



Advancing Research, Innovation and Partnerships for National and Global Impact

NCST Quarterly Newsletter – Issue 021- July-September 2026

PREAMBLE: The Issue 21 of the NCST Quarterly Newsletter highlights how research, innovation and partnerships are helping turn ideas into practical solutions in Rwanda. From strengthening grant-writing skills and science diplomacy to advancing locally developed technologies and supporting research projects, these stories reflect the people and collaborations driving national progress. They also show the value of connecting researchers with the skills, partners and support needed to bring their work into use. We invite you to explore the achievements, lessons and opportunities featured in this issue.

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Capacity Building on Grant and Research Proposal Writing at Rwanda Polytechnic-Kigali College

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Introduction

Rwanda's Vision 2050 and National Strategies for Transformation recognize research, science, technology and innovation as drivers of social and economic development. Researchers contribute to these goals by developing practical solutions to social, economic and environmental challenges.

For research to make a difference, its findings must reach the people and institutions that can put them to use. Collaboration between researchers and those who use their findings helps shape relevant solutions and improve services and well-being. Funding enables researchers to develop and test promising ideas.

Securing it requires strong grant-writing skills: the ability to define a clear problem, propose a sound approach and show the value of the expected results. Strengthening these skills helps researchers prepare competitive proposals for NCST and other funding opportunities.

FROM RESEARCH TO IMPACT

Turning promising ideas into practical solutions

Grant-writing skills help researchers secure support, produce evidence and share findings.



✓ Aligned with Rwanda's Vision 2050 and National Strategies for Transformation

RP Kigali College and NCST Strengthen Researchers' Grant-Writing Skills

From 2 to 4 September 2026, Rwanda Polytechnic (RP) Kigali College, in collaboration with the National Council for Science and Technology (NCST), held a three-day workshop on grant proposal writing and management. The training aimed to help researchers, academic

staff and research support personnel identify suitable funding opportunities and develop competitive proposals.

While participants brought experience in conducting research, preparing a strong grant application calls for additional skills. These include interpreting funding calls, defining a clear research problem, setting achievable objectives, designing a sound methodology

and preparing realistic work plans and budgets. The workshop also focused on showing how proposed research could deliver innovation and practical impact.

The collaboration reflects RP's commitment to building research and innovation capacity across its colleges and NCST's role in supporting Rwanda's research ecosystem. By strengthening proposal-writing skills, the training

helps researchers turn promising ideas into well-planned projects with a stronger chance of securing funding.

Reason behind this training workshop on research grant writing

The goal of this training was to equip the researchers with the necessary knowledge, skills and tools to develop and write effective and winning proposals and implement grant development and management in a systematic manner

The specific Objectives were to:

- i. Provide hands-on skills training to strengthening the capacity of trainees to understand the requirements, prepare and develop a comprehensive and successful grant proposals;
- ii. Enhance understanding of competences of working in as a successful scientific team collaborating with people of the same scientific interest and broadening their collaborations to regional and international partners.
- iii. Train researchers and innovators on research management in research performing organizations and the ability to sustain research efforts, to innovate and achieve project goals
- iv. Implement training of trainers (ToTs) to a group of trainers that will train their peers

Methodology -Training proceedings

The training adopted a practical, participatory, and hands-on proposal-development approach, combining expert presentations, analysis of actual funding calls, case studies, facilitated discussions, individual and group proposal-development exercises, practical methodology development, theory of change frameworks and impact exercises.



Figure 1: Discussion among participants

The facilitators led the learning and critical thinking processes for each topic and prepared learning materials related to the topics that will be presented, an assessment tool for evaluation of expected outcomes were also availed. In addition to this, the trainees came to the training with initial proposal drafts that were improved as a result of applying hands on skills gained during the training.

