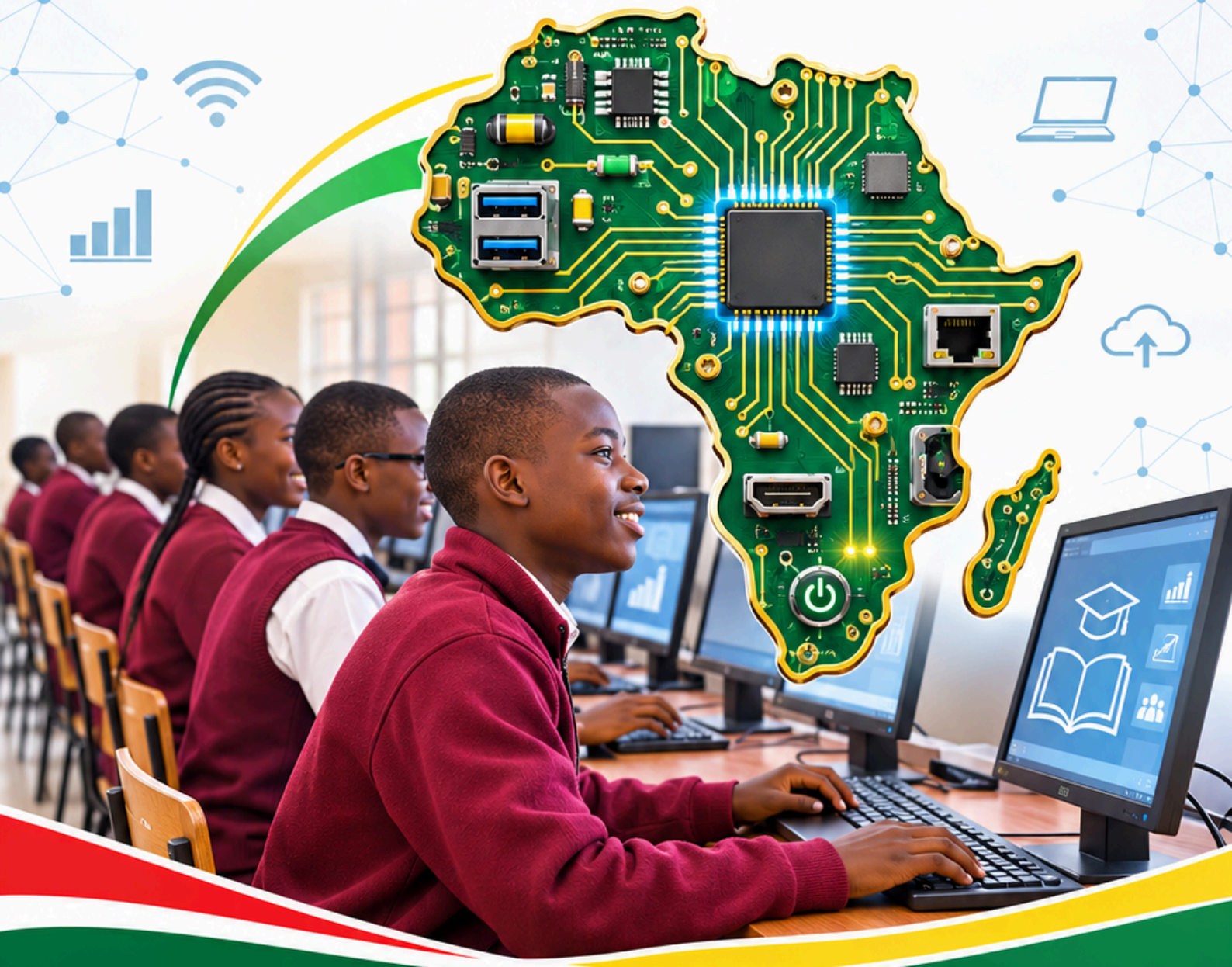
CENTER FOR ICT INTEGRATION

Educate – Innovate – Manage

Centre for ICT Integration

CII Impact Assessment Report 2025–2026

Computer for Education Mission 10,000+ | *Repair to Connect*



Educate | Innovate | Manage

Inside this report

Practical work, educational access and the next phase of Repair-to-Connect.

