





## THE CONFERENCE

The conference brought together diverse participants to discuss education, focusing on building schools and rethinking teaching methods for East Africa's growing young population. It featured a range of speakers, including engineers, architects, professors, teachers, school directors, and local policymakers, who addressed the challenges in creating sustainable educational environments. The event culminated in the launch of the School Design Guide draft, encapsulating the guiding principles for building sustainable schools in East Africa, reflecting the collective expertise and innovative ideas shared during the conference.



## SCHOOL DESIGN GUIDE

The guide, based on field research conducted in East Africa and the expertise of leading architects and engineers in the education sector, outlines sustainable school-building principles and showcases successful designs within the region. It serves as a resource for designers, builders, school directors, policymakers, and parents to enhance education quality. Feedback on the guide gathered at the conference was integrated to address gaps and improve its effectiveness.



LINK TO THE PDF  
DOWNLOAD HERE

## CONFERENCE PROGRAM

### 02 JULY

- 8:30 AM INTRODUCTION
- 9:30 **1** DEFINING THE PROBLEM + Q&A
- 10:30 BREAK
- 10:45 **2** THE SCHOOL ENVIRONMENT + Q&A
- 11:25 **3** RESPONDING TO CURRENT CHALLENGES + Q&A
- 12:15 **4** SPECIAL NEEDS & INCLUSIVE EDUCATION : OUTDOOR LEARNING SPACES & OPPORTUNITIES : MAINTENANCE SAFETY & FINANCES
- 13:15 LUNCH
- 14:15 **5** INNOVATIONS, TEACHING & LEARNING : GREEN SOLUTIONS FOR SCHOOLS : THE FUTURE OF SCHOOLS
- 15:20 BREAK
- 15:50 **6** PANEL DISCUSSION: EXPERIENCE OF EDUCATION IN EAST AFRICA + Q&A
- 16:35 PM WRAP-UP & CLOSING STATEMENTS

### 03 JULY

- 8:30 AM INTRODUCTION
- 8:45 **7** PREPARING THE ARCHITECT OF TOMORROW + Q&A
- 9:15 **8** INTRO. TO MASS AFRICA STUDIO'S LEARNING & ENTREPRENEURSHIP FOCUS AREA + Q&A
- 9:45 **9** COMMUNITY OF PRACTICE : INNOVATIVE CONSTR. CONCEPTS & PARTICIPATORY DESIGN : INCORPORATING TECHNOLOGY INTO SCHOOLS
- 10:50 BREAK
- 11:20 INTRODUCTION OF DRAFT SCHOOL DESIGN GUIDE
- 12:00 CASE STUDY SCHOOLS
- 13:00 LUNCH
- 14:00 BREAK-OUT DEBATE WITH QUESTIONS
- 15:15 CONCLUSIONS
- 16:35 PM EXHIBITION, TOUR & COCKTAIL RECEPTION



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## DEFINING THE PROBLEM

**BENOIT LEGRAND**  
 Coordinator Territories, Cities & Climate, Enabel  
 ENABEL.BE

**DR. KEDRACE TURGYAGYENDA**  
 Commissioner, Education Policy Review Commission  
 EDUCATION.GO.UG



## THE SCHOOL ENVIRONMENT

**MUGDHA THAKURDESAI**  
 Design Principal, Education Design International (EDI)  
 EDUCATIONDESIGN.COM



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### OVERVIEW

Benoit LeGrand and Commissioner Turyagyenda emphasised sustainable, inclusive designs and holistic, quality education for Africa's young population, advocating modern facilities, extracurricular activities, and supportive, learner-focused school environments for future developments.

Benoit LeGrand stressed the importance of addressing the climate crisis in building projects, expanding on sustainability to include social and economic dimensions and advocating for inclusive and gender-positive design principles. The need for cost-effective and replicable design was also emphasised. He went on to trace the shift over the past 70 years from rigid, lecture-based learning to collaborative, learner-centered approaches. In the context of the digital age and an evolving job market, LeGrand called for a rethinking of educational strategies and outcomes.

Commissioner Turyagyenda focused on Africa's predominantly young population, with 70% under 30, stressing the urgent need for quality education to secure the continent's future. She defined quality education as holistic, promoting skills in problem-solving, collaboration, independent learning and community participation. Beyond exceptional teaching, she highlighted the importance of modern facilities, equipment, and extracurricular activities that foster creativity and enhance well-being. She envisioned schools as supportive communities, prioritizing learner-focused approaches, safety, strong leadership, and comprehensive resources.

### DISCUSSION

- + The issue of most schools being private rather than public, which limits govt involvement.
- + The challenge of balancing cost efficiency with sustainability, as the latter often exceed traditional construction costs, leading to hesitation from private developers.
- + How ready is the government to support development partners who want to create the good schools? Has the Ministry of Education included in its plans the retrofitting of existing schools for inclusive design?