Rwanda Polytechnic Researchers Strengthen Grant-Writing Skills

Thirty researchers and scientists from Rwanda Polytechnic's Kigali, Gishali and Musanze colleges took part in a grant-writing workshop held from 2 to 4 September 2026. Organized by RP Kigali College with support from the National Council for Science and Technology (NCST), the training helped participants turn research ideas into stronger proposals for funding.



Figure 2: Plenary session during the Training

NCST facilitators used real funding calls, group exercises and peer review to guide participants through the proposal-writing process. Participants worked on defining research problems, setting clear objectives, choosing methods and

preparing realistic work plans and budgets. They also reviewed draft proposals they had brought to the workshop and identified changes needed before submission.



Figure 3: Interaction session during the capacity training at RP-Kigali College

The workshop brought together staff from different technical and academic fields, creating opportunities for joint

research. Participants advanced two proposals targeted for completion and submission. Continued mentorship and

internal review will help the teams refine those proposals and apply the skills gained during the training.



Figure 4: Feedback by trainers on Presentation of one of Project by PR Staff

Outcomes and recommendations from the training

The table below summarizes the outcomes and recommendations from the training workshop

Table 1: Summary on key outcomes and recommendations from the training on research Grant writing

Topic covered	Outcomes	Recommendations
Research Grant Funding Opportunities and processes for grant writing	Improved proposal writing skills of trainees and increased competency for writing successful proposals for funding: Participants came up with proposal foundations: Innovative ideas/challenges supported into proposals, including through partnership with institutions from different sectors and internationally to respond to various grant calls	- Researchers from RP-Colleges need to have multi-disciplinary and multi-sectorial groups formed and continue collaborations in terms of fund mobilization and implementation of competitive collaborative research projects through joint grant writing locally and internationally - Researchers are required to establish strong partnership and effective leadership for donor management to build trust and long- term support and enhance impact
Research Grant implementation and management and Monitoring and evaluation	Improved understanding on responsibility, compliance and accountability for research grants management between researchers leading projects, institutions hosting projects and funders	- Rwanda is now home to a growing startup ecosystem, which is endeavouring to produce globally competitive technological innovations. It was recommended to strengthen more partnership between academia and industry, startups and scientists to produce and commercialize solutions to global challenges. - It was suggested that offices dedicated for research management should be established or strengthened at college levels to ensure improved research partnerships, joint research proposal development and implementation, and sustainable resource mobilization

Research project lifecycle	Participants gained skills and understanding on moving a research idea from conception, development, submission, awarding to implementation, evidence generation, monitoring, dissemination and impact, while maintaining scientific quality, ethical standards, financial accountability and funder compliance.	RP should move from a project-by-project grant management towards an end-to-end research and grant portfolio management approach. That is establish institutional systems for funding opportunity identification, proposal development, grant management and administration, grant monitoring, evaluation and learning, knowledge management, dissemination, and impact tracking.
Research grant budget development	The training equipped researchers with practical skills to translate their research workplans into realistic, activity-based budgets. Participants learned to cost each activity using the quantity unit cost number of periods formula, document their assumptions transparently, and avoid common mistakes such as vague lump sums. Through a hands-on case study, participants practiced breaking work packages into budget lines, calculating totals, and writing strong budget justifications that clearly explain what is being purchased, why it is needed, and how the quantities and costs were determined. The session also covered value-for-money principles (economy, efficiency, and effectiveness) and equipped researchers with a peer-review checklist to strengthen their proposals before submission.	Going forward, it is recommended that researchers apply the seven principles of strong budgeting when preparing any research proposal budget, and that they consistently reconcile their budget figures with the narrative, workplan, and expected outputs before submission. Institutions should also consider organizing similar workshops on a regular basis, ideally tailored to specific funding calls, to help researchers build confidence in cost justification and improve the overall competitiveness and compliance of their grant proposals.
Research grant Quality Assurance	- Participants gained practical skills to translate project objectives into clear activities, realistic work plans, measurable outputs and meaningful milestones. - Participants assessed the quality and readiness of their proposals, identified gaps and developed action plans to strengthen them before submission.	- Participants should use a structured work-plan format that clearly links each activity to its timeline, responsible person, expected output, milestone and budget. - Every proposal should undergo a final quality review to confirm alignment with the funding call, internal coherence, value for money and compliance with all submission requirements.
Risk Management, Sustainability and Research Knowledge Dissemination and community outreach	Participants improved their capacity to identify and manage project risks, develop realistic sustainability pathways, and design audience-focused knowledge dissemination and community outreach approaches that promote participation, feedback and uptake of research results.	Future proposals should include clear risk registers and mitigation measures, practical sustainability and transition plans, and tailored dissemination/ outreach plans with defined audiences, channels, timing and feedback mechanisms.

