



SUSTAINABLE AND GREEN URBANIZATION SYMPOSIUM
HOSTED BY RWANDA INSTITUTE OF ARCHITECTS

THEME: THE RESILIENT RWANDA: ADDRESSING EVOLVING GREEN BUILDING EMERGENCY
AND SUSTAINABLE INNOVATION NEEDS IN THE BUILT ENVIRONMENT

RWANDA ARCHITECTURE WEEK 2023

Introduction & Opening Remarks



Opening Remarks by Rwanda Institute of Architects, Vice-President Jean Runuya kicked off Rwanda Architecture Week 2023 by highlighting the importance of addressing green building practices and acknowledging the achievements of Rwanda Institute of Architects.

Introduction & Opening Remarks



A KEYNOTE SPEECH delivered by the Director General of Rwanda Housing Authority, Rukaburandekwe Alphonse; on behalf of the Ministry of Infrastructure delivered remarks & gratitude to the architects for their dedication to sustainable practices and green innovation in construction.

I. Urban Resilience Preparedness, Actions and funding to green building Emergency



a. Achieving Energy efficiency in Rwanda by Dheeraj Arrabothu, Sr. Officer - Green buildings, GGGI Rwanda.

GGGI has been actively involved in supporting Rwanda's green growth agenda. GGGI collaborated with the Rwandan government to develop and implement the National Green Growth and Climate Resilience Strategy. This strategy provides a roadmap for Rwanda's sustainable development, focusing on key sectors such as energy, agriculture, urban development, and water resources. GGGI has worked with the Rwandan government to promote sustainable land use practices. This includes supporting the development of land-use plans that integrate environmental considerations, such as watershed management, reforestation, and biodiversity conservation.

I. Urban Resilience Preparedness, Actions and funding to green building Emergency



b. Resilient Rwanda, A call to reflection by Dr. Josephine Malonza of University of Rwanda

Cities take up 2% of space but are responsible for 70% of global economy, 60% energy consumption, 70% of gas emissions responsible of climate change & waste. A call to architects to give back to nature not just take back. A call to improve quality of life around and inside the buildings we engage with, no matter the scale. Highlights of students works examples as models to adapt from different project scales.

II. National Initiatives for Sustainable Urbanization and Circular Economy in the Construction Industry



a. Urban Economic Development Initiative by Mattias Piani of Enabel;

Engaging Communities in Sustainable Urban Development Community Participation & Decision-Making Processes Impact of Community Involvement in UEDI Project.

Presentation involved Construction Materials value chain development, green and circular economy initiatives, and different project applications, with a call on Importance of Green Building.

II. National Initiatives for Sustainable Urbanization and Circular Economy in the Construction Industry



b. Introduction to Circular Economy in Construction Sector, Mr. Philemon Byiringiro, Technical Expert on Sustainable Construction

CPCIC is a result of a merger between the decade-old Rwanda Resource Efficient and Cleaner Production Centre and the envisioned Climate Innovation Centre. CPCIC discussed strategies for promoting circular economy, challenges and meeting gaps and how this calls for a Circular Economy Pilot Project in Construction Sector.. The approach on Circular Economy in Rwanda is originated from the national strategic plan for construction sector 2022-2027 under the custodianship of the Ministry of Trade and Industry (MINICOM). The pillar 1 of the strategic plan is “Boosting environmentally integrated Production and Quality for competitiveness of Made-in-Rwanda MiR construction products”.