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### OVERVIEW

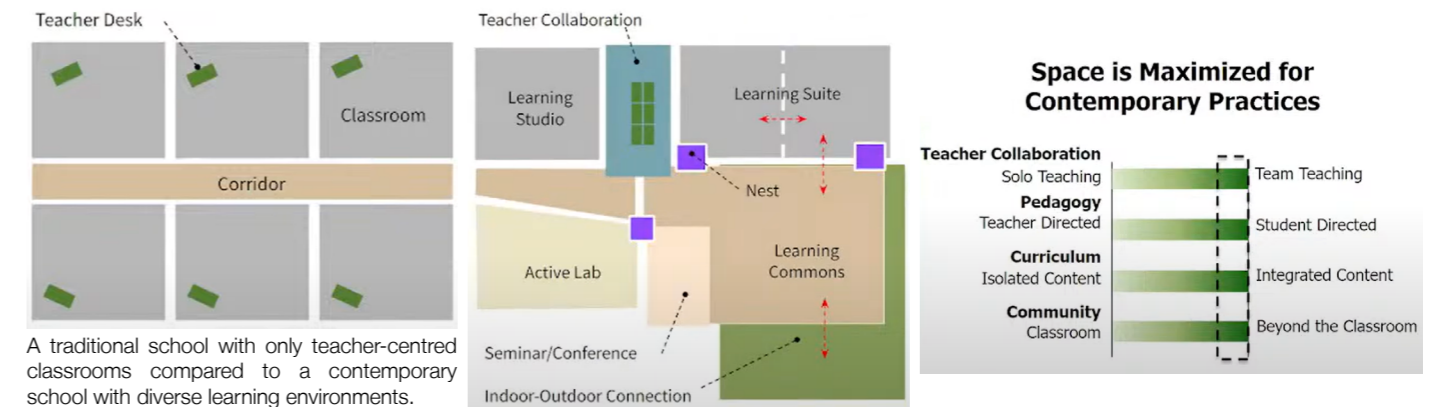
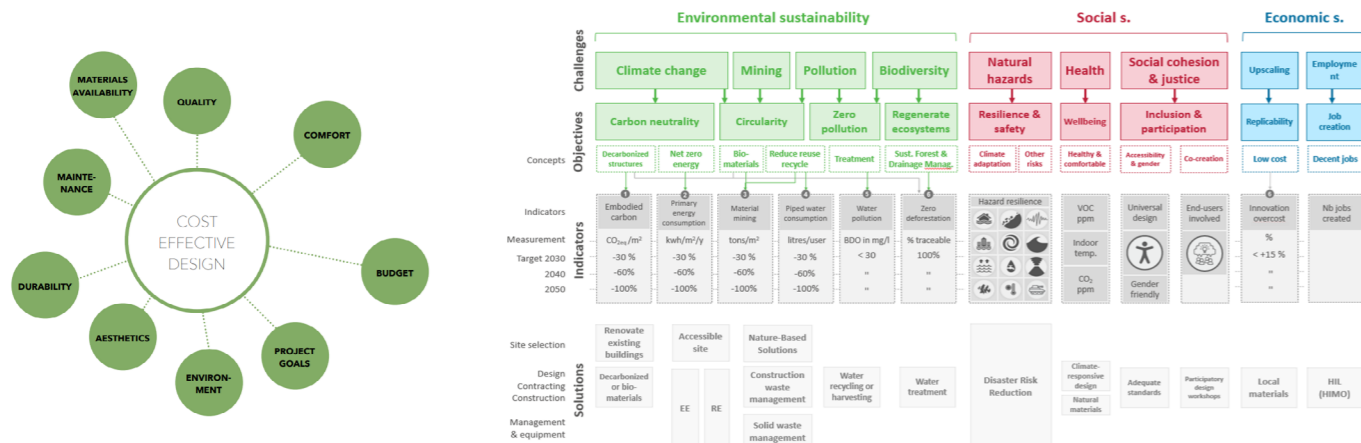
This session demonstrated EDI's school-design principles which promote flexible and diverse learning spaces, integrating traditional and innovative methods. The presentation highlighted student-centred classrooms, collaborative environments and outdoor connections, outlining the psychological impacts of design on learning.

Mugdha Thakurdesai explained how EDI's school projects challenge traditional lecture-based teaching by incorporating flexible, open classrooms and diverse learning spaces that promote student agency, collaboration, emotional well-being, and a sense of belonging. EDI projects in East Africa exemplify these principles, showcasing innovative educational spaces designed to accommodate 10-20 different learning modes. Thakurdesai emphasised the shift from hierarchical, teacher-centered instruction to learner-centered approaches that actively engage students and foster skill development. She highlighted the importance of spatial flexibility, with moveable furniture and walls supporting diverse learning formats, and advocated for environments that facilitate both collaboration and creative exchange alongside traditional classrooms.

Thakurdesai also proposed that schools should encourage students to think beyond classroom walls, integrating outdoor connections to foster environmental curiosity. She underscored the psychological impact of design elements like color and welcoming entrances, which enhance learning and create a sense of belonging. Additionally, she highlighted the importance of teacher-collaboration spaces for skill-sharing and professional development.

### DISCUSSION

- + The challenge of balancing these 'model' school design principles with budget limitations
- + How can we effectively accommodate students with special needs, such as sound sensitivity and the need for breakaway spaces for self-regulation?
- + The need for teacher training, especially in government schools, to ensure that such flexible spaces, which offer new modes of learning, are fully utilised and not underused.



A traditional school with only teacher-centred classrooms compared to a contemporary school with diverse learning environments.

## RESPONDING TO CURRENT CHALLENGES

PROF. PETER CLEGG

Founding Partner Feilden Clegg Bradley Studios & Professor of Architecture, University of Bath  
FCBSTUDIOS.COM | FEILDENFOUNDATION.ORG.UK



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### OVERVIEW

This session introduced the School Design Guide, a comprehensive sourcebook for building schools in East Africa, formed in response to the challenges laid out in previous sessions. Professor Peter Clegg delivered an overview of the tool, tracing the process of its creation and outlining the key principles that underpin its guidelines.