Funding research always seeks making an impact or a difference in society transformation. The research grant writers should aim producing commercializable products and services rather

than simply high-quality academic research. This requires researchers and scientists to have capacity for human centered-design of solutions, product design and business model develop-

ment as well as the desire and capacity to transform successful research into scaled solutions.

Training on Fire safety, Lightning Protection, and Emergency preparedness

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Introduction

On 18th August 2026, The National Council for Science Technology (NCST) staff and National Industrial Research and Development (NIRDA) were jointly participated in a training on Fire safety,

Lightning Protection, and Emergency preparedness. The training was organized through a collaborative initiative between the Ministry of Interior, the Ministry in Charge of Emergency Management and Rwanda National Police, which facilitated fire safety awareness

and preparedness training for employees working in public institutions. The training aimed to strengthen staff capacity and promoting compliance with fire safety standards in public institutions.



Figure 5: NCST and NIRDA team ready for the training on fire safety, lightning protection and Emergency preparedness

The training provided staff with practical knowledge on fire prevention, identification of fire hazards, appropriate use of fire extinguishers, emergen-

cy response procedures, evacuation measures, and lightning protection. It also emphasized of maintaining a safe working environment and ensuring

compliance with established fire safety and emergency preparedness requirements.



Figure 6: NCST staff doing practical training

The session enhanced staff awareness and preparedness to respond effectively to fire-related incidents and other

emergencies. It further contributed to strengthening NCST and NIRDA's commitment to staff safety, workplace

risk management, and compliance with National safety standards.



Figure 7: Demonstration on how it is done

Strengthening Rwanda's Capacity in Science Diplomacy

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Rwanda marked an important milestone in strengthening its science diplomacy capacity through its first participation as a country pair in the prestigious AAAS-TWAS Science Diplomacy Course.

Dr Marie Chantal Cyulinyana from the National Council for Science and Technology (NCST) and Dr Sagesse from Kepler College represented Rwanda at the 13th edition of the course, held at

the Abdus Salam International Centre for Theoretical Physics (ICTP) in Trieste, Italy, from 20-24 July 2026.



Figure 8: Group photo: participants, speakers, and organizers of the 13th AAAS-TWAS Course on Science Diplomacy, (Photo: G. Ortolani/TWAS)

Organized by the American Association for the Advancement of Science (AAAS) and The World Academy of Sciences (TWAS), the course brought together 24 scientists and policymakers, forming 12 country pairs from 13 countries. The programme pairs scientists whose work has relevance to international policy-making with policymakers, diplomats and officials working in science-related institutions. This approach promotes mutual understanding between the

scientific and policy communities and strengthens their ability to jointly address national, regional and global challenges.

The training was particularly timely, as countries face increasingly interconnected challenges, including climate change, food and energy security, biodiversity loss, public-health threats, geopolitical tensions and the rapid advancement of emerging technologies.

These challenges cannot be effectively addressed by science or diplomacy working in isolation. Science diplomacy provides a platform through which scientific evidence, international cooperation and diplomatic engagement can be combined to develop shared and sustainable solutions.

During the course, participants explored the role of science diplomacy in a rapidly changing geopolitical environ-

ment, mechanisms for communicating scientific evidence to decision-makers, the contribution of scientists to international relations and multilateral pro-

cesses, and approaches to developing large-scale scientific collaborations. The programme also examined how science diplomacy can build trust, bridge politi-

cal and institutional divides, and ensure that developing countries participate meaningfully in global science and technology decision-making.



