



## ABOUT KIRDI

The Kenya Industrial Research And Development Institute(KIRDI) is a public research institute under the Ministry of Investment, Trade and Industry.

The Institute was established in 1942 by the British colonial government, initially as a central laboratory at Kabete, Nairobi, to promote industrial development. This Laboratory was administered by the Kenya Industrial Management Board(KIMBO).

KIRDI's mandate is to undertake research, development and innovation in industrial and allied technologies and disseminate research findings to support industrial development.



Eng. Peter Korinko Mositet, KIRDI Board Chair, together with the Director General, management, and staff pose for a group photo after an engaging staff meeting during his induction program

## FEATURED

- Muhuru Bay Solcooldry Launch
- KIRDI-KIEP Graduation
- Changamka Kenya Shopping Festival
- Happy Land Preparatory School Visit
- EU-EAC MARKUP II Leather Training
- KIRDI Team Spreads Joy at JEHO Children's Home in CSR Initiative
- Kaizen Training
- KIRDI and ILO's Blueprint for Sustainable Economic Growth
- KIRDI at the First-Ever ATL&T Expo in Kenya

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## 1. Muhuru Bay SolCoolDry Launch

On August 13, 2024, a groundbreaking innovation lit up the shores of Muhuru Bay, Migori County, with the launch of the SolCoolDry facility. Powered entirely by solar energy, this state-of-the-art cooling and drying hub is set to transform post-harvest practices, reduce food losses, and uplift livelihoods. Developed by KIRDI in collaboration with local and international partners, SolCoolDry stands as a beacon of sustainable development, promising a brighter, more resilient future for the community.

This state-of-the-art facility combats up to 40% post-harvest losses in agriculture by offering sustainable cooling and drying solutions. Fully powered by off-grid solar energy, it serves over 200 fishers with ice production and hygienic tunnel drying for fish like omena, Nile perch, and tilapia, extending their shelf life and improving quality.



Developed by the Kenya Industrial Research and Development Institute in partnership with local and international stakeholders, the project was funded by the German Ministry of Food and Agriculture (BMEL) and supported by global organizations such as the Fraunhofer Institute of Solar Systems (Germany), Innotech GmbH (Germany), and Kenya Marine and Fisheries Research Institute (KMFRI). Locally, the County Governments of Kwale and Migori, along with community-based groups like the Mwazaro BMU Self Help Group, were instrumental in making this initiative a reality.



stakeholders during the launch

Stakeholders, including KIRDI, believe the SolCoolDry plant will drive growth and empower local businesses. As a hub for innovation, KIRDI connects entrepreneurs, offering valuable insights and opportunities that propel communities toward a sustainable and prosperous future.



stakeholders during the launch

**“Transforming challenges into opportunities, innovation knows no bounds when driven by a passion for sustainability and a commitment to positive change.”**



# KIRDI NEWSLETTER

## 2. KIRDI-KIEP GRADUATION.

On 14th November 2024, KIRDI celebrated a landmark moment in Kenya's industrial journey with the graduation of 51 KIRDI-KIEP Cohort V beneficiaries from the Nairobi Chapter. These visionary participants completed intensive training in manufacturing and enterprise growth, focusing on empowering MSMEs, fostering innovation, and advancing "Made in Kenya" products.



From second left is PS for Industry, Juma Mukwana, alongside the KIRDI Board Chair, Director General, and KIRDI Board Members during the graduation ceremony



KIRDI-KIEP beneficiaries during the ceremony

This transformative initiative underscored KIRDI's unwavering commitment to empowering MSMEs and fostering a culture of creativity and innovation. It marked a pivotal step towards industrial growth and economic transformation in Kenya, celebrating the achievements of individuals who were equipped to shape a brighter, more prosperous future for the nation.

The event was graced by Dr. Juma Mukhwana, Principal Secretary for the State Department of Industry in the Ministry of Investments, Trade, and Industry (MITI), who toured KIRDI's research and incubation centers, engaged with the graduates, and urged them to drive local industry forward. Joining him were KIRDI Board Chairperson Hon. Eng. Peter Mositet, KIEP Coordinator Mr. Philip Maitha, and Director General Dr.-Ing. Calvin Onyango



PS for Industry, Juma Mukwana, and KIRDI Board Members pose for a photo with KIRDI-KIEP beneficiaries

## success story

### Innovating Fitness: Isaac Imade's Journey at KIRDI

Isaac Imade, an SME at KIRDI's Engineering and ICT Research Center (EICT-RC), embarked on a transformative journey in July 2024, driven by a passion for innovation and cost-effective solutions. His path began with a personal fitness transformation—shedding weight from 118kg to 66.3kg in just four months. However, his pursuit of strength training exposed a major challenge: quality gym equipment was either scarce or overpriced.