Professor Clegg addressed the pressing challenge facing East African nations: the urgent need to build schools rapidly to accommodate a growing population, while also meeting the high expectations for quality education. Recognising this dual demand, Professor Clegg and his team has been working for a year on the development of a series of guidelines for the design of schools which will form a sourcebook and online resource for design professionals, teachers and school proprietors. He explained the process the team had gone through to define the qualities of a good school, focusing on four key principles. Schools should be :

- **Child centred:** providing a holistic education with flexibility to meet future needs
- **Inclusive:** community-based with universal access and provision for special needs
- **Sustainable:** designed to respect nature and mitigate climate change
- **Robust:** with high standards of health and hygiene and low maintenance costs

The Design Guide will include recommendations on site masterplanning and the design of specific buildings. A section on Landscape design will look at the design of the all-important external environment of a school. There will be discussion of materials and construction techniques that minimise cost and embodied carbon and finally a section on building services which looks at Water, Sanitation and Hygiene (WASH) and the provision of cooking facilities and electricity. The talk included reference to many examples of best practice in school design in Rwanda and Uganda, which will form a series of case studies in the book.

### DISCUSSION

+ The challenges in designing foundations that allow for the future vertical expansion of schools, especially in urban contexts i.e. convincing developers of its necessity; and balancing this with the criteria of minimising a building's carbon footprint.



## SPECIAL NEEDS AND INCLUSIVE EDUCATION

COMMISSIONER SARAH BUGOOSI

Special needs, MoES Uganda,  
EDUCATION.GO.UG

YAHOKO ASAI

Regional Inclusive Education Technical Specialist, Humanity & Inclusion  
HI-US.ORG/EN/INDEX



### OVERVIEW

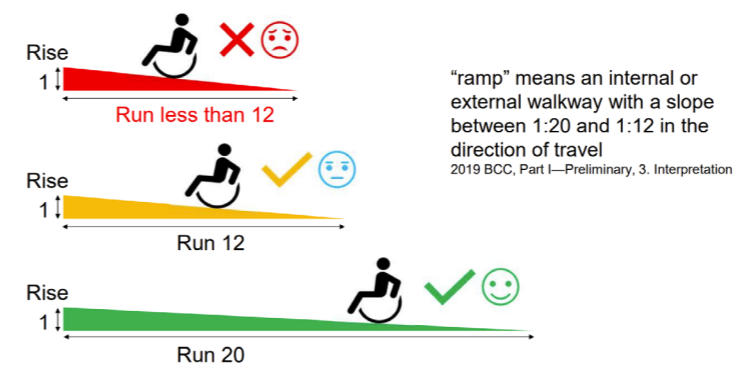
This break-out session looked at the challenges in improving accessibility and inclusion in schools in Uganda and about government policy and design guidance to improve it.

Commissioner Bugoosi presented some of the constitutional rights and protections for persons with disabilities. She explained how these are not always met in schools design, especially when considering more holistic accessibility needs beyond simply providing ramps. Some of the barriers faced by those with accessibility needs were presented, including not only physical barriers, but also inadequate teaching practices; negative attitudes of teachers and parents; and unsuitable learning materials.

Yahoko Asai showed some examples she had seen of where accessible design had been intended, but where the infrastructure – for example steep ramps – was not appropriate. She highlighted the point that an impairment only leads to a 'disability' when barriers are in place, and that removal of these barriers can lead to full and equal participation in education. She presented the new [School Accessibility Companion Guide to the Building Control Code 2019](#). This is a visual guide and a check list to help those designing and building schools to build in genuinely accessible measures.

### DISCUSSION

- + How do we consider emergency egress for those with physical impairments, especially with multi-storey buildings
- + The cost of making every part of a school (even multi-storey) accessible by ramp
- + The idea of reducing ramps required by ensuring that every type of space can be accessed on the ground floor, and adjusting the timetable accordingly.
- + The problem that the current ministry-standard designs do not result in accessible spaces.



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## LEARNING SPACES AND OPPORTUNITIES

**CHLOE HUMPHREYS**  
Landscape Designer, The Landscape Studio  
THELANDSCAPESTUDIO.COM

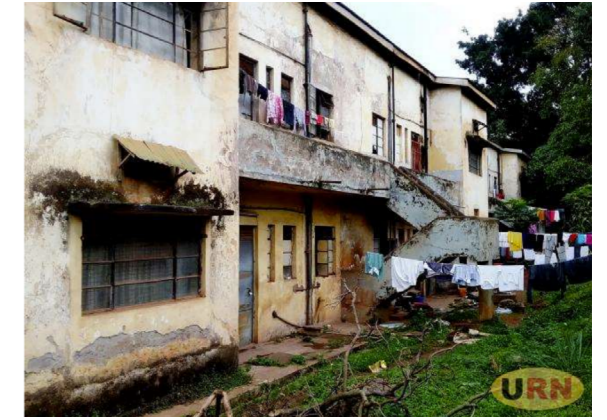
**OLIVER MCILVENNA**  
Senior Associate, Grants Associates  
GRANT-ASSOCIATES.UK.COM



## MAINTENANCE, SAFETY & FINANCES

**ANTHONY RUCUKYE**  
Manager of Investigation, National Building Review Board  
NBRB.GO.UG

**ROBERT KISALAMA**  
Institutional Development Expert, Enabel Uganda  
ENABEL.BE/COUNTRY/UGANDA



### OVERVIEW

This break-out session looked at all aspects of the landscape setting for schools, identifying problems and opportunities provided by the setting of the school buildings.

Chloe Humphreys' presentation focused on three exemplar projects which illustrated the importance of working with the existing site conditions, relying on indigenous species and working with nature and climate as well as the local community to create beautiful and functional school landscapes. The Orione Community Training Centre provides a holistic environment based on farming and biodiversity for the care and education of children, many of whom have physical impairments. Mustardseed School is based around an approach to education in a landscape setting, with stone and compacted clay 'Teaching circles'. It includes a 'Conservation site' and a 'Boulder' site which is being developed to test out the usefulness of indigenous tree species to try to find an alternative to Eucalyptus. The AWF school takes its inspiration from the Karamajong homesteads who provide for the local community. In all these examples, Humphreys' work derives from a simple, playful and functional approach to landscape design.

