Highlights of TUT Team Development Work
Lighting Tool /Application Webinar

Energy Efficient Lighting Assessment Tool &Application

german cooperation
DEUTSCHE ZUSAMMENARBEIT

Implemented by:
gIz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH
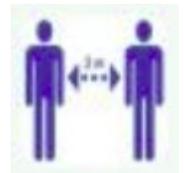
Tshwane University of Technology
We empower people

CEEP
Centre for Energy and Electric Power

Center for Energy and Electric Power (CEEP)
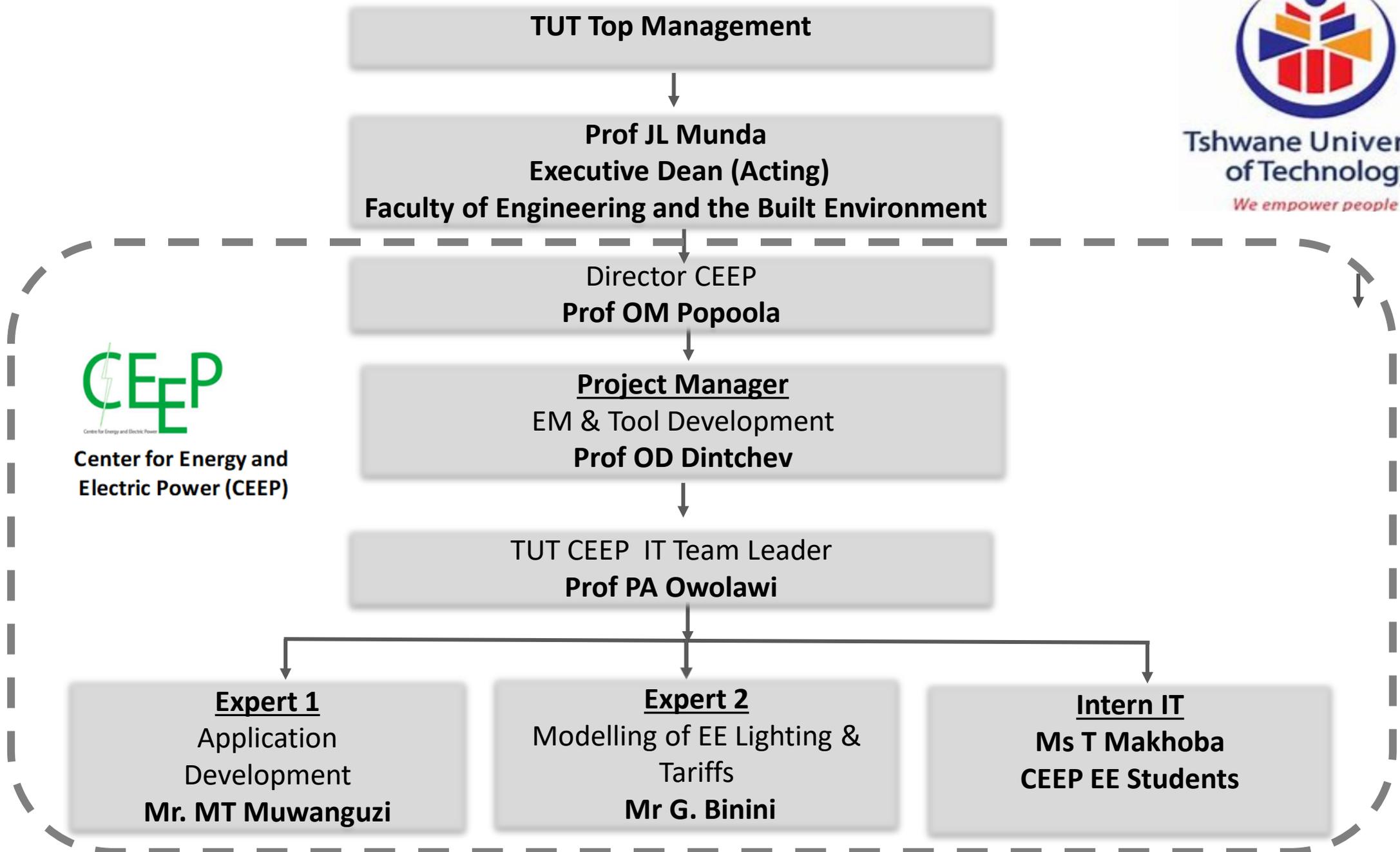
⚠ **COVID-19 alert**