Determined to bridge this gap, Isaac devoted himself to designing durable and affordable fitness equipment using thicker steel and premium materials. His creations quickly gained recognition from gym owners and fitness enthusiasts, who praised the improved quality and accessibility. With KIRDI's support, he refined his designs, reduced dependency on costly imports, and contributed to local manufacturing.



Isaac's journey exemplified resilience and innovation, proving that local solutions can drive global change. With KIRDI's backing, he was well on his way to leaving a lasting mark on Africa's fitness and industrial landscape.



Beyond gym equipment, Isaac envisioned a larger impact—establishing five manufacturing plants across Africa, starting in Kenya as the hub and expanding to South Africa, Angola, Nigeria, Morocco, and Egypt. His commitment to engineering excellence and industrial growth positioned him as a game-changer in the region's fitness and manufacturing sectors.





## 4) CHANGAMKA KENYA SHOPPING FESTIVAL

KIRDI was part of the 7th Edition of the Changamka Kenya Shopping Festival, which took place at KICC, Nairobi, from 5th to 9th November 2024.

The festival was launched by then the Cabinet Secretary for the Ministry of Investments, Trade & Industry, H.E. Salim Mvurya, and was attended by KIRDI's Board Chair, Hon. Eng. Peter Korinko Mositet, and Director General, Dr.-Ing. Calvin Onyango.

The event featured incredible discounts, factory prices, and exclusive deals on a wide range of products.

KIRDI showcased its innovative solutions and locally-produced goods, emphasizing its role in advancing Kenya's industrial research and development.



At the African Industrialization Conference, Dr.-Ing. Calvin Onyango, KIRDI's Director General, shared invaluable insights on the critical role of research, innovation, and commercialization in strengthening Kenya's industrial landscape. He emphasized KIRDI's role in fostering innovation and supporting SMEs to thrive in the manufacturing sector. Visitors to the KIRDI booth had the chance to witness the success stories of local manufacturers and shop for high-quality products at factory prices.



The KIRDI booth attracted visitors eager to explore cutting-edge products and engage with SMEs transforming Kenya's manufacturing sector. The event provided a unique opportunity to support local innovation and shop high-quality products at factory prices, celebrating Kenyan creativity.





# KIRDI NEWSLETTER

## **5) HAPPY LAND PREPARATORY SCHOOL VISIT.**

On October 11, 2024, the Kenya Industrial Research and Development Institute (KIRDI) welcomed pupils from Happyland Preparatory Primary School for an educational tour focused on science, technology, and innovation. The visit aimed to inspire young learners and expose them to real-world applications of scientific research.



Students engaged with researchers explored KIRDI's advanced facilities, and observed practical demonstrations of industrial processes and innovation techniques. These interactive sessions provided valuable insights into the role of research and technology in national development.



The visit sparked curiosity and enthusiasm among the pupils, evident through their insightful questions and eagerness to learn. KIRDI remains committed to nurturing future innovators by bridging the gap between academic knowledge and practical application.

We appreciate Happyland Preparatory for visiting KIRDI and look forward to seeing these young minds contribute to science and technology in the future.





# KIRDI NEWSLETTER

## 6) Empowering Leather Entrepreneurs: EU-EAC MARKUP II Training at KIRDI

The Kenya Industrial Research and Development Institute (KIRDI) successfully hosted a five-day Leather Manufacturing Training at the Industrial Material Research Centre (IM-RC) from 22nd to 26th October 2024.

Organized under the EU-EAC MARKUP II Program, the workshop aimed to enhance the skills of leather manufacturers, designers, and brands in crafting luxury bags and accessories.



This initiative, part of the EU-EAC MARKUP II program, aimed to promote economic growth in the East African Community through private sector development and export promotion.



The participants demonstrated dedication and passion, and the skills they acquired were poised to make a significant impact on the future of the leather industry in East Africa.



# KIRDI NEWSLETTER

## 7) Rewan Leather: A Legacy of Growth and Innovation

For over 20 years, Rewan Leather stood as a trusted name in the leather industry. Established by John Kimani, the business became synonymous with quality and dedication. In 2019, his son, Dennis Njoroge Kimani, took over after completing his university studies, determined to modernize and expand its reach.

Stepping into leadership came with its challenges—sourcing premium leather and navigating a highly competitive market. However, Dennis's passion for craftsmanship and entrepreneurial drive kept him moving forward. A firm believer in the profitability of well-made leather products, he recognized that they could yield up to 70% profit with the right approach.



Rewan Leather found invaluable support in the Kenya Industrial Research and Development Institute (KIRDI), which provided crucial services such as staking, shaving, and retanning. Access to advanced equipment allowed Dennis to refine his products while maintaining top-tier quality. KIRDI's affordable services also helped small businesses like Rewan Leather scale up and compete effectively.

