TOWARDS A SUSTAINABLE CONSTRUCTION INDUSTRY: THE ROLE OF INNOVATION AND DIGITALISATION

10 – 12 JULY 2022
International Convention Centre, East London, South Africa

BACKGROUND

The unsustainable traditional approach to construction project delivery has necessitated the continuous call for more sustainable construction industry—a sector that provides construction projects that encourage the judicious use of environmental resources, one that promotes people’s social well-being and also provides value for clients’ investments. The current wave of industrial revolution driven by digital, physical and biological technologies as well as innovative building solutions provides possible directions towards attaining a sustainable construction industry. The adoption of advancements such as systems integration and the internet of things, virtual/augmented/mixed realities, artificial intelligence, building information modeling, cloud computing, cyber security, big data and analytics, autonomous robots, simulations etc., offer the construction industry opportunities for digital transformation. More so, innovative building solutions such as modular integrated construction, self-healing concrete technology, additive manufacturing (3D printing), smart constructions and various available innovative building materials all offer possible directions for the industry’s transformation into a more sustainable one.

The journey towards attaining a sustainable construction industry might not be smooth considering the different challenges bedevilling the industry in both developing and developed countries. Therefore, understanding the different aspects of construction that need to be reinforced and transformed through innovative solutions and digitalisation is crucial. Evidently, it is strategic at this point in time for stakeholders to critically evaluate the construction industry from its resources (finance, human, material), technology, supply chain down to the external construction environment. This is with a view of creating an innovative and digitalised industry needed for a more sustainable construction industry. Therefore, it is appropriate and timely to explore and deliberate upon ways to achieve a more sustainable construction industry, emphasising innovative solutions and digitalisation.

CONFERENCE AIM AND OBJECTIVES

The conference aims to provide an opportunity to review and create knowledge on achieving a sustainable construction industry through innovation and digitalisation, consequently highlighting the resulting processes and practices needed in delivering and operating sustainable construction projects more effectively and efficiently by emphasising innovation and digitalisation. The papers submitted for the conference might explore topics included but are not limited to the following:

- Augmented/Virtual/Mixed Realities in sustainable construction
- Big data and the Construction industry
- Carbon emissions and energy usage in the built environment
- Changing roles and responsibilities of project stakeholders in sustainable construction projects
- Circular economy in construction
- Construction digitalisation
- Corporate Social Responsibility
- Digitalisation and construction human resource management
- Efficient and sustainable use of construction materials
- Health, safety and well-being of construction workers and end-users
- Housing affordability and sustainable development problems
- Indoor environmental quality and management
- Information modelling and Digital Twin Technology (BIM, BrIM, CIM, GIS)
- Innovative Building Materials for sustainable construction
- Innovative Building Technologies for sustainable construction
- Innovative financing of sustainable infrastructure
- Land use planning and sustainable development
- Material management and environmental concerns
- Material re-use in infrastructure development
- Pollution in the urban environment
- Regulatory Framework for and Government Initiatives
- Sustainable building design and refurbishment
- Sustainable supply chain management and procurement strategies in construction
- Sustainable waste management
- Sustainable construction practices
- Value management and sustainable practice
AWARDS
Best paper award (general)
Best postgraduate paper award
Best industry paper award

ORGANISERS AND CONFERENCE CHAIRPERSONS
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MAIN SPONSORS
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CONFERENCE FEE
Delegate R3 500 + VAT
Student Delegate R1000 + VAT
Accompanying Person R300 + VAT (non-presenters)
International delegate $300
Online Delegate $150 (Only International)

• Accommodation is not included in the conference fee. Information on preferential rates provided by local hotels will be advertised on the conference website in due course.
• Registration covers one paper only, attendance to all programme sessions, conference material, light lunches, tea and coffee breaks, welcome reception, opening ceremony, conference dinner, conference bag etc.
• Participants who wish to present and publish additional papers are expected to pay the additional paper fee of $80/R1,000 per paper.

ORGANISING COMMITTEE
Prof Clinton Aigbavboa, UJ — Committee Chair
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Mr Spyakulela Dywill — WSU
Mrs Lepeto Aghimien — UJ
Dr Ntebo Ngozwana — cidb
Ms Ntswaki Mokonyane — cidb

KEYNOTE SPEAKERS
Mr Bongani Chada, cidb CEO
Mr Gregory Motokeng CEO — BBBE
Professor Samuel Lanyea — University of the Witwatersrand — RSA
Professor Chinaloye Anumba — University of Florida — USA
Professor Natho Chiwewe — UNISA — Australia
Professor David Edwards — Birmingham City University — UK
Mr Troy Everett, TAFE New South Wales, Australia

IMPORTANT DATES
Submission of Abstracts — 15 December 2021
Notification of Acceptance of Abstracts — 15 January 2022
Submission of Papers — 15 March 2022
Notification of Decision on Papers — 15 April 2022
Submission of Revised Papers — 30 April 2022

ABSTRACT AND PAPER SUBMISSION INFORMATION
Please submit your abstract of not more than 300 words and include up to 5 keywords online via the google link: https://forms.gle/1F7FzQK0zVeKgBVjy9
The abstract template can be accessed using: http://tiny.cc/cidb-abstract-template
Abstracts will be sent to two referees. Only the authors of abstracts that pass this peer-review process will be invited to submit full papers. The deadline for the submission of abstracts is 2:59hrs GMT on 15 December 2021.

GUIDELINES FOR FULL PAPER SUBMISSION
Full papers must not exceed 10 sides of A4 and should adhere to the cidb 2019 conference guidelines paper template, which is available for download at: http://tiny.cc/cidb-full-paper-template
Two members of the scientific committee will review each paper. If the paper is accepted, its authors will be invited to present the paper at the conference. At least one of the authors must be able to attend the conference.

PUBLICATION
Conference Proceedings will be published in a Springer Edited Book Submitted for indexing to ISI Proceedings, EI-Compendex, DBLP, SCOPUS, Google Scholar, and SpringerLink.

VENUE INFORMATION
East London

International Convention Centre
Marine Park Complex, 22 Esplanade, Beachfront, East London.

East London is a city on the Indian Ocean, in South Africa’s Eastern Cape Province. It’s known for its beaches, such as Nahoon and Cove Rock. The Buffalo Pass is a road crossing a forested valley and the Buffalo River. Fossilised human and animal footprints, plus artefacts from the Xhosa-speaking people, are exhibited at the East London Museum.
Elephants, lions, zebras and other wildlife roam in several nearby game reserves.