30th March 2021

Prof OD Dintchev

Digital Lighting Tool /App Development for South African Energy-Efficient Economy

The German Development Cooperation in South Africa (GIZ) appointed the Centre for Energy and Electric Power (CEEP) at Tshwane University of Technology (TUT) for the Development *of Energy Efficient Lighting Assessment Tool and Application (T/Ap) .*
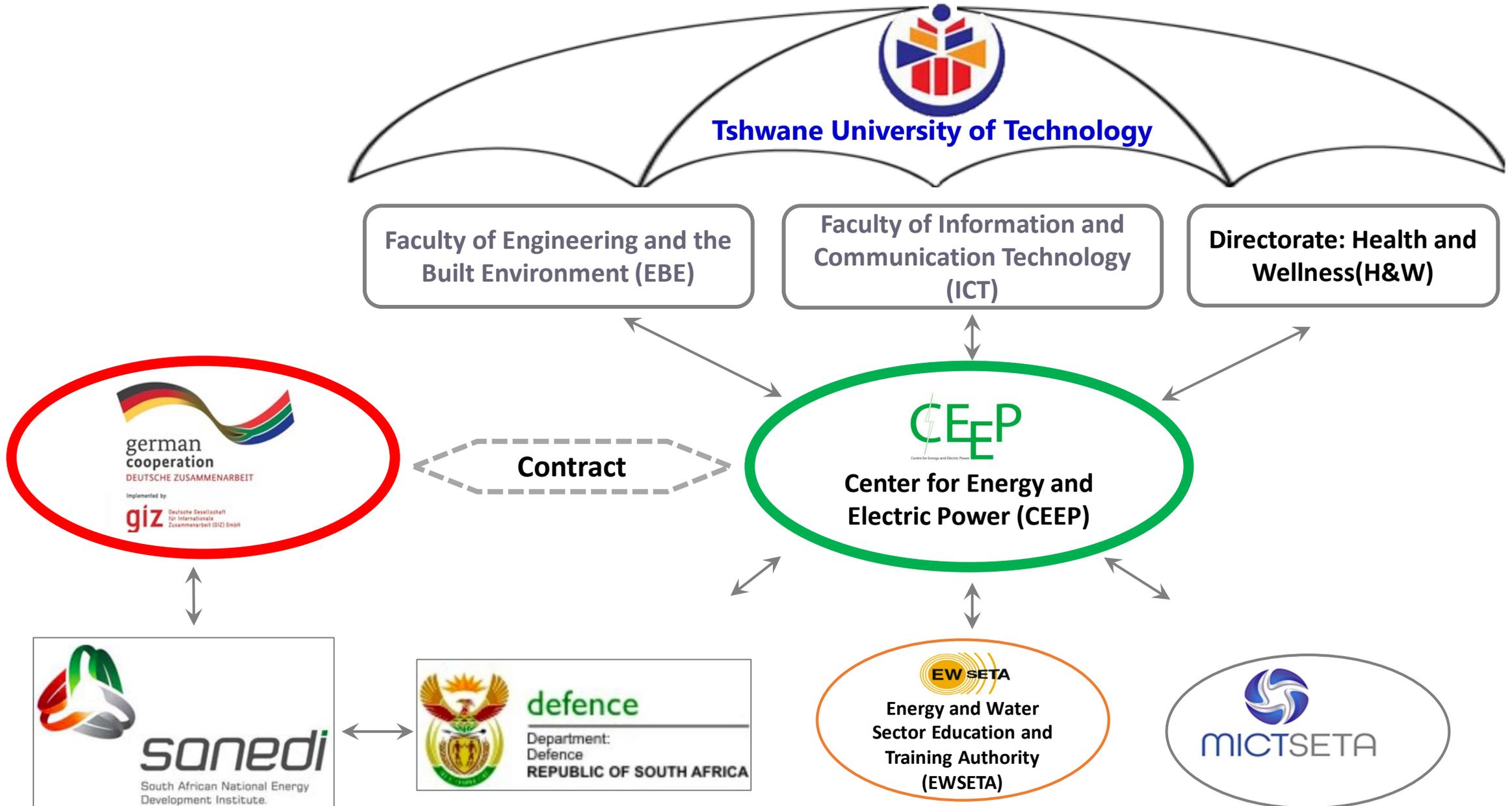
TUT / CEEP GIZ Project Team Organogram