01 **Leadership, organisation and impact** 03-05

02 **Repair-to-Connect: technical delivery** 06-10

03 **Skills, learning and school evidence** 11-21

04 **Circular ICT programmes and national reach** 22-25

05 **Accountability, value and assessment method** 26-28

CII documents the restoration of existing school computers, practical youth technical skills and planned nationwide expansion. Reported cumulative achievements are presented together with estimates of environmental and replacement-cost value.

LEADERSHIP INTRODUCTION

Message from the CEO

Extending the life of technology. Expanding the reach of education.

At the Centre for ICT Integration, we believe that a computer already owned by a school should not be forgotten simply because it has developed a fault. Behind every unused device is an opportunity for a learner to practise, for a teacher to teach and for a community to make better use of its resources.

Our guiding idea
Repair first. Restore learning. Keep school technology useful for longer.



David Butita Wamono

Chief Executive Officer

Centre for ICT Integration

Since CII was founded in 2021, our work has focused on practical solutions: diagnosing computer faults, restoring workstations and school networks, and helping institutions move from dormant equipment to functioning digital learning spaces. This approach combines technical care with educational purpose.

In this assessment, CII reports 612 computers revived across 30 schools. We also present organisational estimates of avoided replacement expenditure and potential carbon benefits from extending equipment lifecycles. These measures matter, but they must be interpreted alongside how figures are recorded, calculated and improved over time.

We see youth technical skilling as an essential part of this mission. Interns and emerging technicians gain hands-on experience in the workshop and in school ICT environments. The skills developed today can support a stronger local maintenance ecosystem tomorrow.

Looking forward, our Computer for Education | Mission 10,000+ — Repair-to-Connect initiative expresses an ambition to extend this model from Western Kenya to additional counties. Future scale will depend on sound partnerships, responsible resource management, safe handling of equipment and sustained support for schools.

I invite school leaders, learners, development partners, public institutions and communities to engage with this report as both a record of progress and a statement of work still to be done. Our shared aim is simple: technology for every child, powering education.

David Butita Wamono | Chief Executive Officer, Centre for ICT Integration

EXECUTIVE SUMMARY

Impact at a glance

CII-reported cumulative achievements and indicative economic value

612
Computers revived

30
Schools reached

KES 9.18M
Lower device-value estimate

KES 15.30M
Upper device-value estimate

How the economic valuation works

CII applies an assumed residual value of KES 15,000 to KES 25,000 for each of the 612 revived computers. The resulting indicative value retained in school ICT assets ranges from KES 9,180,000 to KES 15,300,000.

Installation labour is additional. Because an agreed labour rate per computer has not been specified, it is not included in the monetary range above. The value of any avoided installation work can be assessed separately using actual school circumstances.

Calculation basis

612 x KES 15,000 = KES 9,180,000

612 x KES 25,000 = KES 15,300,000

Environmental estimate: 309.68 metric tonnes CO2e avoided, as reported by CII. This is a separate indicative environmental measure, not a financial saving.

Who we are

Founded in 2021 • Bukananchi Market • Bungoma–Chwele Road

Centre for ICT Integration (CII) is a Kenya-based EdTech social enterprise working to narrow the digital divide in schools and communities through practical ICT rehabilitation. From its CII Circularity Hub at Bukananchi Market, the team works with learning institutions to identify dormant equipment, diagnose faults, extend computer lifecycles and strengthen access to functional digital learning facilities.

Our vision

To become a leading green ICT integration champion in Kenya and Africa through sustainable technical support and digital access.

Our mission

To build an ICT-literate society through equitable access to functional computers, reliable networks and practical technical skills.



CII technicians assess existing equipment before making repair and reuse decisions.

CII's approach is deliberately different from a model based only on acquiring new computers. It begins by recovering value from the technology that institutions already possess, then connecting equipment, people and skills to the educational needs of each school.

Repair-to-Connect

Computer for Education | Mission 10,000+ — Repair-to-Connect

01 AUDIT

Record equipment condition, faults, ownership and laboratory constraints.

02 PROTECT

Assess institutional information and arrange appropriate data handling before reuse.

03 RESTORE

Repair suitable devices, optimise software and recover LAN/Wi-Fi functionality.

04 REDEPLOY

Return serviceable workstations to learning with maintenance and teacher support.



Diagnostic assessment helps distinguish repairable devices from equipment requiring other handling.

The stages are a practical operating framework, not a guarantee that every machine can be restored. Unserviceable equipment must be handled lawfully through authorised channels; CII does not present itself as a licensed e-waste recycler.