Oliver McIlvenna focused on the principles of landscape design embodied in the current draft design guide and explained the principles behind the way it was organised. He asked for feedback from the group to feed into the final document.

### DISCUSSION

- + Problems with tree maintenance (roots and dead leaves).
- + Should we be planting more fruit trees to engage the children with fruit production?
- + Making it easy to maintain surfaces under trees to encourage those shady spaces to be used
- + Achieving better learning conditions outside (e.g. the use of simple transportable desks and chairs)



### OVERVIEW

This breakout session addressed the cost considerations involved in building and maintaining schools, reinforcing key regulations, tools, and strategies for cost reduction throughout a building's lifecycle.

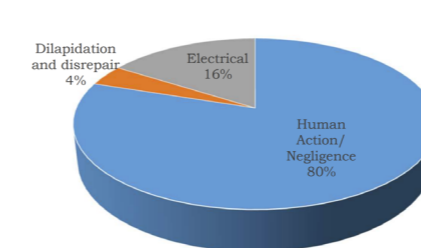
Anthony Rucukye's presentation underscored the importance of maintenance and fire safety, highlighting their frequent neglect in Uganda. He stressed that the life expectancy of a building should be a primary consideration from the outset, influencing all design decisions, including material selection and layout planning. The session also focused on fire safety, highlighting the need for effective preventive measures, especially in contexts where fire stations are insufficient. A fire-safety self-assessment toolkit was also demonstrated.

Robert Kisalama emphasised the crucial role of strong school leadership in the financial sustainability of schools. He proposed that effective resource prioritisation and meticulous financial monitoring are essential. Additionally, Kisalama demonstrated that designing systems and fostering relationships are just as important as designing facilities and infrastructure; he specifically noted the benefits of integrating schools with local communities, providing examples of income-generating activities that leverage these relationships and benefit different stakeholders.

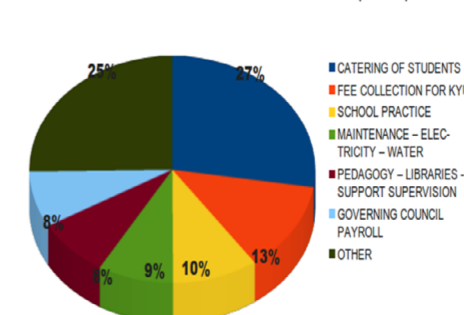
### DISCUSSION

- + Overcrowding in schools: how can regulations be better enforced?
- + The need for infrastructural provisions for fire safety, such as fire hydrants.
- + The importance of integrating proper access points for fire engines within the site plans of new developments.
- + Guidance on restoring buildings that are beyond maintenance and require extensive restoration.

RCA: FIRE INCIDENTS IN SCHOOLS



STRUCTURE OF PLANNED EXPENDITURES (5 NTCs)



## INNOVATIONS IN TEACHING AND LEARNING

**ELIZABETH NKWASIRE**  
Teaching & Learning Expert, Enabel  
ENABEL.BE/COUNTRY/UGANDA

**AUDREY DRALEGA**  
Founder People & Potential Education Consultancy  
PEOPLEANDPOTENTIAL.ORG



### OVERVIEW

This break-out session discussed improving education through learner-centered methodologies, ICT integration, flexible classroom environments, and the use of outdoor spaces, addressing challenges such as teachers' lack of computer skills and high dropout rates among secondary school students, especially girls.

Elizabeth Nkwasure discussed Enabel's We Learn: We Teach programme, focusing on learner-centered methodologies and ICT in schools. They found that 80% of teachers lacked computer skills, and fewer than 12% had laptops. The high dropout rate in secondary education, especially among girls, is a major challenge. While 61% transition from primary to secondary school, only 33% complete lower secondary, and 21% advance to upper secondary. ICT can enhance education, as many teachers have smartphones and some schools have laptops and ICT teachers.

Audrey Dralega spoke from experience as a teacher/educational consultant on how children learn and what makes a good classroom environment. Her main points included: the importance of adjustable furniture to create varied seating options and reconfigurable spaces allowing for individual study and collaborative work; the importance of encouraging creativity and making through science art and design/technology; the need to avoid sensory overload in the classroom but provide calm and well-lit spaces; the recognition that the whole school can become used for teaching and the use of outdoor spaces needs to be further developed.

### DISCUSSION

There was very little time for discussion but the group did hear about an interesting development that could improve outdoor learning opportunities, with the use of a foldable three legged stool and a small noteboard as a desk, currently being tested in rural schools.



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## GREEN SOLUTIONS FOR SCHOOLS

**PAUL KIMERA**  
Managing Director, Technology for Tomorrow  
T4TAFRICA.CO/INDEX.HTML

**ALLAN SEMAKULA**  
Director, Local Works  
LOCALWORKS.UG



### OVERVIEW

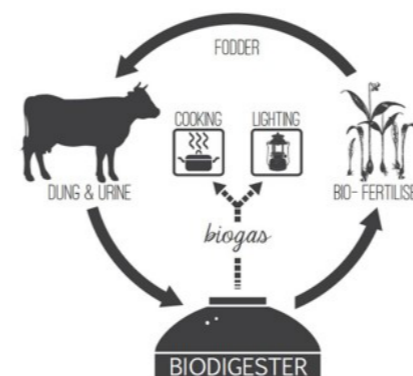
This break-out session looked at sustainable technologies and approaches to sanitation, fuel and water provision as well as waste management in schools.