TUT Top Management

Prof JL Munda
Executive Dean (Acting)
Faculty of Engineering and the Built Environment

Director CEEP
Prof OM Popoola

Project Manager
EM & Tool Development
Prof OD Dintchev

TUT CEEP IT Team Leader
Prof PA Owolawi

Center for Energy and Electric Power (CEEP)

Expert 1
Application Development
Mr. MT Muwanguzi

Expert 2
Modelling of EE Lighting & Tariffs
Mr G. Binini

Intern IT
Ms T Makhoba
CEEP EE Students

Tshwane University of Technology
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Cooperation

Based on the methodology and the academic environment, the TUT Team developed and maintained an unique framework of "actors"/stakeholders which was a perquisite for successful planning and executing the project.

Project Main Actors and Collaborations

Digital Lighting Tool /App Development for South African Energy-Efficient Economy

- The CEEP developers created a unique Tool/Application based on the potentials of the ***digitalization*** in maximizing the performance results expected and emanated from Energy Efficiency projects.
- The T/App enables South African Municipalities, other public and private organizations to determine/differentiate their potential energy and monetary savings through implementation of energy-efficient lighting solutions at their premises.
- Two versions of the T/App were provided, namely for Personal Computers and Android Devices.

TUT Team Methodology for Development of Lighting Efficiency Assessment Tool & App
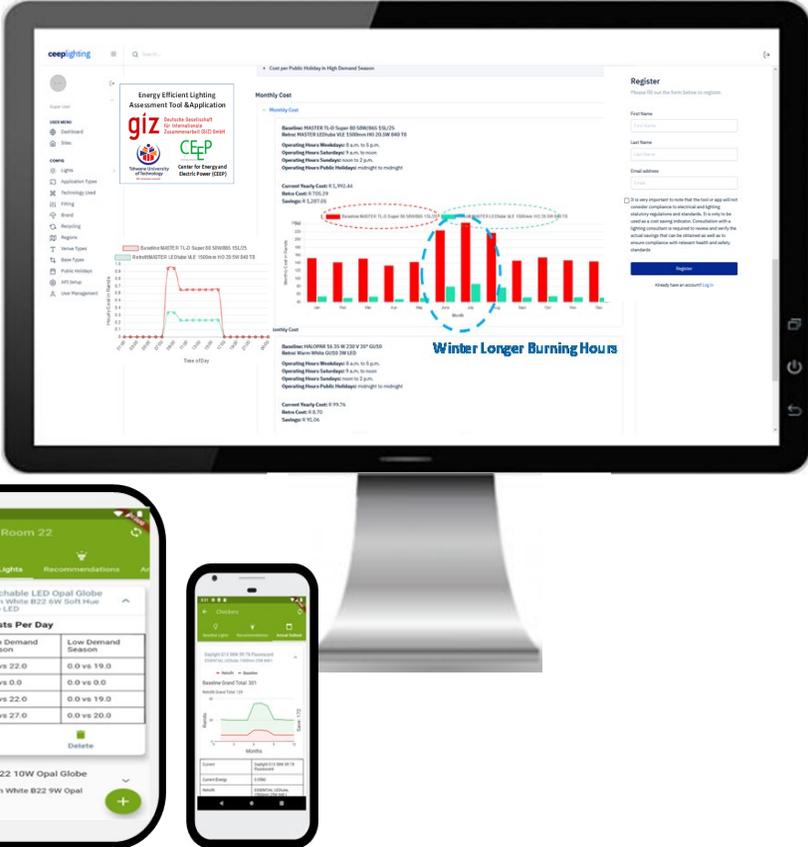
Stream 1