Diagnostic audits

Understanding faults before committing school resources.

A meaningful school-computer revival programme starts with evidence. Teams need to know which computers can be restored economically, what components are missing and whether faults are isolated or shared across a laboratory. A structured audit reduces avoidable spending and creates a baseline for measuring improvement.



Board and component diagnostics form part of CII's practical technical workflow.

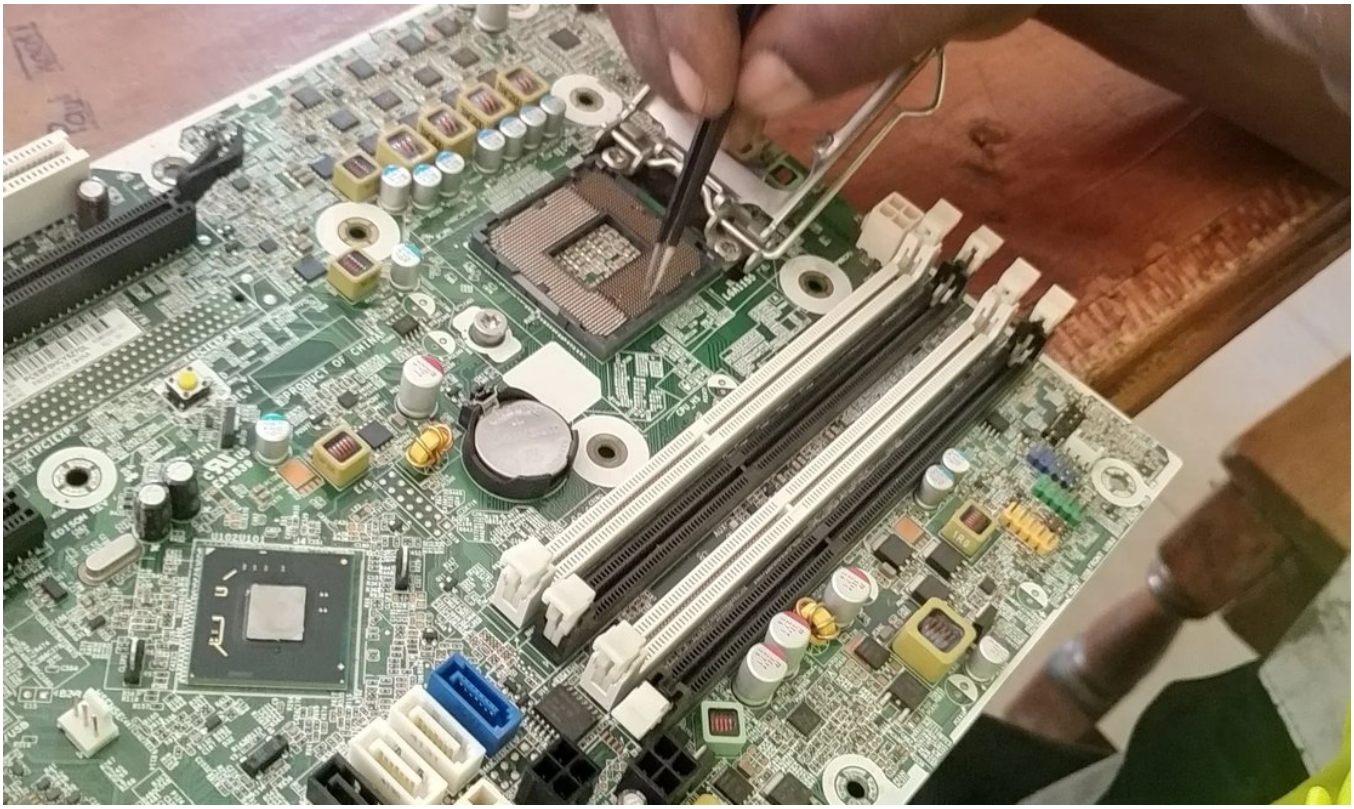
What a school audit should capture

- Device make, type, asset identifier and ownership authorisation.
- Power, motherboard, storage, memory, display and peripheral fault categories.
- Network connectivity, cabling, switches, router condition and coverage.
- Estimated parts and labour needs, repair priority and redeployment status.

CII's diagnostic approach links initial equipment assessment with repair decisions, functional testing and return to school service. This connection supports practical quality control and helps schools prioritise equipment that can provide reliable learning value.

Precision repair

Recovering educational value through skilled component-level work.