Figure 9: Team Rwanda with Eudy Mabuza, Minister Counsellor: Science and Technology, South African Mission to the EU, Belgium (nationality: South Africa). (Photo: G. Ortolani/TWAS)

The course included the TWAS Budinich Science Diplomacy Lecture, delivered by Ko Barrett, Deputy Secretary-General of the World Meteorological Organization. The lecture highlighted the importance of international scientific cooperation in addressing global challenges and honoured the legacy of Italian physicist Paolo Budinich, whose collaboration with Nobel Laureate Abdus Salam contributed to the establishment of major international scientific institutions in Trieste.

Rwanda's participation represents an important contribution to national efforts to strengthen evidence-informed policymaking and use science, technology and innovation as instruments of international cooperation. For NCST, the knowledge and networks gained

through the course will support its mandate to advise the Government on science, technology and innovation policies, promote strategic partnerships and strengthen Rwanda's participation in regional and international science-policy processes.

Following the course, the Rwanda pair committed to promoting science diplomacy through policy briefs, stakeholder dialogues, capacity-building activities and stronger engagement between scientists, policymakers and diplomatic actors. Particular attention will be given to areas of strategic importance to Rwanda and the region, including climate change, clean energy, public health, emerging technologies and sustainable development. The pair will also seek opportunities to contribute to

science diplomacy initiatives within the East African Community and the African Union.

As Rwanda continues to pursue a knowledge-based and innovation-led economy, strengthening science diplomacy will help the country build trusted international partnerships, mobilize scientific expertise and infrastructure, contribute to global decision-making and advance national development priorities. The participation of Rwanda's first country pair therefore provides a strong foundation for developing a wider national community of science diplomacy practitioners.



Figure 10: Interaction session on building scenarios (Photo: G. Ortolani/TWAS)

The AAAS-TWAS Science Diplomacy Course has trained hundreds of professionals from developing countries over more than a decade. Rwanda's inclusion in this growing international network creates valuable opportunities for continued learning, collaboration and the use of science as a bridge for cooperation, dialogue and sustainable development.

one joint science diplomacy policy brief on a priority issue relevant to Rwanda and the region, and convene a policy dialogue bringing together researchers, policymakers, diplomats and other stakeholders. Rwanda will also explore opportunities to strengthen awareness and capacity in science diplomacy through professional and academic networks.

The team aims to establish at least one sustained collaboration or partnership connecting Rwandan scientific and policy communities with regional or international counterparts, with particular attention to shared challenges such as climate resilience, sustainable energy, health, environmental sustainability and emerging technologies.

Way Forward

Following our participation in the 2026 AAAS-TWAS Science Diplomacy Course at ICTP, Trieste, Italy, we commit to continuing our collaboration as a Rwanda-based pair to strengthen the role of science, technology and innovation in diplomacy, evidence-informed decision-making and sustainable development.

Drawing on the course's emphasis on the science policy interface, mechanisms for influencing decision-makers, the role of scientists in diplomacy, and international scientific cooperation, team Rwanda will work together to translate scientific knowledge into practical policy and diplomatic engagement.

Over the next 6-12 months, the team will develop and disseminate at least



Figure 11: Team Africa Discussion (Photo: G. Ortolani/TWAS)

Through these efforts, team Rwanda seeks to contribute to Rwanda's national development priorities while strength-

ening science diplomacy as a practical instrument for regional cooperation, innovation and sustainable development.

