



FUTURE LAB
By the Innovation Village



Energy Lab
By The Innovation Village

FUTURE SERIES
A LAUNCHPAD TO
UNIMAGINED POSSIBILITIES



TOPIC 1:
**IMPACT OF REAL ESTATE ON
CLIMATE CHANGE**

28TH FEBRUARY 2020



The
Innovation
Village

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The topical meetup successfully convened a total of fourteen (14) relevant stakeholders ranging from non-governmental organisations, private sector, government agencies, educational institutions and startups from the real estate and construction industry.

These stakeholders shared their practical experiences, challenges and lessons learned in incorporating innovative building techniques that can reduce the negative effects of climate change within the built environment.

The discussion forum further motivated participants to think deeper into more homegrown energy efficient and green solutions that can be applied to the construction and infrastructure sector in a bid to reduce the negative effects of construction on the environment and to realise cost savings through reduced energy consumption.

The speakers were very engaging which resulted in the audience participating in the discussions very actively. The audience left with an eagerness to contribute positively in conversation and action geared towards eco friendly and sustainable building solutions.

The overall success of the dialogue was made possible by the support of our facilitators, Mr. Ronald Kaweesi of PropTech Uganda and Mr. Geoffrey Kasumba of CliMates ECO/United Nations Framework Convention for Climate Change as well as the Mastercard Foundation who sponsored the event.

Partner



Sponsor



Private Sector



Researchers



Development Partners,
NGOs, CSOs



Startups

ChargeKo Technologies, AgriTech Solutions,
Climate ECOS, Energy-4-U, HiRes Digital,
Green Building Council Uganda

GHG

Greenhouse Gas

AI

Artificial Intelligence

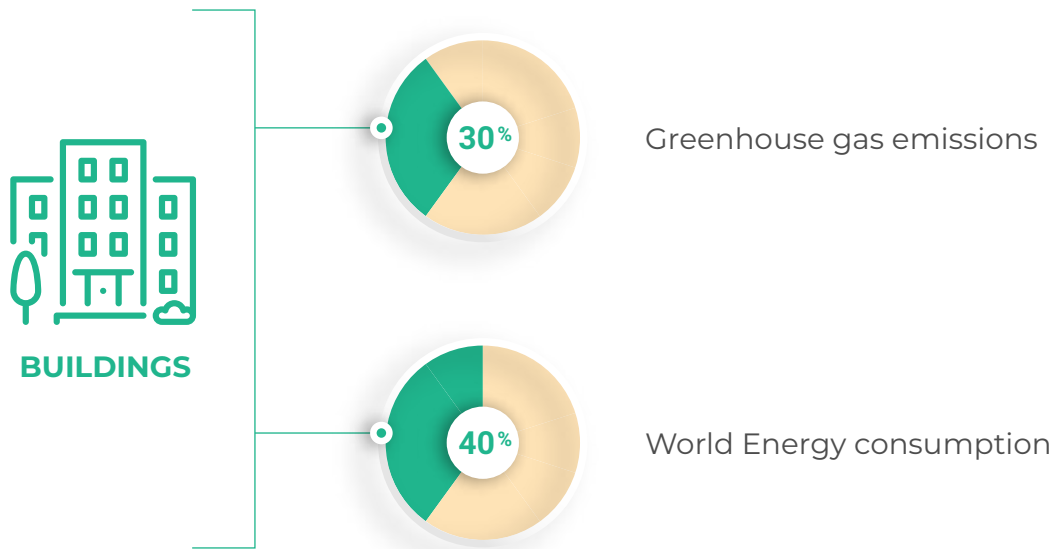
HVAC

Heating, Ventilation and Air
Conditioning



Climate change is the single greatest threat to life this century. Buildings contribute 40% of World Energy consumption and contribute 30% of the World's annual Greenhouse gas (GHG) emissions. Therefore, a small decrease in the energy consumed by buildings could result in a significant environmental impact.

Global real estate asset is valued at USD 550 Trillion meaning that property owners, investors, asset managers and other real estate stakeholders are major decision makers in the discussion of impact of Real Estate on Climate change.



IMPACT OF REAL ESTATE ON CLIMATE CHANGE

This topical meetup themed “Impact of Real Estate on Climate Change”, organised by the Energy Lab at the Innovation Village in partnership with PropTech Uganda, was held on Friday 28th February 2020.

This meetup is a start of a series of several topical meetups that will be geared towards devising ways through which innovation can be leveraged in the built environment to create sustainable development. As such, this meetup was aimed at providing insight into the effects of construction and real estate on climate change as well as identifying and assessing the various technologies, best practices and policies that can support in counteracting the devastating effects.



Introductions from The Innovation Village team

Joanita Nyangoma, Energy and Sustainable Lad Lead

The Future Labs program, from which the Energy Lab was derived, was set up by the Innovation Village to enable collaboration between startups, private sector, public entities and investors to address community and industry challenges under a single innovation ecosystem in various sectors.

The Energy Lab specifically, has been set up as a platform that converges all key stakeholders in the sector in order to collaborate on solutions developed by startups to unlock opportunities for the sector as one force towards a sustainable energy economy.

The Energy Lab seeks to partner with key sector players in a bid to develop and support innovators and startups in creating low cost sustainable energy solutions that address industry and community challenges.



CLiMATES ECO: Climate Change Overview in respect to Uganda

Geoffrey Kasumba, Climate Change Specialist

Uganda is the 14th most vulnerable country and the 48th least ready country - meaning that it is very vulnerable to, yet unready to address climate change effects. Vulnerability measures the country's exposure, sensitivity and ability to cope with the negative effects of climate change by considering vulnerability in six life supporting sectors namely: food, water, ecosystem service, health, human habitat and infrastructure.

The National Vision 2040 prioritises among others renewable energy, appropriate adaptation and mitigation strategies, knowledge and information sharing on climate change, increased coordination and capacity and improved monitoring/evaluation regarding climate change interventions.

Climate adaptation strategies are very necessary especially to ensure that property assets do not suffer from damages and potential business disruptions due to more frequent and severe rain storms. Now more than ever, there is an urgent need for resilience-building across assets to ensure business continuity and reduce financial loss. It should also be noted that considerable capital should be used to invest in energy efficient/conservation solutions reducing some of the negative effects realised from climate change.

PropTech Uganda: Impact of Real Estate on Climate change

Ronald Kaweesi, PropTech Uganda Lead

“Climate change is the most disruptive socio economic force in human history. Disruption spells opportunity, but only for those who are prepared for it. Intelligent investors take note.” - Ludgin and Mazzacurati

There is a shortage of tools and resources to effectively identify and analyse localised climate change impacts. Therefore, there is a need to monitor resilience of assets or effectiveness of action.

Artificial Intelligence (AI) systems allows one to make sense of the building data collected. AI powers smart building management systems for autonomous tasks, producing a more energy efficient outcome.

In a bid to reduce the negative effects of climate change, interventions necessary at construction and real estate phase respectively include:



Construction

- Carbon reduction at construction
- Reconstructing chemical composition to make materials more sustainable
- Self healing concrete
- Carbon take back paint
- Reinforced timber frames instead of iron bars



Real estate

- HVAC and Energy Optimisation
- Air quality
- Smart Building

1

Keen interest by the various participants to be strong allies with players in the Energy and Sustainability ecosystem in the fight against Climate Change

2

Knowledge enhancement regarding the various energy efficient technologies and best practices that can help to mitigate the negative effects of Climate Change with a particular focus on the construction and real estate sector

3

Valuable insights into Climate change policy dynamics at a global scale

4

Recommendations for appropriate and sustainable building technologies applicable to the local Ugandan context



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