Hands-on precision work on a desktop computer motherboard.

CII's technical work includes identifying board faults, checking power and connector integrity, assessing removable components, carrying out appropriate soldering and service procedures, and restoring systems to usable operating condition. The objective is not simply to make a computer power on: it is to support stable, repeatable classroom use.

A successful refurbishment process also considers system cleanliness, storage health, operating-system readiness, drivers, user accounts, basic security settings and whether common educational applications can run reliably on available hardware.

Technical safety matters. Not every damaged board is safe or economical to repair, and all invasive work should be performed by competent personnel with suitable tools and electrical safeguards.

Campus connectivity

A working computer laboratory requires a working network.

Computer access depends on more than the device itself. A school may have serviceable desktops but experience broken LAN ports, unreliable switches, disconnected network drops, damaged patch leads, poor Wi-Fi coverage or software configurations that prevent students and staff from using available resources.



School-based technical service is part of the route from repair bench to connected learning.

CII's network support priorities

- Inspect and document the condition of existing network infrastructure.
- Repair or replace suitable connections and organise structured cabling where required.
- Restore functional sharing, connectivity and sensible access controls.
- Train designated school ICT Champions in basic maintenance and incident reporting.

Reliable connectivity improves the usefulness of refurbished workstations, helps teachers manage computer-based lessons and supports ongoing digital literacy activities.

School computer labs

Keeping practical digital learning available throughout the school year.



Testing and preparation are essential steps before computers return to school laboratories.

Schools need continuity. When a repaired computer fails again and no local support is available, the original intervention quickly loses educational value. CII therefore places importance on preventive maintenance, informed school custodianship and routines that encourage early fault reporting rather than prolonged storage.

The proposed School Lab Maintenance Charter sets out a shared understanding of equipment care, use, reporting and follow-up technical support. Teacher ICT Champions can reinforce everyday good practice, help identify recurrent issues and sustain a practical learning culture within their institutions.

Over time, the measure of success should evolve from a count of repaired devices to more meaningful outcomes: functioning workstations available per lesson, laboratory uptime, classroom use and the number of learners participating in hands-on ICT activity.

Youth technical skilling

A practical pathway between training institutions and meaningful technical work.



CII student interns and workshop participants during practical ICT activities.

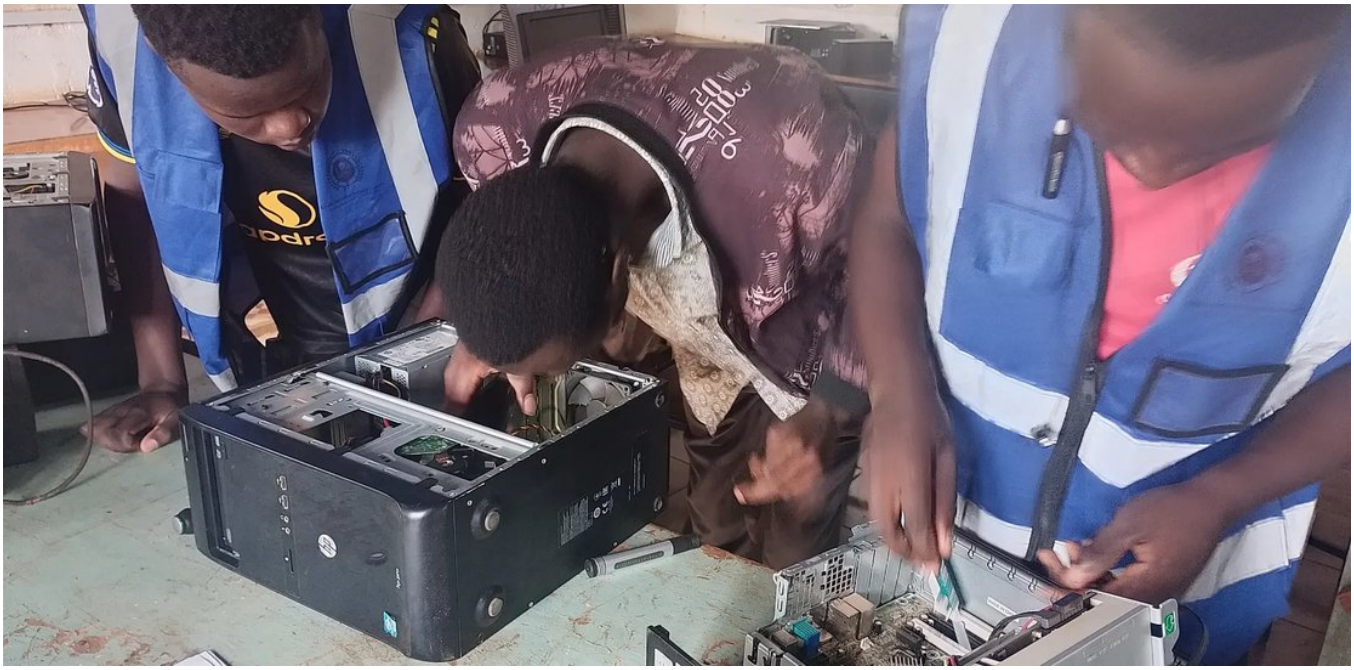
CII's workshop and field activities create opportunities for youth and TVET graduates to encounter faults that cannot be understood through classroom theory alone. Supervised diagnosis, safe tool use, repair documentation, computer assembly, LAN troubleshooting and communication with school staff are all relevant workplace experiences.

