



UGANDA INDUSTRIAL RESEARCH INSTITUTE

Driving Uganda's Industrial growth through skills development

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UIRI Namanve campus layout

Experience

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"It is a great place," she says. "We are working to convert the theoretical knowledge from university into practical applications. We use the equipment to create products and develop prototypes after receiving the raw materials."

The Uganda Industrial Research Institute (UIRI) is a pivotal hub for nurturing entrepreneurs and startups, playing a crucial role in Uganda's journey towards industrialisation.

Since its inception in 2002, UIRI has been dedicated to fostering industrial development in Uganda. Its incubation programme has been central in transforming raw ideas into viable businesses. For many entrepreneurs, UIRI is more than just an incubator, it is a launchpad for dreams.

Anita Tukashaba, a textile engineer intern, is currently attached to the textile laboratory. Here, she learns how to test various textile fabrics, starting with raw materials derived from natural fibers, including plant and animal sources. From plants, they work with banana fibers, pineapple fibers, and rattan. From animals, they work with fibers such as silk and wool.

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Research

To maximize the value of raw materials, research is the backbone of UIRI, driving value addition. Peace Nayebara, another textile engineer intern at the institute, takes great pride in this aspect of UIRI.

She derives immense satisfaction from her research experience.

"Currently, we are working on bark cloth, gathering information to explore its potential uses and what we can produce from it," she says.

Technology

Technology transfer and development are core services at UIRI. At the UIRI Nakawa campus, there are various technology showrooms. Each department is sectioned according to the type of technology offered, such as the

printed circuit board section, bamboo processing section, and handmade paper technology section.

This extends to the expansive space in Namanve, where Mr Ashaba Osbert, a Production Engineer in textiles, is pleased to be associated with the institute for its advanced technology.

"In the material and testing laboratory, we inspect materials in terms of their structural integrity and fitness. We conduct mechanical tests and non-destructive tests, such as X-rays. This is one of the few institutes in East Africa that can offer high-tech skills to support industries," he says.

Ms Mary Birungi, who joined as a trainee a year ago and has since been retained as an employee, commends the institute for its skill development programs.

"It has been a great experience because I started as a trainee and was later retained due to my acquired skills. It is a good institute because it helps you gain more skills. I learned many skills, such as making dresses and uniforms," says Ms Birungi, a fashion designer.

Fascination

Upon entering the UIRI showrooms at both campuses, visitors encounter comprehensive displays of cutting-edge technology.

The Nakawa campus, although smaller and akin to a starter hub for trainees, features sections dedicated to textiles and bamboo processing, meat processing, dairy processing, bakery, mushroom cultivation and value addition , Bakery , fruit and vegetable processing , soap and cosmetics processing ,Hand paper technology, wood and cow horn technologies, micro biology ,chemistry and food laboratories that help analyze and test products for quality and standards.

Notably, the mushroom section includes varieties known for their medicinal properties. For instance, the Ganoderma Lucidum mushroom, imported from China, is renowned for its anti-aging benefits.

According to the UIRI website, the Ganoderma Lucidum mushroom recently earned UIRI a prestigious award of Shs200 million under the National Research and Innovation call for FY 22/23 PRESIDE Project track.

Meanwhile, the Namanve campus integrates all essential aspects of UIRI's mission. This larger facility hosts specialized training centers where aspiring entrepreneurs and industry professionals refine their skills across various disciplines.

These centres are pivotal in nurturing talent and fostering innovation within Uganda's industrial landscape.

One notable success story showcased by **Prof Charles Kwesiga**, the executive director of UIRI, highlights the institute's impact on research, innovation, and value addition.

He proudly presented a prototype of a wooden radio developed through UIRI's guidance and support. The project exemplifies how UIRI empowers trainees to iterate and innovate through mindset change until they produce market-ready solutions.

"The transformation in mindset is evident from their initial enthusiasm to their persistent requests for the extended program," Prof Kwesiga says.

"For instance, an individual initially designed a basic radio, but with our guidance, he developed a prototype that meets market demands, a significant shift in mindset and capability."

Prof Kwesiga says the growing number of youths with innovative ideas is limited by the available infrastructure. He proposes that more research centres should be established.