Paul Kimera highlighted how few schools in Uganda have adequate sanitation facilities. He presented different methods of sourcing water as well as hygiene technologies ranging from low to high-tech systems. Under the topic of sanitation, the issues of waste management and fuel provision were also covered, demonstrating how biogas produced from composting systems can be used to partially fuel stoves along with more traditional sources. The presentation also showed a range of sustainable materials and how they are used from recycled-plastic roof tiles to interlocking stabilized soil blocks for underground water systems.

Allan Semakula's presentation focused on rainwater collection systems, highlighting their importance in remote and rural areas where access to proper water infrastructure is scarce. He presented various water storage systems of differing material make-ups, highlighting their advantages, disadvantages and best contexts for application. Precedents of buildings whose roof forms were carefully designed to facilitate rainwater collection were shown.

### DISCUSSION

- + The efficacy of biodigesters using human waste, compared to those which use animal waste; for which a hybrid system is imperative. It was suggested that biodigesters using human waste predominantly function as a method of solid waste management rather than as a main fuel source.
- + How to change perceptions on using biogas as fuel.
- + Issues of vandalism to plastic water storage tanks, their durability and hence the need to protect them.
- + Causes of odors severely emanating from pit latrines and how such issues can be avoided with proper design and installation.



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## THE FUTURE OF SCHOOLS

**KENNETH SSEMWOGERERE**

Architect & Senior Lecturer, Makerere University and Director, SASA College of Industrial Design

[SCID.AC.UG/INDEX.PHP](http://SCID.AC.UG/INDEX.PHP)

**ALEX NDIBWAMI**

Architect & Lecturer, University of Rwanda

[INFINITEAXIS.RW](http://INFINITEAXIS.RW)



### OVERVIEW

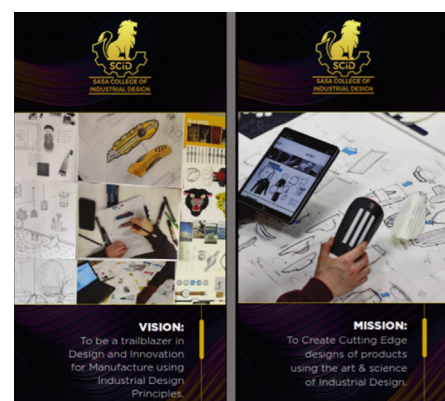
This break-out session looked the role of architectural education in building the architects of the future (as global citizens).

Dr. Ssemwogere talked about the mismatch between the university training of graduates and the skills required in the workforce, which led him to found the College of Industrial Design. He had also noticed that architectural graduates were struggling to find jobs, while craftsmen were able to find ample work. The new course trains students in practical skills and fabrication, in addition to design.

Arch. Ndibwami set out his philosophy of education, that it should be more about doing than just hearing. He highlighted issues of identity and how they shape current discourse. He presented the briefs that the final year architecture students at the University of Rwanda had followed for their final project, looking at issues of: complexity in school design; schools as centres of excellence; what an 'African' school looks like and site repair and expansion. One of his students presented their group project, studying a school in Kigali and designing creative ways to make better use of the 'leftover space.'

### DISCUSSION

- + What will the impact of AI and IT be on architecture?
- + How key MINEDUC policies could be implemented in existing school
- + How to maximise space on a site with challenging topography.



## PREPARING THE ARCHITECT OF TOMORROW

**DR. MARK R.O. OLWENY**

Senior Lecturer, University of Lincoln and Research Associate Professor, Uganda Martyrs University



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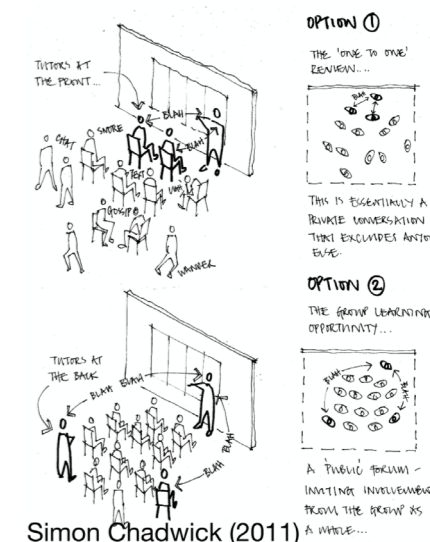
The session focused on the future of the architectural field, outlining its current state; gaps within the profession; and thereby the needed changes to the current architectural education.

Dr. Mark Olweny redefined architects as "social geographers," emphasising the often-overlooked social dimensions of architecture. He critiqued the traditional architectural education system for its focus on passing down existing knowledge, advocating instead for a curriculum that fosters critical thinking, continuous learning, and independent reflection. Dr. Olweny argued that students should challenge established norms and seek better methods, underscoring that true sustainability in architecture requires a fundamental shift in thinking, not just the adaptation of conventional practices.

He highlighted architecture's role in the climate crisis, calling for a comprehensive reevaluation of design approaches and values that integrate socio-economic and environmental factors—elements currently missing from curricula. Dr. Olweny proposed that architects shift from being "all-knowing experts" to facilitators who collaborate across disciplines and with communities. This paradigm shift necessitates an evolution in architectural education, promoting active participation and collaboration over passive learning.

### DISCUSSION

- + The lack of a structured internship program for training architects in Uganda, which is essential for students to not only apply technical skills but also to hone the critical soft skills necessary for excelling in the profession
- + The nature of the architectural profession involving a commitment to continuous learning: development does not stop at university.