Interns in the distinctive blue reflective vests shown in CII photographs represent the practical learning dimension of the initiative. Apprenticeship and internship activities should be supported by clear supervision, safe working arrangements, recorded competencies and feedback from mentors.

CII has proposed a Tool Retention Pool to help trainees transition towards self-employment or employment. Its detailed financing and implementation should be documented before reporting it as an achieved benefit.

Technical skills in action

Building confidence through repeatable repair and quality control.



Student interns participating in a supervised computer maintenance and refurbishment environment.

Practical competencies

Device inspection, component fault tracing, operating-system maintenance, tool care, ESD awareness and test documentation.

Work readiness

Teamwork, communication, troubleshooting, job sheets, client care and the discipline to retest before redeployment.

A stronger internship evaluation system could record trainee entry level, practical tasks completed, demonstrated competency, mentor sign-off and post-placement outcomes. This would allow CII to communicate youth-skilling impact with the same confidence it seeks for workstation revival.

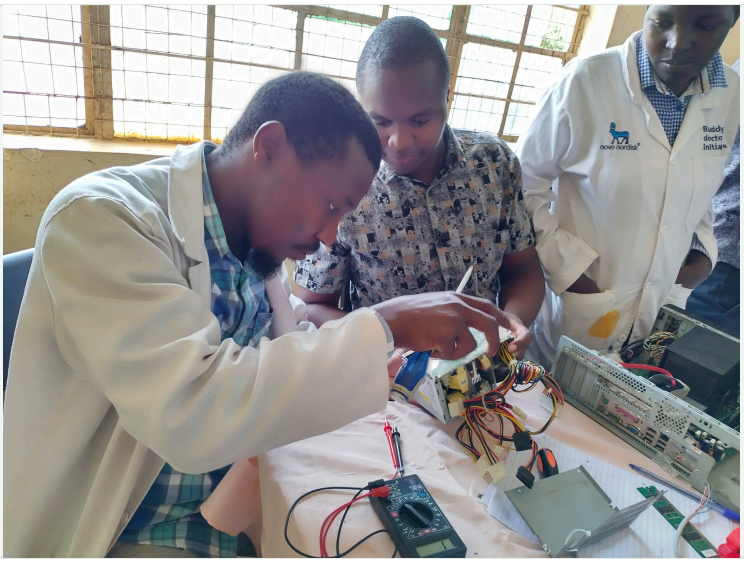
CII's longer-term Digital Innovation Academy vision adds an educational layer: turning restored facilities into spaces where learners can develop digital literacy, coding and creative problem-solving skills.

Bungoma ICT Teachers' Training

Circular-Economy Skills | 2022

St. Luke's Kimilili Boys High School | In collaboration with the Teachers Service Commission (TSC)

CII reports that ICT teachers in Bungoma participated in practical circular-economy skills training in 2022. The sessions demonstrated hands-on computer diagnosis, repair and component handling, helping teachers appreciate how existing equipment can be maintained and returned to educational use.



Practical demonstration of desktop computer hardware diagnostics and handling.



Participants working together on a computer display during a hands-on repair exercise.

Historical activity (2022): included as background to CII's practical training approach; not counted as a new 2025-2026 training event.

A broader impact picture

Connecting tangible repair outputs to meaningful learning outcomes.