"Currently, our centre can only accommodate a maximum of 160 trainees, which falls short of the country's needs. **My hope and prayer are for us to replicate this success and establish additional centers across Uganda, enabling us to support and harness the potential of more youth,**" he says.



UIRI Executive Director Prof. Charles Kwesiga displays a radio made at the UIRI mechatronics workshops



Printed Circuit Board (PCB) Lab.



UIRI Researcher testing for cotton parameters at the UIRI textile laboratory



UIRI Technician programming the CNC Machine at the UIRI engineering workshops



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UIRI skilling the youths for a sustainable future

World Youth Skills Day was established to emphasize the critical importance of equipping young people with essential skills for employment, decent work, and entrepreneurship, as well as for addressing global challenges and advancing sustainable development. Daily Monitor's **Richard Luyombya**, spoke to Prof Charles Kwesiga, the Executive Director of Uganda Industrial Research Institute (UIRI).

What is the relevance of the Youth Skills Day?

In 2014, the United Nations General Assembly designated July 15 as World Youth Skills Day to celebrate the critical role of equipping young people with skills for employment, decent work, entrepreneurship, and addressing global challenges, while advancing sustainable development.

The theme for this year's Youth Skills Day is 'Youth Skills for Peace and Development.' What does it communicate?

It highlights the crucial role that young people play in addressing global issues. Youth must be fully engaged in their environment and the global challenges at hand, not only as future leaders preparing to inherit today's world but also as active participants in finding solutions for our planet.

How important is it to equip young people with skills?

It is critically important because for development to occur, viable enterprises must be created. Establishing viable enterprises necessitates the application of appropriate technologies and the cultivation of relevant human capital. Developing this human capital demands skilled manpower. Without these skills, individuals cannot effectively participate in enterprise development.

How is the Uganda Industrial Research Institute (UIRI) supporting the youth to acquire skills for employment and decent work?

Based on the statement I just made regarding the application of appropriate technology and the deployment of requisite human capital, UIRI's focus has been to address these issues comprehensively. We aim to indigenise the technologies necessary for creating enterprises and to be actively involved in skills development, especially among our youth.

We believe in starting early rather than retraining retirees. By focusing on youth, we ensure they acquire the necessary skills to establish viable enterprises. UIRI



UIRI Technicians at work in the UIRI engineering workshops

has proactively trained and skilled youth, introducing concepts that complement academic education.

Additionally, we have established a facility at Namanve with an industrial production component, providing a platform for apprenticeship. This apprenticeship approach complements academic knowledge by offering hands-on exposure and practical training.

Through observing production processes and the creation of products, youth gain a deeper understanding of industrial operations, enhancing their practical expertise alongside their theoretical understanding.

What role do young people play in peace-building and conflict resolution?

There is ample evidence that youth can become problematic if neglected. Current events in Kenya, for example, illustrate how disgruntled youth can pose

challenges for leadership. The Arab Spring serves as a vivid historical example where youth-led movements had a significant impact.

These memories underscore the relevance of youth. If their potential is channeled into positive energy, they can actively participate in and contribute positively to the development process, rather than being disruptive.

How can we discover the potential of young people as agents of peace and a prosperous and sustainable future?

Engaging youth in current affairs and empowering them

as active participants, rather than mere spectators, is a crucial initiative undertaken by the government to promote youth involvement in governance. By involving them, we can harness their potential and foster a mutually beneficial partnership.

The challenge arises when we isolate and exclude them from governmental and social activities, which impedes their growth and development. It is vital to integrate youth into educational programs and establish meaningful partnerships that enhance their participation and contribution to society.

As Uganda joins the global celebration of Youth Skills Day, what message do you have for policymakers and the public?

Policymakers and the public must recognize the integral role that youth play in our society, particularly given our demographic distribution where a substantial portion falls within the youth age bracket. It is crucial to fully integrate them into all facets of our endeavors.

We must address issues of participation comprehensively and ensure that youth are actively involved in the development process.



Students on internship at UIRI engineering workshop

UIRI textile section



Students on internship acquiring skills in textile, fashion and design



Weaving looms fabricated at the UIRI carpetry workshop