Simon Chadwick (2011) A WHOLE...

**INTRODUCTION TO MASS AFRICA STUDIO'S LEARNING & ENTREPRENEURSHIP FOCUS AREA**

MARTINE I. DUSHIME  
L&E Co-Lead, MASS Design  
MASSDESIGNGROUP.ORG



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**OVERVIEW**

The presentation showed how spatial design can enhance education by fostering entrepreneurship, creative thinking, problem-solving, and collaboration, crucial for the region's young population to become a skilled workforce and job creators.

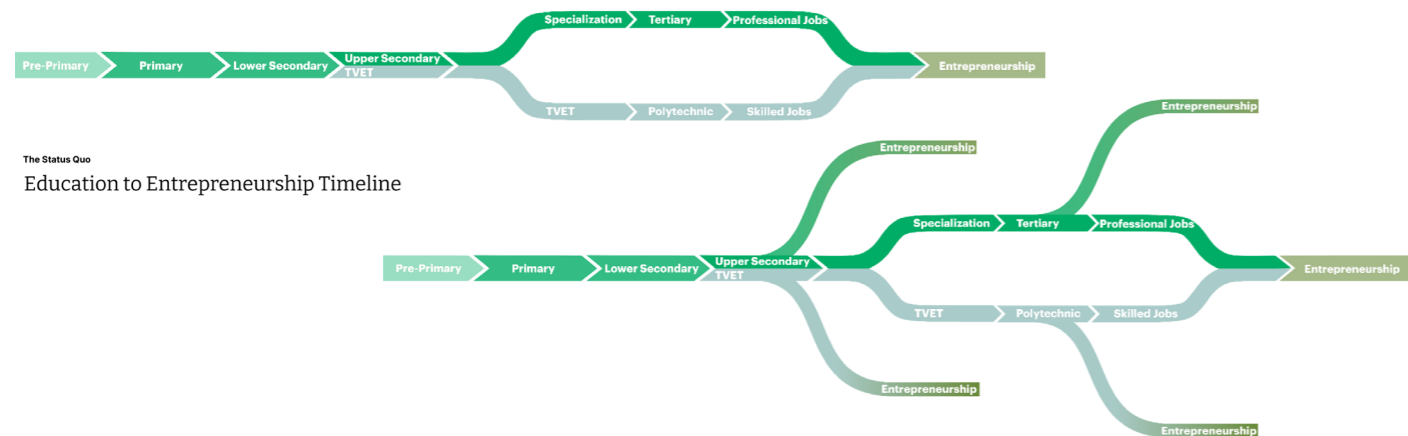
Martine Dushime underscored the urgent need for numerous new educational institutions in East Africa to support its burgeoning young population and secure a prosperous future for the region. Illustrating the scale of the issue, she went on to discuss how innovative educational strategies are essential, especially within the African context. With a growing workforce needing new job opportunities, fostering entrepreneurial skills is crucial. This necessitates the reform of traditional educational approaches and enhancing collaboration among thinkers and innovators is vital to address these challenges.

Dushime showcased how MASS Design Group's projects follow these principles. Projects such as the Rwanda Institute for Conservation Agriculture (RICA), Norrsken Kigali House and the Ellen DeGeneres Campus of the Dian Fossey Gorilla Fund, were shown as examples for re-imagined learning spaces. The RICA Campus, for example, was designed to align with its curriculum, exposing students to the agricultural process from land care to production. Meanwhile, Norrsken Kigali House supports startups by fostering relationships among problem solvers and creative thinkers, leveraging shared resources, and enhancing networks across entrepreneurial sectors.

Dushime concluded that whilst building more and better educational facilities is essential, exploring alternative education methods is crucial for boosting economic growth amidst modern challenges.

**DISCUSSION**

+ Knowledge sharing: how can this effectively occur between different groups of firms that work on similar projects, (i.e. involving new typologies and techniques) so that progress in this sector is more efficient?



**COMMUNITY OF PRACTICE**

PETER TUMUHEKYI  
Project Director, Kabale Schools COP; Head Teacher,  
Rwesasi Secondary School

MIKE KIRONDE  
Director St Janans Schools, Kabalagala and Bombo  
kabalagala.jananschools.com



**OVERVIEW**

This break-out session talked about the work of the Community of Practice Group in Kabale which consists of 20 schools in the region- including both primary and secondary as well as private and government funded- who are working together to share best practice, improve teacher skills, and upgrade facilities.

Peter Tumuhekyi spoke about the successes of the joint venture with the Feilden Foundation, whose funds had installed clean drinking water systems in all the schools, and supported the professional development training on Active Teaching and Learning and behaviour management which changed the views of the teachers on corporal punishment. He also addressed the challenges of encouraging people to invest time in meeting and dialogue, but underscored the potential of schools to foster shared bonds among them. He highlighted how the exchange of insights could lead to problem-solving, and how fresh ideas could break through the barriers of dogmatism and mediocrity.

Mike Kironde outlined the vital role of the private sector in the development of schools. With more than 75% of all secondary schools developed and run by the private sector, it is important to find ways of encouraging entrepreneurial skills, and understanding the business skills needed to run a private school.

**DISCUSSION**

- + The importance of schools working together in a geographical area to support each other. New schools can put existing ones out of business unless there is a shared understanding of needs.
- + Land to develop schools is regarded as the major problem particularly in urban areas : Is there anything that can be done to help fund or release land for school use?
- + Setting up a Community of Practice requires a small amount of funding, but the return on investment from peer-led support can be considerable.