612
Reported refurbished or revived computers

30
Reported schools reached

These two figures communicate operational reach. Yet the strongest evidence of impact comes from connecting them to school experience: whether a formerly idle computer becomes available to a learner, whether a laboratory has more usable workstations during timetabled lessons, and whether staff can maintain equipment after the team has left.



Component maintenance and systems servicing help sustain existing ICT investment.

Recommended outcome indicators

- Functional devices at baseline compared with functional devices after intervention.
- Number of lessons and practical learner sessions supported by restored facilities.
- Repeat-fault rates and laboratory uptime after three and six months.
- Teacher and student feedback on access, confidence and actual computer use.

Climate & circularity

What extending a computer's life can—and cannot—claim.

309.68

METRIC TONNES CO_2e

CII-reported estimate

Refurbishment can delay the environmental burden associated with manufacturing and procuring replacement equipment. However, avoided greenhouse-gas emissions are not the same as physically removing carbon dioxide from the atmosphere. An estimate requires a credible alternative scenario, realistic device-life assumptions and a transparent calculation method.



Repair and reuse can help prevent the premature retirement of serviceable ICT equipment.

Proposed calculation framework

- Identify the actual devices revived and their expected additional years of use.
- Define the likely replacement scenario and associated manufacturing emissions.
- Subtract significant refurbishment, transport and energy-related impacts where applicable.
- Show the emission factors, source years, assumptions, uncertainty and double-counting controls.

CII presents 309.68 tonnes CO2e as an estimated climate benefit associated with longer equipment life. This is an emissions-avoidance estimate, not a carbon-removal certificate or a tradable carbon credit.

ECONOMIC VALUE

Value preserved through repair

Residual computer value and installation labour are treated separately

KES 9.18M - KES 15.30M

Estimated residual value retained across 612 revived computers

Per-computer assumption

KES 15,000 - KES 25,000

A working computer retains usable value for the school when it is repaired and returned to learning rather than abandoned.

Labour for installation

Installation labour is a separate service component. If the agreed installation rate is L shillings per workstation, the additional installation-service amount for 612 workstations is 612 x L. No labour rate is assumed in this report.

Interpreting the result

The KES 9.18-15.30 million range is an indicative asset-value measure, not cash received by CII or automatically cash saved by a school. An actual net saving requires comparison against a credible replacement alternative and subtraction of repair, materials, labour and transport costs incurred.

A practical school-level record can show: restored device count, assumed residual value, installation labour, repair inputs, and service readiness.

What schools say

Practical learning is the purpose of every restored workstation.



School computer-laboratory support and the opportunities created by functional equipment.

> **This program has really helped us to have more computers in classroom to enhance digital literacy.**
>
> COMPUTER TEACHER • MILUKI SECONDARY SCHOOL

Miluki Secondary School describes how restoring computers expands classroom access to practical digital learning. The school perspective places the focus on the learner: more functional workstations support opportunities to practise, create and develop confidence with ICT.

Our work in pictures

A documentary selection from CII's actual project photo archive.



Precision motherboard diagnosis



Student technical interns



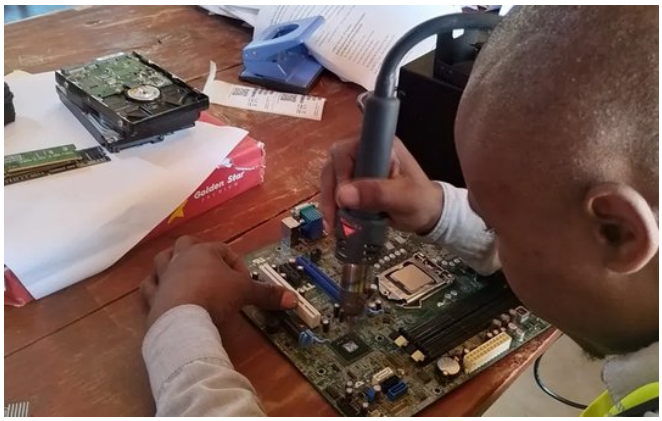
Laptop servicing



Monitor assessment



Technical field support



Desktop maintenance

CII | FIELD PROJECT PHOTO FEATURE

Revived Computers in Schools

Repair-to-Connect | Documenting restored equipment in use



BUTULA BOYS

Five revived computers presented at Butula Boys.