Monitoring the Progress and Impact of NCST- Funded Projects

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Biodiversity, Beers, Bitters, Beverages, and a Bag of Crisps (5Bs) Project

Background

This project is transforming Rwanda's biodiversity and indigenous fermentation knowledge into promising food and beverage products. Rwanda's traditional foods and beverages carry valu-

able cultural knowledge and untapped scientific potential. Through the National Research and Innovation Fund, the National Council for Science and Technology is supporting researchers and industry partners to convert this potential into practical innovations. One ex-

ample is the Biodiversity, Beers, Bitters, Beverages, and a Bag of Crisps project, known as the 5Bs project, implemented by the University of Rwanda under the Rwanda Innovation Challenges for Academia-Industry Research and Development Collaboration scheme.



Figure 12: NCST team with 5Bs project team

The project aims to valorize native plant biodiversity by developing commercially competitive foods and beverages using indigenous aromas, flavours and fermentation agents. Its target products

include aroma-enhanced dairy products, flavourings for beer and non-alcoholic beverages, natural bitters, food seasonings and preserved or dried foods. A major research component

focuses on developing a stable, locally sourced yeast starter culture for Ikigage, Rwanda's traditional sorghum-based beverage.



Figure 13: co PI Clement explaining the process of producing yeast

Traditional Ikigage production commonly depends on spontaneous fermentation or back slopping. Although deeply rooted in local practice, these methods can result in inconsistent quality, variable alcohol content and a short shelf life. Working with the National Industrial Research and Development Agency's life-science laboratory, the research team collected Ikigage samples from producers in Burera, Musanze, Gisagara, Gicumbi and Kayanza districts. Nine distinct yeast colonies were isolated and screened, and five promising strains were retained after biochemical characterization and carbohydrate-assimilation tests.

9

Yeast colonies isolated

5

Promising strains retained

2

Leading starter candidates

The results identified BRR-R and GSG-R as the leading candidates for sorghum-beer starter cultures. BRR-R recorded a fermentation performance index of 100 per cent, while GSG-R achieved 92 per cent and demonstrated a balanced metabolic profile. The team has also produced a freeze-dried yeast prototype, an important step toward a starter culture that can offer producers more reliable fermentation and consistent product quality. In parallel, phytochemical screening of five indigenous plant species identified bioactive compounds with potential application in natural flavouring, seasoning and food development. Five aroma-based products derived from *Mondia whitei*,

Rhamnus prinoides, *Vernonia amygdalina*, *Combretum molle* and *Artemisia afra* were produced and tested.

NCST noted encouraging progress and recommended accelerating the remaining activities. Priorities include yeast growth studies, DNA sequencing, preservation and packaging, timely progress reporting, stronger industry collaboration, and protection of intellectual property

Regulatory recognition remains an important challenge because some locally developed flavours and aromas are not listed in global food databases used in authorization processes. Continued advocacy, evidence generation

and engagement with regulators will therefore be essential. By linking scientific research with traditional knowledge, laboratory infrastructure and industry collaboration, the 5Bs project demonstrates how Rwanda can develop home-grown technologies that improve product quality, support commercialization and create greater value from its biological resources.

Women Led Research Advances Indigenous Chicken Productivity

An NCST-supported research project is combining genetics, locally adapted feeds, farmer training and market partnerships to strengthen Rwanda's indigenous poultry value chain.



Figure 14: NCST Team and IC team group photo

Indigenous chickens are an important source of food, nutrition and household income in Rwanda, particularly for rural families with limited resources. However, low productivity, disease outbreaks, expensive feed and weak access to reliable markets continue to constrain the sector. Through the Women in Sciences Research and Innovation Grant Scheme, the National Council for Science and Technology is supporting a five-year project led by Dr Claire D'Andre Hirwa at the Rwanda Agriculture and Animal Resources Development Board to address these challenges through research, capacity building and industry collaboration.



Figure 15: Demonstration of Artificial insemination (AI) in chickens



Figure 16: Artificial insemination (AI) in chickens process demonstration

The project is developing improved indigenous chicken genetics, feed and market systems while strengthening women's capacity to produce and com-

mercialize quality poultry products. Research at RAB's Muhanga Station has established and multiplied selected indigenous chicken breeds, including In-

dayi, Imirangi, Inshenzi and Sekaganda. Blood samples from 197 chickens were collected for DNA extraction, purification and genotyping, generating evidence to guide genetic improvement and the establishment of an elite flock.