III- SPONSOR PRESENTATION - INNOVATIVE DESIGNS & ENERGY EFFICIENT SOLUTIONS IN CONSTRUCTION

SAFINTRA



MANUMETAL



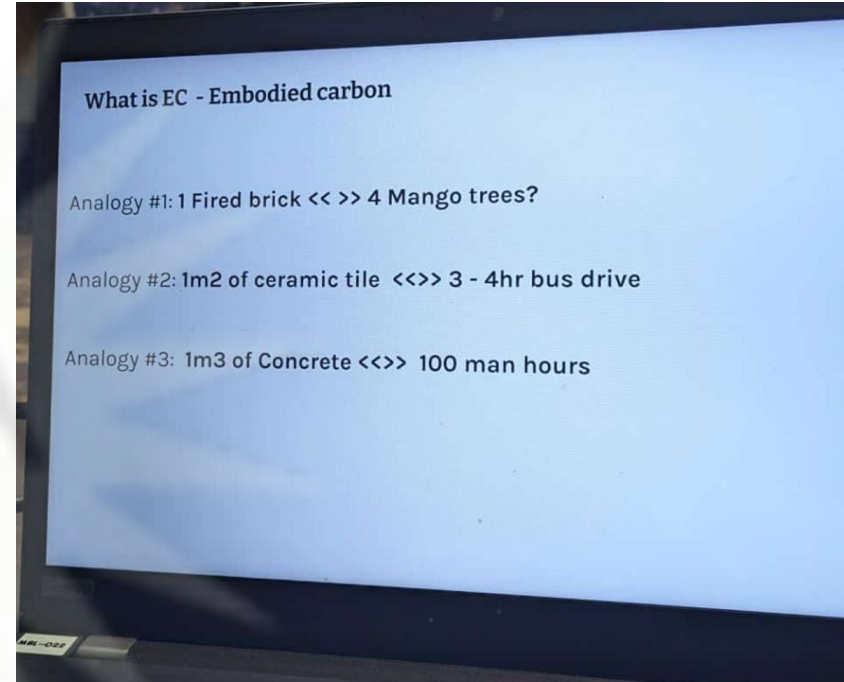
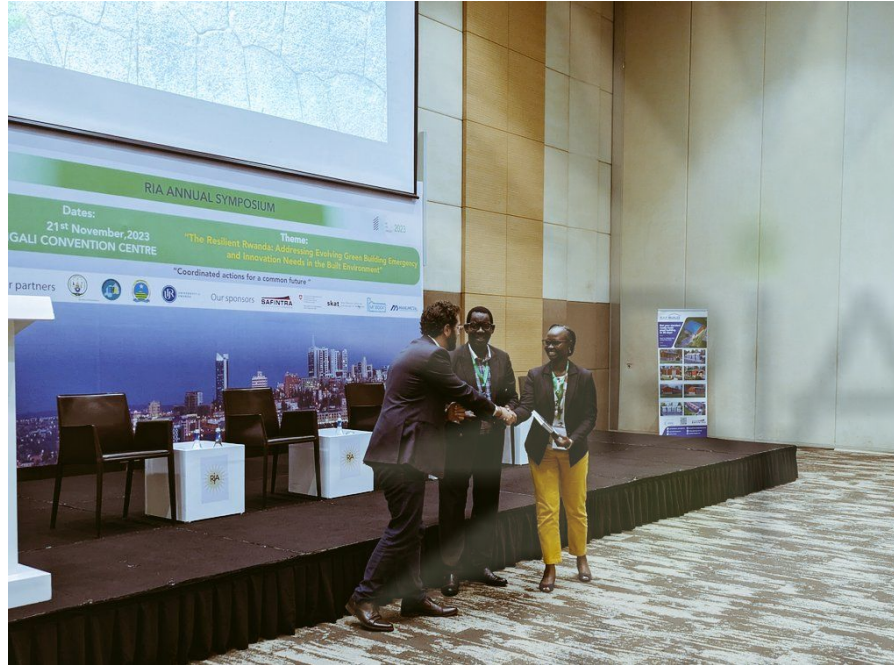
Manumetal Donation to the City of Kigali
for Urban Green Furniture for Public Spaces.

MR. ROOF



MR ROOF is specialized in the manufacture and installation of innovative roofing products & accessories. The best way to ensure a long lifespan of new roofing is to invest in quality products and opt for professional roofing installation. Mr Roof provides its customers with both and to further protect them we give them a 5 year warranty on material and installation. It's essentially a warranty that offers you peace of mind knowing that we stand by our work, guaranteeing performance for the years to come.

IV. Digital Toolkits for a sustainable built environment were distributed:



- a. PROECCO PROGRAMME Digital Toolkit Hand-over to Rwanda Institute of Architects Leadership
- b. MASS DESIGN Embodied Carbon Research - Calculations Process for Embodied Carbon in Buildings

V- Innovative Solutions for Green Buildings - Local Projects were presented



BE DESIGN - Introduction of KOMERA LEADERSHIP CENTER

BE_Design proudly presents the Komera Leadership Center, a facility in the rural eastern province of Rwanda providing health, education, and mentorship programs for young women, and a place for family development initiatives and community gatherings. Strategically set on the main road, across from the village football pitch, the Leadership Center acts as a much-needed community and education hub for local residents.

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V- Innovative Solutions for Green Buildings - Local Projects were presented



MASS DESIGN - NORRSKEN BUILDING

The new Norrsken hub is housed on the historic École Belge site in central Kigali, and marks the first adaptive reuse project in the area. Adaptive reuse measures make the Norrsken Kigali House an example of inclusive urban development, creating new public thresholds along the site perimeter. While repurposing existing classroom blocks, the site also presented an opportunity to build a new frontage that is open, transparent, and engaging.

The Norrsken Kigali House is a model of green building development and will be EDGE Advanced certified, meaning its buildings will have 40 percent or more on-site energy savings. For temperature control and ventilation, the design optimizes clay-shaded facades and natural ventilation, and incorporates a thermal labyrinth, a pioneering sustainable cooling system, to reduce energy demands.

VI. TRAINING & WORKSHOP



**International
Finance
Corporation**

We promote sustainable private sector investment in developing countries, helping to reduce poverty and improve people's lives.

BIM empowers owners

Using BIM, owners can:

- Improve building quality
- Significantly reduce building lifecycle costs
- Better understand design projects from beginning to end
- Optimize operational efficiencies
- Increase occupancy and use rates

Building Information Modeling (BIM)

A foundational, intelligent model-based process for business and industry transformation

- Uses 3D models to capture, explore, and maintain consistent and coordinated planning, design, construction, and operational data
- Provides greater project insight for cost, schedule, and constructability
- Uses and shares the same consistent data whether you're at your desk or in the field
- Enables prompt response to change with processes that are smarter and faster

Problems owners face

- Over **60%** of major capital programs fail to meet cost and schedule targets¹
- 30%** of construction cost is rework²
- 55%** of maintenance remains reactive³

The cost to owners

Poor use of data coupled with highly fragmented teams cost the US capital facilities industry \$15.8 billion annually¹

Owner's burden is about **2/3** of those costs during ongoing operations.

- International Finance Corporation “Excellence in Design for Greater Efficiencies”
- AUTODESK Team _ How BIM can Unlock Value to your AECO Firms?

VII. SITE VISITS



The rest of the CPD was concluded with site visit
- ADHI RWANDA_BWIZA
SDC_PROECCO_MPAZI PHASE II

RIVER

SIDE

ESTATE

GALLERY



A large, faint watermark of the RIA logo is centered in the background. The logo consists of a stylized sun with rays and the letters 'RIA' in a bold, sans-serif font.

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