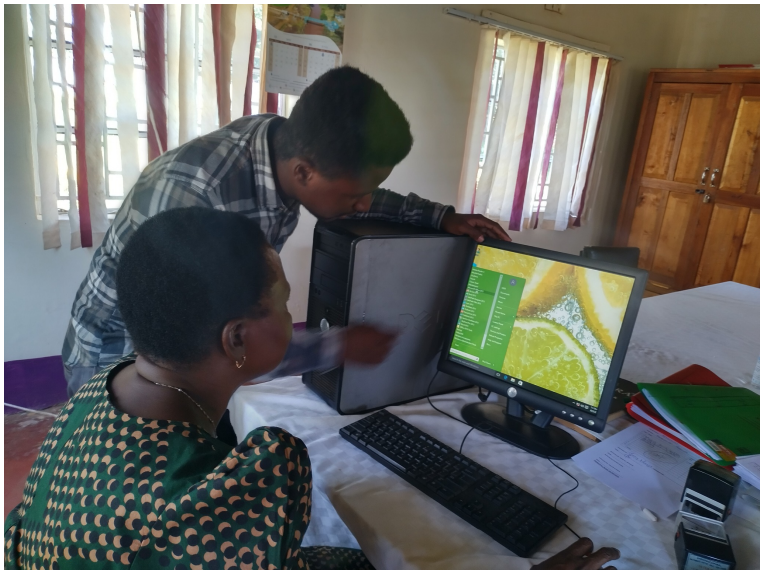
MATUMBUFU, BUNGOMA

Learners and school representatives with revived computers.

CII | FIELD PROJECT PHOTO FEATURE

Revived Computers in Schools

Repair-to-Connect | Documenting restored equipment in use



MATUMBUFU, BUNGOMA

Practical demonstration of a revived computer workstation.



NALONDO BOYS

Presentation of a revived desktop computer to school representatives.

CII | SCHOOL & TRAINING LAB PHOTO FEATURE

Revived Computers in Use

From repair benches to active learning spaces



NAMACHANJA HIGH SCHOOL

Students using revived computers for practical digital learning.



KIBABII TECHNICAL TRAINING INSTITUTE

Learners using revived workstations for hands-on ICT training.

Innovating for resilience

A non-cash model proposed to strengthen continuity of lab support.

The Maintenance Point Bank is CII's proposed way of recognising recoverable value in dormant or surplus institutional hardware. Subject to appropriate agreements and ownership verification, equipment assessed and accepted for reuse could generate internal service credits that schools apply towards eligible diagnostic support, materials, spare parts or scheduled maintenance.



A managed equipment pipeline requires clear ownership, condition and material records.

Conditions for responsible operation

- Written agreements specifying that credits are not cash and do not represent a regulated financial product.
- Transparent acceptance rules, asset ownership checks and realistic valuations.
- Appropriate data-handling procedures and a record of all equipment movements.
- Referral of genuine waste to properly licensed handlers, not informal disposal.

The Maintenance Point Bank forms part of CII's programme design for sustaining school ICT services. Its planned operation uses agreed equipment assessments, transparent service-credit rules and responsible handling of non-repairable materials.

Digital Innovation Academy

Making practical computer laboratories places of curiosity and creation.



CII involvement in the wider educational technology conversation.

Once a school's computers are functional, a second opportunity emerges: using that capacity for purposeful learning. CII's proposed Digital Innovation Academy (DIA) would support foundational digital skills, student coding projects, confidence with online tools and the development of problem-solving habits.

The academy concept complements the repair programme rather than replacing it. A restored workstation can support typing and curriculum delivery, but it can also become the site of a first coding project, collaborative assignment or local innovation challenge.

An achievable programme pathway

- Equip teachers with practical classroom-ready activities and ICT Champion support.
- Introduce age-appropriate digital literacy and coding sessions using available hardware.
- Track participation and learner skill progression with simple baseline and follow-up tools.
- Use student projects and teacher feedback to refine the programme before expansion.

Scaling beyond the pilot

Western Kenya as a foundation for eventual expansion across the country.

CII proposes a staged county-based expansion under Computer for Education | Mission 10,000+ — Repair-to-Connect. The initial concept identifies Bungoma, Busia, Kakamega and Vihiga as prospective focus counties, using one anchor refurbishment and training centre per county, accompanied by selected school engagements.