Under Dennis's leadership, the business flourished. With a dedicated team of three employees, Rewan Leather expanded its market presence, supplying high-quality leather to Kariokor Market in Nairobi, Malindi, and even reaching international clients in Kigali, Rwanda, and Luanda.



Reflecting on his journey, Dennis shared, "Taking over the family business was a challenge, but with determination and the right support, I was able to elevate it to new heights. KIRDI played a crucial role in our success, offering the technical expertise and equipment necessary to compete in today's market."



His story is a powerful testament to resilience, innovation, and the strength of strategic partnerships. Through hard work and KIRDI's support, Rewan Leather not only preserved its legacy but also embraced modern advancements, ensuring a bright future in the leather industry.



## 8.)KAIZEN TRAINING

The Kenya Industrial Research & Development Institute (KIRDI), in collaboration with AOTS, recently hosted a transformative Kaizen 5S Marathon for local SMEs and industries. The training equipped participants with practical, low-cost strategies to boost productivity, enhance workplace safety, and create a positive work environment



The program focused on eliminating waste (Muda) and adopting small, deliberate steps for continuous improvement, empowering businesses to achieve higher efficiency, profitability, and sustainable growth.



Earlier in the year, KIRDI also conducted a high-impact Training of Trainers (TOT) on the Kaizen 5S philosophy which equipped professionals with tools to streamline processes, improve quality, and drive innovation. KIRDI remains steadfast in its mission to empower industries toward excellence.

## 9.)KIRDI and ILO's Blueprint for Sustainable Economic Growth

In 2024, the Kenya Industrial Research and Development Institute (KIRDI), in partnership with the International Labour Organization (ILO), conducted a comprehensive resource mapping and value chain analysis in Turkana County. The study identified livestock (45%), fisheries (19%), and minerals (11%) as the county's primary economic drivers. While 49% of local producers reported increased resource availability over the past decade, mainly due to support from development partners, 43% experienced declines, primarily attributed to persistent drought conditions.



The analysis highlighted significant demand for livestock, fish, agriculture (16%), and charcoal (10%) within the county. The county government has initiated various value addition projects, such as empowering slaughterhouse operators and enhancing fish processing capabilities. Despite challenges like post-harvest losses and irrigation inefficiencies, there is a strong commitment to effective resource management and development.



The study recommended adopting technologies to enhance processing in various sectors, including honey, meat, snacks, oils, and cosmetics. It also proposed establishing a Common Manufacturing Facility and a Technology Transfer Office to support MSMEs. KIRDI committed to working with partners to implement these strategies for sustainable growth and improved livelihoods in Turkana County.





## 10.) A Groundbreaking Event: KIRDI at the First-Ever ATL&T Expo in Kenya!

From October 3rd to 5th, history was made at the Sarit Expo Centre, Nairobi, as the Kenya Industrial Research & Development Institute (KIRDI) proudly participated in the All Things Lab and Testing (ATL&T) Exposing and Dialogue event—the first of its kind in Kenya.

Under the powerful theme, "Facilitating Intra-Africa Trade through Competent Testing Solutions," KIRDI's booth became a hub of inspiration, demonstrating cutting-edge research and game-changing testing solutions that are shaping Africa's industrial and trade landscape.



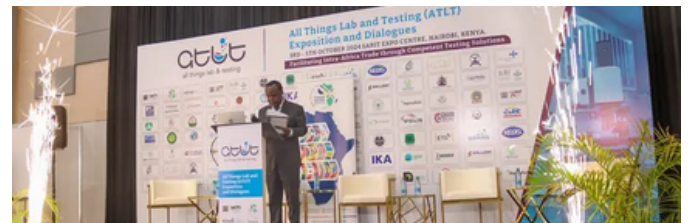
This transformative experience brought together industry leaders, innovators, and experts, sparking meaningful conversations and paving the way for a future driven by industrial excellence.

The event was officially inaugurated by Dr. Juma Mukhwana, CBS, Principal Secretary for the State Department of Industry, setting the stage for an eye-opening showcase of industrial innovation and technological advancement.

The All Things Lab and Testing (ATLT) Exposing and Dialogue event at the Sarit Expo Centre was an insightful and productive gathering. The sessions featured valuable discussions on enhancing testing capabilities and infrastructure in Africa. Key topics covered included:

- ◆ The role of standards bodies in African trade
- ◆ Challenges in the lab supplies market
- ◆ Future-proofing labs and cutting-edge innovations
- ◆ Medical diagnostics partnerships and GMO testing procedures
- ◆ Advancements in forensic testing and intellectual property management

Participants had the opportunity to visit the KIRDI booth for further insights on testing solutions driving trade across Africa.