Nutrition research has produced three feed formulations tailored to the starter, grower and layer stages using locally available ingredients. Trials involving dried black soldier fly larvae found that a 15 per cent inclusion level offered the best performance among the tested levels, suggesting a practical option for farmers seeking to prepare more affordable feed. The project has also developed an indigenous chicken vaccination calendar and extension materials covering breeding, housing and poultry health.

50

women beneficiaries trained

3

locally adapted feed formulas

197

chickens sampled for genotyping

Laboratory analyses revealed clear nutritional differences between indigenous and commercial broiler chickens. Across the project's multivariate analyses, indigenous breeds showed higher protein and mineral concentrations,

while broilers generally showed higher fat and lower mineral density. Indayi and Umirangi were particularly notable for their protein and mineral profiles. The findings provide a stronger scientific basis for breed selection, product

positioning and future food-quality research, while additional studies are continuing on meat quality and heavy-metal levels.



Figure 17: Demonstration on how food is prepared to feed IC

The project places women farmers at the centre of the innovation process. Fifty women beneficiaries, including young participants, received training in poultry housing, feeding, breeding, biosecurity, vaccination and record

keeping. Seven women promoters in Bugesera and Muhanga are receiving follow-up support, and participating farmers have organized financial solidarity mechanisms to help purchase feed and veterinary medicines. The ini-

tiative has also trained 11 RAB researchers, supported internships for 35 secondary-school and university students, supervised two master's students and created employment through station activities and participating households.

Partnerships are helping move the research beyond the laboratory. The project has engaged the University of Rwanda, the International Livestock Research Institute, Egerton University, poultry associations, farmers and feed companies including Zamura, Prodev and Gorilla Feeds. It has also developed a farmer-owned model that connects a hatchery unit, quality chicks and feed, training and veterinary services, production standards, market linkages and consumer engagement. The long-term vision is a self-sustaining genetic improvement and community business system that benefits women, youth and local consumers.

During its monitoring and evaluation visit to RAB Muhanga Station on 17 March 2026, NCST reviewed the project's technical and financial progress and recommended accelerating the remaining activities. Priorities include continued data collection, publication of findings, technical support to women promoters, stronger private-sector engagement and a policy brief on the farmer-owned model. Disease outbreaks and delays in project funding remain implementation risks. Nevertheless, the project demonstrates how women-led science can translate Rwanda's indigenous animal genetic resources into better nutrition, stronger rural enterprises and a more resilient poultry sector.

Design, Fabrication and Testing of a Solar Powered Induction Cooker

Every day, millions of Rwandans start a meal the same way: by lighting a fire. Smoke fills the kitchen, eyes sting, and someone, usually a woman or a girl, spends hours gathering wood or watching the pot. For most households this is simply how cooking has always been done.

A research team at Rwanda Energy Group (REG), working with Rwanda Polytechnic's IPRC Tumba, is trying to change this. They are designing and building an induction cooker that runs on sunshine, with the capacity to shift to electricity when solar power becomes weak. On 16th September 2026, a team from the National Council for Science and Technology (NCST) visited the project to see how far it has come.



Figure 18: Visit to one of women beneficiaries of indigenous chicken

What is an induction cooker?

An induction cooker works without flames or glowing electric coils. Instead, it uses a magnetic field to heat the pot directly, making cooking faster, safer, and more efficient. Because the cooking

surface itself stays much cooler than a traditional hot plate, less heat is wasted and the kitchen remains more comfortable. With no open flame, smoke, or cooking fumes, families can enjoy a cleaner and safer cooking environment.