Energy Management and M&V

ISO 50001 ENERGY MANAGEMENT

EVO Efficiency Valuation Organization
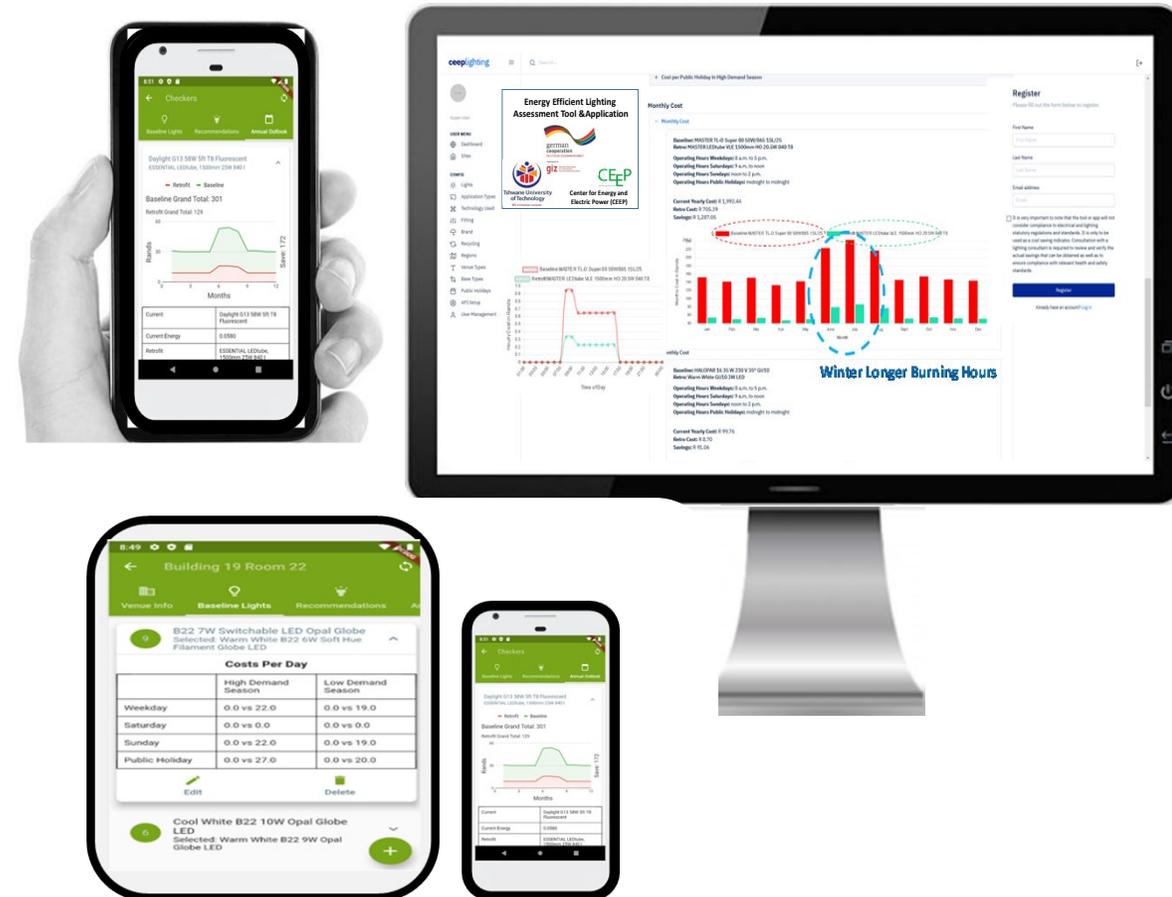
Stream 2

WEB and Mobile App Development

Developers

Lighting Efficiency Assessment Tool & App

Tshwane University of Technology and CEEP in particular, succeeded in developing a workable *digital solution* for the energy efficiency sector as part of the *revitalization* of the South African Economy in this difficult COVID-19 affected time.

The Digital Tool/Application demonstrated the innovative thinking of the TUT researchers and their contribution to Ultimate Digital Freedom nowadays.

Future Work

Handing over of T/Ap) to SANEDI

- Administration & Maintenance work to the current TUT Development Team.

- Extend the T/Ap to work on iOS devises
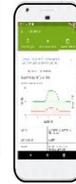
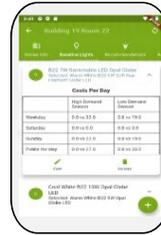## Energy Lighting Assessment Tool & Application

Interactions with DMRE

➢ Design/amend, and create and integrate a variety of standardized templates in T/Ap

➢ Create a **comprehensive database** containing **data from the previous** DoE EE and DSM Programme;

➢ Include in T/Ap the database from the existing DoE On-line System

➢ Upgrade the T/Ap, while creating a **"Business Intelligence"(BI)** / **"Smart"** function of the Tool/App

➢ Incorporating the M&V reporting into the Tool/App, therefore allowing almost **real-time Monitoring and Evaluation (M&E) of the EE and DSM Municipal Programme.**

Thank you for your Attention!