**The All Things Lab and Testing (ATLT) Exposing and Dialogue event at Sarit Expo Centre has successfully concluded, featuring key discussions on the future of industry and trade in Africa.**

**Key Topics Covered:**

- Intra-Africa and cross-border trade
- Approval processes and regulatory compliance
- Property management

A special thanks to Dr.-Ing. Calvin Onyango, KIRDI researchers, and the event organizers. Appreciation also goes to all visitors who engaged in discussions on testing solutions for Africa's industrial growth.

# KIRDI NEWSLETTER

## 11.)KIRDI Team Spreads Joy at JEHO Children's Home in CSR Initiative

On 11 December 2024, the Kenya Industrial Research and Development Institute (KIRDI) team, led by Dr. Josephine Akama, Head of Corporate Affairs, visited JEHO Children's Home as part of a corporate social responsibility (CSR) initiative. The visit aimed to spread joy, foster community engagement, and positively impact the children's lives.



The team engaged in storytelling, interactive games, and meaningful conversations, deeply moved by the children's resilience and inspiring stories. Dr. Akama described the experience as enriching, highlighting the importance of giving back and supporting those in need.

KIRDI also expressed gratitude to the JEHO Children's Home staff for their dedication in providing a nurturing environment. This initiative underscores KIRDI's commitment to community support, expanding its role beyond research and innovation to create lasting social impact.



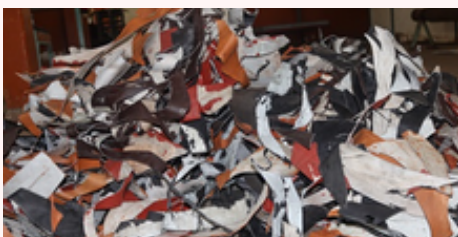


### 13. )CHROME LEATHER SOLID WASTE: TURNING WASTE INTO WEALTH.

The Kenyan government, through the Bottom-Up Economic Transformation Agenda (BETA), had identified the leather industry as a key sector for economic growth and industrialization. With a workforce of 17,000, the sector had the potential to create 100,000 jobs and increase its value from Ksh.15 billion to Ksh.100 billion over five years. However, a significant challenge threatened this progress—Kenya's nine operating tanneries generated over 8 tonnes of chrome leather waste monthly, including shavings, trimmings, and buffings. Unfortunately, most of this waste ended up in landfills or incinerators, causing environmental pollution and health hazards.

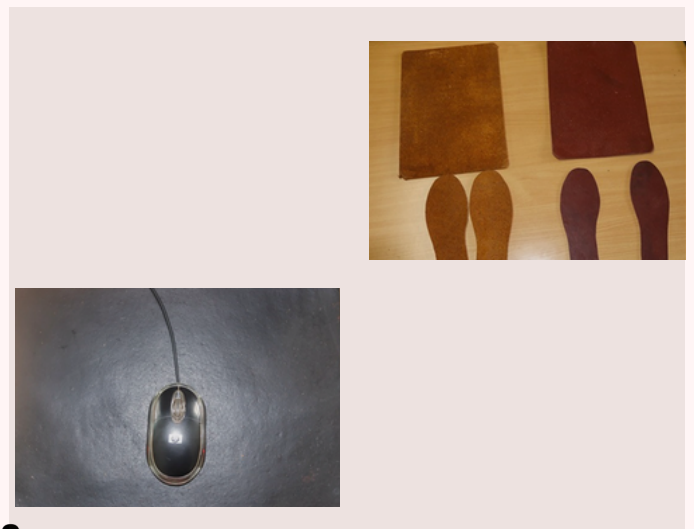
#### EMERGING TECHNOLOGIES TRANSFORMING THE INDUSTRY

To address this, KIRDI's Industrial Material Research Centre (KIRDI-IMRC) introduced cutting-edge technologies to repurpose leather waste into high-value products such as shoe insoles, mouse pads, table mats, leather ceilings, and partition boards. By transforming discarded materials into useful items, KIRDI not only helped reduce environmental impact but also unlocked new business opportunities, creating jobs and supporting small enterprises in the leather industry. This initiative showcased the potential of waste as a resource, aligning with global sustainability trends.



#### DIGITAL TRANSFORMATION

By embracing the circular economy, this approach aligned perfectly with BETA's vision of sustainable industrialization, job creation, and environmental conservation. With these advancements, Kenya's leather industry transitioned from being a sector burdened by waste to a model of innovation, eco-conscious manufacturing, and economic empowerment.









## PICTORIALS

### ENGINEERING (MECHANICAL & CHEMICAL)



### ENERGY (ESCC-RC)





### Vision

Quality industrial research for  
competitive and sustainable  
industries

### Core Values

Integrity – Sustainability – Team work  
– Creativity – Customer focus



### Mission

Provide innovative technologies for  
industry through research and  
dissemination of findings

### Motto

Research – Innovate – Commercialize

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