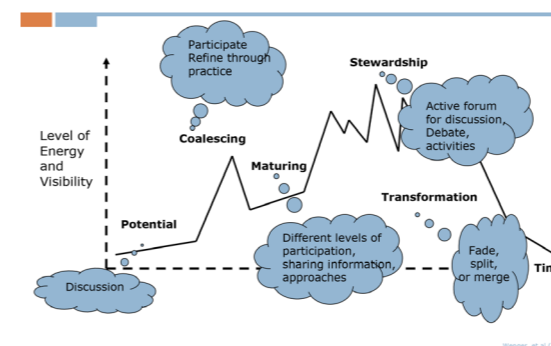


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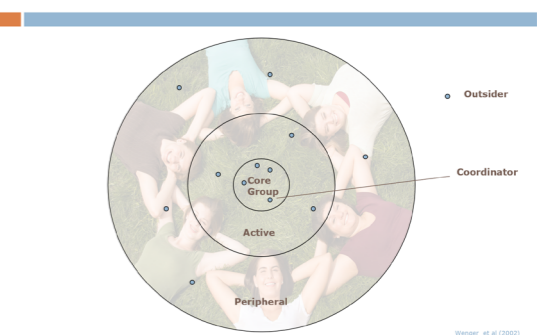


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**Stages of Community Development**



**Degrees of Participation**

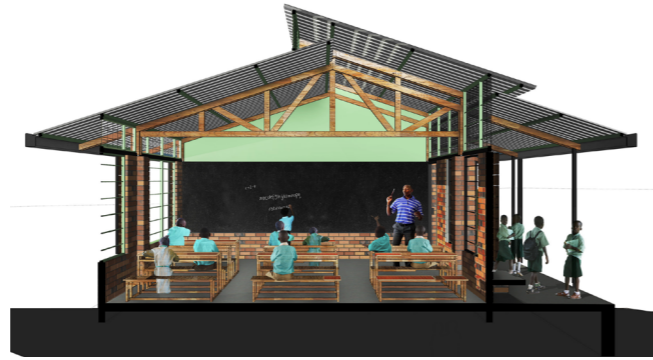




## INNOVATIVE CONSTRUCTION CONCEPTS

**EDSON AGUME**  
Structural Engineer, Localworks  
LOCALWORKS.UG

**FELIX HOLLAND**  
Principal Architect, Localworks  
LOCALWORKS.UG



### OVERVIEW

This breakout session explored sustainable construction methods for building schools, highlighting eco-friendly, locally sourced, and natural materials alongside prefab techniques.

Edson Agume discussed key principles for extending a building's lifespan through effective maintenance, refurbishment, good design, and appropriate material use. Framing his presentation within the context of the climate crisis, Agume detailed various components of a building and showcased sustainable material alternatives, such as using stones for foundations and earth bags for walls. He also stressed the importance of proper finishes and protecting materials like timber from weather damage, emphasising how these practices reduce maintenance needs and overall costs.



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Felix Holland presented the principles of his innovative eco-prefab system, demonstrating its benefits for both the environment and addressing Uganda's classroom shortages. Central to this approach is a prefabricated structural panel made of a timber frame filled with sawdust and lime wash, and finished with pigmented lime plaster to protect the timber and eliminate repainting. Holland highlighted key design features that enhance structural efficiency, such as asymmetrical roof profiles for shading, clerestory windows, and the strategic use of steel in structural frames.



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### DISCUSSION

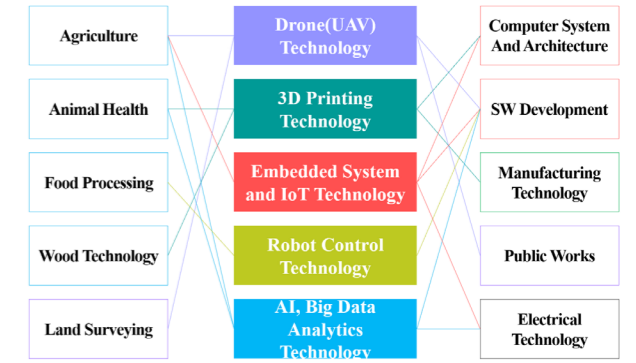
- + It was noted that the eco-prefab approach is most appropriate for single-storey structures in non-urban areas where significant areas of land are afforded. Applications for multi-storey schools, particularly at secondary level, is still under research.
- + Concerns with how such light-weight structures hold up in areas of high seismic activity were raised.



## INCORPORATING TECHNOLOGY INTO SCHOOLS

**EDGAR KALEMA**  
Lead Systems Architect, DFCU Bank  
KALEMAEDGAR.MEDIUM.COM/

**EMMANUEL NSENGIYUMVA**  
School Construction Specialist, Ministry of Education, Rwanda  
MINEDUC.GOV.RW



### OVERVIEW

This break-out session looked at the opportunities in technology to enhance education in East Africa.

Edgar Kalema presented evidence on how tech has been used to increase attention and attainment in schools. He highlighted how it can be used to widen access, to help students develop practical skills and to enable students to learn at their own level. He demonstrated systems which can be used to track student records and performance, as well as to organise systems. He presented a case study of the Duolingo app, developed in Central America, and how it has successfully widened access to and participation in language learning.



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Eng. Nsengiyumva explained the role that technology, specifically a digitisation strategy, played in Rwanda meeting its Vision 2040 goals in Education. He gave examples of where it is already in use, for example using drone footage in agricultural training. Technology has been used to build capacity among teachers and the government aims to increase a strategic and systematic use of IT in schools.

