



Augmented Reality dominates UNESCO World Heritage Futures Lab

...using augmented reality for cultural preservation

Creative technologists and indigenous communities from 20 African countries took part in a three-day UNESCO World Heritage Futures Lab. The Lab required the participants to narrate the history of World Heritage sites using Virtual Reality (VR) applications. The event was held at NUST's tech ecosystem, formally referred to as the High-Tech Transfer Plaza Select (HTTSPS), as it directly aligns to the HTTSPS's goal to enhance capacities in immersive digital technologies.

Africa's Pride

World Heritage Sites are designated by UNESCO for having cultural, historical, scientific or other form of significance. There are several such sites worldwide and Namibia is proudly home to some, such as the Twyfelfontein and the Namib Sand Sea. "Technology and innovation can be conduits for digital growth, socioeconomic advancement and information access," said Marly Muudeni Samuel, a creative Technologist and NUST alumnus who represented Namibia. Avuzwa Ntshongwana, a co-founder of a gaming studio represented South Africa. She highlighted her passion for technology which has led her to building a game based on African culture and history.

practices: The hunting of a Kudu," remarked the NUST Vice-Chancellor, Dr Eroid Naomab. From an educational perspective, VR technology has the potential to revolutionise education by providing immersive and interactive learning experiences, and it can be used to create virtual classrooms, simulations, and other educational environments that can enhance learning. Mr Djaffar Moussa-Elkadhum, the UNESCO Representative to Namibia, placed emphasis on the value of cultural heritage and that the World Heritage Futures Lab forms part of the 50th anniversary celebrations of the UNESCO 1972 Convention.

Impact

The Lab facilitated the development and dissemination of dynamic digital content and products for a deeper understanding and appreciation of the world's heritage. The project will continue throughout the year and production funding and exhibition opportunities will be availed. The event was organised and sponsored by UNESCO, with support from partners such as NUST, MTC and Electric South.



Deputy Executive Director for the Lifelong Learning Department from the Ministry of Education, Arts and Culture (left) enjoying a virtual reality experience guided by Selma Auala, a student from the Faculty of Computing and Informatics.

Community Engagement

"We value the preservation of our African heritage, evidenced by the various digitalisation projects we run in tandem with indigenous communities. Through the Faculty of Computing and Informatics, we recently developed our first Virtual Reality application to safeguard San cultural



Held at the Botswana Institute of Technology, Research, and Innovation (BITRI), the event saw over 50 people attend in a hybrid format.

Researchers contemplate bio fuel for Otjozondjupa's woes

A team from the Faculty of Engineering and the Built Environment recently travelled to Gaborone, Botswana to attend a meeting to discuss NUST's role in assessing the analytical properties and market potential for both industrial and domestic users of fuel through the Steambio Africa (SBA) project.

An analysis of the different condensate streams will provide the type, quantity and quality data on water purity and of the chemical species found. The project also necessitates the development of additional biomass products where NUST will contribute in assessing the superheated steam process outputs. These include both solid biofuel and condensate streams with different feedstock sources and processing conditions. The SBA Project will address two significant

challenges facing the Otjozondjupa region; namely the need for clean, secure, and reliable energy; and the need to address the challenge of encroacher bush and other invasive woody biomass species. The SBA aims to produce clean burning, solid biofuel that will replace charcoal and wood for cooking and heating. It will also replace coal in power generation. The project offers a more sustainable and economically competitive energy approach for both households and industry users.

Destination Switzerland for NUST students

Five NUST students will depart for Switzerland on 31 January 2023 to participate in the B360 Education Partnerships (B360) Sending North Programme to undertake industry internships at companies in the central European country.

Sakaria Nghivafe, Anna Tomas, Dawid Amutenya, Faith Hungwe and Martin Nambahu were selected for the B360 Sending North Programme in August 2022. The five students represent the Faculties of Computing and Informatics, Engineering and the Built Environment and Commerce, Human Sciences and Education respectively. Nghivafe will be placed with financial services provider, bob finance AG, Tomas with banking giant, Credit Suisse, Hungwe

will undertake her internship at the Swiss Bank Julius Bär, Nambahu will be attached to Büchi Labortechnik and Amutenya will be placed with Ferrum AG. The NUST students will spend three-months in Switzerland undertaking their required industry internships. They will also be placed with Swiss host families, giving them a holistic impression of Swiss life and a rich cultural experience.



From left to right: Sakaria Nghivafe, Dawid Amutenya, Anna Tomas, Martin Nambahu and Faith Hungwe.