BUNGOMA

15 target schools

BUSIA

15 target schools

KAKAMEGA

15 target schools

VIHIGA

15 target schools

4 proposed anchor centres • 60 target schools

Proposed scope, not a claim of completed delivery or signed partnership

Beyond these initial counties, CII intends to pursue opportunities in other Kenyan counties as soon as suitable partnerships, trained technicians, facilities, equipment supplies and financing are available. Expansion decisions should reflect needs assessments rather than a commitment to deliver to every county on a fixed timetable.

Government and institutional cooperation referred to in strategy materials is prospective unless confirmed through executed agreements. No government approval or funding is implied by this plan.

Contribution to SDGs

CII's programme aligns with internationally recognised development priorities.

SDG 4

QUALITY EDUCATION

Functional computers and practical digital activities help schools widen access to relevant learning opportunities.

SDG 8

DECENT WORK

Internships and technical mentoring can strengthen youth work readiness and local repair skills.

SDG 9

INNOVATION & INFRASTRUCTURE

Repairing school LANs and extending ICT hardware life strengthens usable technology infrastructure.

SDG 12

RESPONSIBLE CONSUMPTION

Extending device life supports reuse and avoids premature disposal, subject to responsible downstream handling.

SDG 13

CLIMATE ACTION

Lifespan extension may lower lifecycle emissions when supported by rigorous alternative-scenario accounting.

CII connects education access, practical youth skills, reliable digital infrastructure and responsible equipment reuse. These priorities guide the organisation's contribution to sustainable and inclusive development.

Accountability

The link between repaired equipment, functional school labs and learning access.

CII's impact approach follows the path from assessing dormant school computers to restoring workstations and supporting classroom use. It distinguishes repair outputs from the educational opportunities created when laboratories remain operational.

BASELINE	School code, devices present, devices working and network condition.
WORK ORDERS	Diagnosis, work performed, materials, labour hours and serial/asset ID.
HANDOVER	Functional test, school sign-off, deployment date and user readiness.
FOLLOW-UP	30/90/180-day checks, recurrent faults, device uptime and teacher feedback.
IMPACT	Cost assumptions, emissions factors, student access and internship skills data.

Impact records focus on equipment condition, school service and learning access. Institutional and learner information is handled in line with data-minimisation, access-control and lawful-processing principles under Kenya's Data Protection Act, 2019.

FINANCIAL ASSESSMENT

Economic value and stewardship

An understandable basis for reporting value from revived computers

612 workstations x KES 15,000-25,000

Indicative residual value retained

KES 9,180,000 - KES 15,300,000

Why this value matters

When CII restores existing computers to working condition, schools preserve usable ICT equipment and can allocate scarce budgets to other learning priorities. The range above expresses the assumed remaining value of computers returned to service.

How installation labour fits

Installation labour is costed separately from residual device value. CII can report the value of installation support when an actual rate and service record are available. If installation work is necessary to redeploy a machine, the relevant cost must be considered in assessing net financial benefit.

Avoiding double counting

Residual value retained, replacement expenditure avoided and installation-service value describe different economic concepts. They are not added together indiscriminately. Actual school savings depend on which alternative purchase or installation expenses would otherwise have been incurred.

CII financial-impact illustration: device value = 612 x KES 15,000-25,000; installation = 612 x the documented rate per device, when applicable.

ASSESSMENT APPROACH

How CII measures impact

Scope, operational evidence and a consistent valuation method

Reporting scope

This assessment describes CII activities and cumulative achievements since its establishment in 2021. The 612 computers revived and 30 schools reached are cumulative CII-reported figures, not a separate count limited to 2025-2026.

Operational impact

A computer is counted as revived when a previously nonfunctional workstation returns to usable service. CII connects diagnosis, repair, functional testing and redeployment to practical educational access.

Financial valuation

Residual computer value is assumed at KES 15,000-25,000 per revived device. For 612 devices, indicative retained value is KES 9.18-15.30 million. Installation labour is considered separately using the actual agreed rate; net savings are assessed after relevant costs.

Environmental impact

CII reports an indicative 309.68 metric tonnes CO2e avoided through extended equipment life. This estimate is distinct from financial value and is not a claim of carbon removal.

Learning, training and expansion

The report includes evidence of school computer use, technical internships and the 2022 Bungoma ICT teachers training. The four-county anchor-centre model and further county expansion are presented as programme intentions rather than completed installations.

CENTRE FOR ICT INTEGRATION

info@cii.or.ke | programs@cii.or.ke | www.cii.or.ke