Figure 19: Induction cooker designed at IPRC Tumba

Now imagine powering that cooker with the sun. Solar panels can provide electricity during the day and store extra energy in a battery for later use. On sunny days, a family can prepare meals using energy generated from sunlight and run from the battery when solar lights are missing. If the battery runs low, the cooker can then automatically switch to grid electricity. This reliable combination of solar, battery, and grid power gives families a practical way to cook cleanly while reducing their dependence on a single energy source.



Figure 20: Batteries storing solar energy for use when solar lights are off

That is the idea behind the project “Design, Fabrication and Testing of a Solar Powered Induction Cooker.” The team wants a cooker that is built locally, can be repaired locally, and eventually costs less than the imported models people can buy today.

The project is led by Dr. Delphine Abijuru of Rwanda Energy Group, with IPRC Tumba as a key partner. It began in December 2022 and was planned to finish in December 2025. The timeline has since been extended to December 2026, which means the team is now in the final stretch.

The project has six main objectives:

1. To study the technologies that can be used in a solar induction cooker
2. To carry out a baseline study on how households cook today and what they need
3. To set up the project so it can run smoothly
4. To simulate an induction cooking system on computer
5. To design and simulate the circuit that converts electricity from AC to DC
6. To build working prototypes of the solar induction cooker

Behind these objectives is a bigger hope: to cut the use of biomass for cooking, to improve family health, and to give young graduates skills and opportunities. The project also wants to bring together universities, colleges and industry, so that classroom knowledge turns into products people can use.

As part of its role as funder, on 16th September 2026, a five-person NCST team visited the project at RP-Tumba College. During the visit, the team did several things:

- a. Toured the laboratories and watched the lab work
- b. Looked at the plans for field visits to data collection sites
- c. Reviewed the work done so far and the plan for the way forward
- d. Checked how well the project team works together

It is a bit like a health check for a project and an opportunity to support the team in completing its work successfully, identify lessons along the way, and generate knowledge that can strengthen future research projects.

The project team has moved beyond plans and designs to a functioning prototype that the NCST team was able to see in operation:

- **The cooker is operational:** The project team has successfully built a working solar induction cooker, and initial testing has already been completed.
- **The housing is complete:** The cooker’s outer body has been fabricated and also serves as its stand. This practical two-in-one design reduces the number of components required and may help lower production costs.
- **The protective cover and circuit board are ready:** A cover was designed and produced to protect the electronic circuit board, which has now been assembled with the cooker. As the control centre of the appliance, protecting the circuit board is essential for both safety and durability.
- **The testing system is in place:** The researchers have assembled a test setup comprising solar panels, a battery pack, and a hybrid inverter that manages electricity from solar panels, battery storage, and the grid, enabling the team to assess how the cooker performs under different power conditions.



Figure 21: NCST Team and Project team

Together, these achievements represent an important step forward. Developing a functional cooker in a local workshop, using local expertise, is a significant accomplishment. The work also demonstrates the value of collaboration between a national energy company and a technical college. At the time of the monitoring visit, several important outcomes are already clear:

The technology is working: A functioning solar induction cooker has been developed locally.

Local technical capacity is growing: Researchers and students have gained practical experience in designing and building a clean-energy product—skills that cannot be acquired from textbooks alone and that remain valuable within Rwanda.

Partnerships are delivering results: REG and RP-Tumba College have shared technical knowledge, facilities, and equipment. The use of borrowed solar panels and batteries is one practical example of this collaboration.

Women’s leadership in science is being supported: The project was funded to help women scientists lead research and translate ideas into practical solutions. A woman-led project that connects laboratory innovation with household needs reflects this objective.

The route to impact is becoming clearer: If the cooker proves affordable, reliable, and easy to use, it could reduce reliance on firewood, lower smoke exposure in kitchens, and create opportunities for locally manufactured clean-cooking products.

By the end of the project, Rwanda will have more than a research report. It will have a tested, locally built solar induction cooker; a cohort of women researchers and young graduates with strengthened technical skills; and evidence to inform future clean-cooking initiatives. NCST will continue to follow the project and looks forward to sharing the final results once field data collection is complete.