NAMIBIA UNIVERSITY OF SCIENCE AND TECHNOLOGY
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NUST BRIEF

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HTTPS is here!

The 164-million dollar High-Tech Transfer Plaza Select (HTTPS), in collaboration with MTC, was officially inaugurated by the Vice-President of Namibia, HE Dr Nangolo Mbumba. The HTTPS is an inviting space where generation of new knowledge, technology transfer and inventions will contribute to the socio-economic development of Namibia.

51-million-dollar NUTST-MTC partnership

Through a 51-million-dollar partnership, NUST and MTC have undertaken thirteen research projects under an existing 5-year Memorandum of Understanding. The majority of these multidisciplinary projects are in collaboration with the Faculties of Computing and Informatics; Health and Applied Sciences; and Engineering. "MTC has agreed to invest into continuous research and innovation in order to participate in developing fit for future technology solutions. Most notable, is this smart partnership with NUST, which has seen the start of a roadmap towards a new multidisciplinary technology culture and interactive curricula accelerating innovation and helping deliver solutions to pressing social challenges in Namibia," Managing Director of MTC, Dr Licky Erastus said. HE Dr Mbumba expressed his satisfaction with the HTTPS, which will facilitate the co-creation and co-development of opportunities in the digital economy through research and development.

Left to right: NUST Vice-Chancellor, Dr Erold Naomab; Vice-President of Namibia, HE Dr Nangolo Mbumba; and Managing Director of MTC, Dr Licky Erastus, officially inaugurating the HTTPS building by cutting a ribbon.

Drone image of the HTTPS

"It is imperative for Namibia to optimise its ability to compete for global investment, attract global talent, retain Namibian talent, and encourage the development of great ideas in Namibia that have global potential and impact. Today, we are celebrating innovation. Taking hands with NUST and MTC. Innovation and the 4th Industrial Revolution are also Government imperatives and a continuum that starts with research and invention and continues through the translation in economic and societal benefits," he emphasised.

HTTPS ecosystem

Standing six-stories tall, this state-of-the-art building has over 200 parking bays and more than 100 offices. The HTTPS can also facilitate large and small group meetings, and is equipped with technologically advanced video conferencing rooms and presentation rooms, making for a fascinating work environment. NUST Vice-Chancellor, Dr Erold Naomab, explained that the HTTPS is distinctly different due to its size, and the intensity and scale at which technology transfer will happen. "It is noteworthy that technology transfer usually happens at a smaller sporadic scale within isolated technology transfer or research and innovation offices in universities or the industry. Therefore, the HTTPS is not an office, nor a building, but it is an ecosystem that brings various technology actors together irrespective of size or the type of sector," he explained.

Meeting Goal 9 of the United Nation's Sustainable Development Goals

Minister of Higher Education, Technology and Innovation, Hon Dr Itah Kandjii-Murangi, highlighted that the inauguration of the HTTPS facility addresses Goal 9 of the United Nation's Sustainable Development Goals.
"The HTTPS speaks directly to the fostering of innovation through the transfer of technology and knowledge between higher education Institution, business and various development partners. The aim is to ensure that technological and scientific developments are available to a wider audience. This anchors the University as a vital centre of competence to assist in tackling social challenges and drive economic growth," she elaborated.

HTTPS projects

Specific projects to be undertaken within the HTTPS will be based on cutting-edge digital technologies such as the Industrial Internet of Things (IIoT), Cyber Security, X Reality, Big Data Analytics and Artificial Intelligence, Autonomous Robotics, and Edge Computing.

Dr Naomab and Dr Erastus toasting to the future.

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Succulent plants project aims to transform agricultural sector

Researchers from the Faculty of Natural Resources and Spatial Sciences (FNRSS) are currently conducting trials on the production of succulent plants. What makes this production noteworthy is that these plants have the potential to produce high amounts of biomass in arid and semi-arid conditions.

Biomass can be converted to a range of products, from fodder to proteins and renewable energy. Dr Vera De Cauwer, Senior Lecturer in the FNRSS highlighted that, "Succulent plant production has the potential to restore degraded lands and to diversify farmers' income, especially considering the warmer and drier climate conditions predicted for Namibia." The trial represents the first phase of a larger project called, 'The Succulent Bio-Economy Project'. It is an initiative between NUST, the University of Oxford and the Namibian Chamber of Environment (NCE). Last year, researchers got the opportunity to use land of the B2Gold Mine in the Otjikoto Region, where they planted succulent plants on a trial field in collaboration with the NCE. "Two indigenous species have shown promising results in the preliminary experiments and are included in the field trial. These are the yellow milk bush and the paintbrush flower," Dr De Cauwer said. Additionally, the trial will also include non-indigenous species, such as the rubber euphorbia, prickly pear and spekboom/elephant bush that have proven biomass production capacity under controlled conditions. The research team expects that it will take approximately two years before sufficient biomass can be harvested.

Planting rubber euphorbia cuttings.

Biochar being produced.

Biomass project impacts Namibia's bioeconomy development

Under the Biomass Utilisation by Sustainable Harvest (BUSH) Project, a Biomass Research Coordination Workshop was recently held in Windhoek. Academic staff from NUST were invited to share lessons from the project and discuss ways of enhancing cross-faculty collaboration. BUSH is a two-and-a-half-year project funded by the German government, through the German Society for International Cooperation (GIZ).

The workshop highlighted the key areas of research currently underway in establishing the true value chains in the production and processing of biomass products in Namibia. It also served as a platform for policy discussion and future implementation within the biomass sector, as well as innovative and potential revenue streams for job creation and economic growth. The project strives to encourage and promote research and development on the economic use of biomass through controlled bush-thinning practices. It has thus far implemented technology dissemination and value chain development schemes for the future conducive environment which bush control will provide. Furthermore, it has supported opportunities the BUSH Project to promote the generation and application of knowledge related to the biomass industry through scholarship programmes and direct applications of the knowledge gained. "One of the seven sub-projects involved the need for researchers and technology developers to identify proper technologies for the recognised potential in biochar production. Benefits such as socio-economic and nutritional improvements were examined and the various field-sized kiln used for biochar production and tests yielded improved food productivity," said Mr Evert Strydom (the Principal Investigator). In addition, the BUSH project principal investigator initiative has adopted a multidisciplinary approach to addressing bioeconomy research and development matters in Namibia, with input from NUST's Faculties of Natural Resources and Spatial Sciences; Engineering; and Health and Applied Sciences. During the project period, a number of research projects and prototypes have been completed, energy efficient stoves, debusher, biochar mixtures and crop implementation, wood gasification to electricity studies, and wood plastic composites development.

NUST presents the 2021 Virtual COVID-19 Marathon. Run or walk to raise funds that will provide essentials to a less privileged school in the Khomas region.

When: Saturday, 31 July 2021

Distance: 5km, 10km, 21km, and 42km

Virtual: Your route of choice

Virtual: Start anytime from 05:00-18:00 (Cut off: 18:00)

Entry Fee: N$ 60.00

Entries Close: Monday, 26 July 2021

For enquiries: wellness@nust.na

Register at: https.//ww.esurveyspro.com/s/476805/NUST_Marathon_Registration

NUST invites you to participate in this initiative, which will raise funds for an underprivileged school in the Khomas Region.