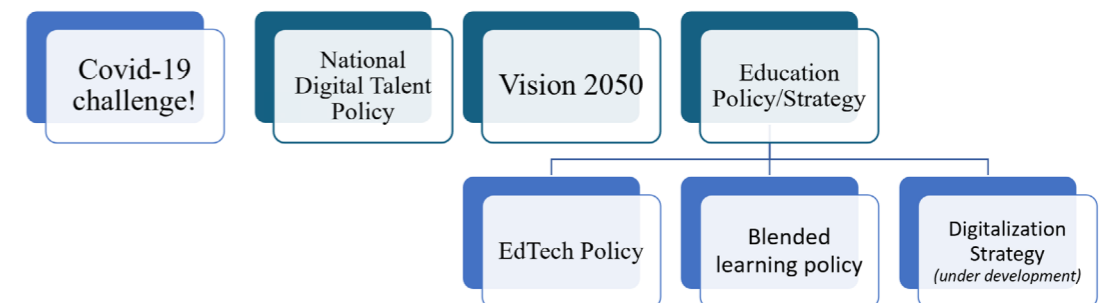


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### DISCUSSION

- + Further ideas for how technology can be used in education.
- + How tablets and internet could be used to help adults with no teacher training to deliver lessons
- + The role that AI can play, and where it is not a suitable tool.
- + How tech can be used in a home school environment.

### Rwanda's Digitalization Experience in Education



## CONCLUSIONS

### DISCUSSIONS, REFLECTIONS & FEEDBACK

#### PANEL DISCUSSION: EXPERIENCE OF EDUCATION IN EAST AFRICA

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## OVERVIEW

Each day concluded with discussions. On the first day, a panel of experts shared key insights and responded to online forum questions, followed by closing remarks from Architect Jacqueline Namayanja. On the second day, all participants engaged in a group debate to discuss the conference topics.

## PANEL DISCUSSION

The panel discussion highlighted key considerations for creating effective educational environments. The importance of WASH and sanitation facilities, particularly for girls, was emphasised as essential for enhancing security and reducing absenteeism. Effective school leadership and management were also recognised as critical for fostering safe and productive learning spaces. The complexity of balancing various criteria, beyond just cost, when building schools was discussed, with a focus on the need for a nuanced approach, adapting to different contexts. The significance of community involvement in school projects was underscored, as it can help address challenges such as cost, changing mindsets, and improving overall educational outcomes. Practicable approaches were defined as crucial, encouraging collaboration between designers and educators. The panel agreed on the need to understand local contexts, integrate community needs, and implement practical solutions like school feeding programs to boost attendance.

## REFLECTIONS

Following the panel discussion, Architect Jacqueline Namayanja delivered the closing remarks for the first day of the conference, offering insightful reflections on the day's proceedings. She commended the day as intellectually stimulating and rich with promising visions for the future, yet underscored the importance of a balanced dialogue. Arch. Namayanja addressed the rapid transition from teacher-led to student-led learning, advocating for the preservation of cultural traditions that honour the teacher-student relationship, which she likened to the nurturing bond between parent and child. Acknowledging the necessity of progress, she highlighted that many of the "new" educational and architectural approaches are, in fact, a resurgence of time-honoured practices, such as community-based learning and vernacular building methods. Arch. Namayanja concluded by calling for a broader embrace of these concepts across various sectors, urging a shift in mindset and enhanced public awareness to foster genuine sustainability and meaningful progress.



## OVERVIEW

Feedback from the group debate session on the second day, along with comments from the conference's online forum, was collected to identify gaps, necessary additions, and revisions to the School Design Guide. Below is a comprehensive summary of the findings.

### 1. INCLUSIVE AND FUNCTIONAL DESIGN

Designing schools with inclusivity in mind requires more than just meeting basic accessibility standards; it involves a comprehensive approach to disability accommodation that goes beyond ramps and handrails. By incorporating local community input, schools can better understand and address the specific challenges faced by students with disabilities, enhancing both the functionality of the design and the community's sense of ownership and involvement.

### 2. SUSTAINABLE MATERIALS AND INNOVATIVE PRACTICES

The push towards sustainability in school design involves the use of regenerative materials like timber, as well as the reduction or substitution of cement. Integrating energy-efficient solutions such as solar power, biogas, and mini-hydro systems should be considered. Conducting research and offering education on material sustainability, coupled with pilot projects to test new innovations, ensures that sustainable practices are practical and effective. Community involvement in construction further strengthens the sustainability and resilience of the design.

### 3. COMMUNITY-CENTRIC ENGAGEMENT AND REGULATORY POLICIES

Involving the community early in school design fosters ownership and ensures that local needs are met. Educational workshops and continuous feedback mechanisms help sustain this engagement over time. Simultaneously, adaptable policies are necessary to support evolving needs. Effective regulation, including green building codes and partnerships between government, private sectors, and research institutions, can provide the incentives and penalties needed to ensure compliance with sustainable practices.

### 4. PRACTICAL IMPLEMENTATION AND TECHNOLOGY INTEGRATION

Successful implementation requires hands-on guides and region-specific case studies. Masterplanning ensures long-term sustainability and adaptability of campuses. Integrating AI and modern technologies into the construction process enhances both efficiency and sustainability, while hybrid solutions—like combining solar power with existing infrastructure—offer practical, innovative approaches to school design.

## NEXT STEPS

The Feilden Foundation and Enabel have developed a revised version of the School Design Guide, incorporating the insights gathered from the conference. The guide includes outline designs and a Uganda-specific addendum, which can be tailored to the needs of other countries within the diverse East Africa region. The current working draft of the School Design Guide is available at the link provided here. This will be made available as a website and in print and will be translated into French.

[LINK TO THE PDF  
DOWNLOAD HERE](#)

