

## **Tshwane Higher Education Innovation Challenge**

### **Cost effective digital and technological platforms for easy access to municipal services**

#### **Challenge overview**

Mayoral charter on urban management, basic service delivery and the security and protection of the city.

#### **Challenge Objective**

The objective of the challenge is to find possible solutions to assist the City to deploy technologies and/or systems to enhance (i) efficiency in accessing various municipal services and facilities, (ii) protection of public assets by bringing complementary systems that can improve monitoring safety and security of assets, (iii) digital platforms that can assist in introducing new revenue opportunities for the City.

#### **Challenge expectation.**

In light of the matters highlighted on the mayoral charter, student innovators are invited to propose alternative, novel and non-conventional solutions that would enable the City of Tshwane to have;

#### **Challenge 1**

A multi-service municipal digital booking system. This system should enable customers to check availability of municipal services, through internet services platforms or non-internet dependent methods. For example, customer must be able to make a booking of townhall or booking of a visit to the museum without necessarily having to call the facility or doing a manual booking. The system must be capable of facilitating financial transactions for patrons. The booking data be secured on a reliable data-storage computing systems that are curated by the City's IT management representative. A system that can enhance promotion of heritage and cultural facilities of the city.

#### **Challenge 2**

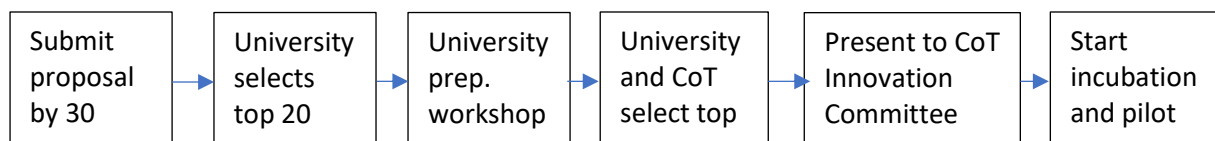
The Electronic Burial Management System that is available is meant to be utilised/operated by cemeteries officials. Given the risks associated with network cable theft and vandalism, it would be appreciated if the innovators could come up with solutions that would enable cemeteries officials to operate this system on a wireless connectivity. But most importantly, this system is an administrative record management tool designed for exclusive use by cemeteries officials. Perhaps other adjustments such as operating this system on digital and mobile platforms may be considered in the next phase

### Challenge 3

A human resource management system that can effectively assist the city to monitor progress and effectiveness of Expanded Public Works Programme (EPWP) participants, i.e. the City needs to understand where are the employees deployed, are they performing their duties as per deployment service level agreement.

The student participants can use their creativity to come up with cost effective digital platforms that can integrate all the unique capabilities

#### Challenge process



#### Evaluation criteria

<b>Novelty</b>	<b>Feasibility</b>	<b>Team</b>	<b>Impact</b>
Is it something we haven't seen before?	Can it be implemented within reasonable time and cost?	Do you and your team have the right mix of skills to do this?	What is the potential impact on City service delivery or revenue?

#### Who may apply?

At least one team member must be registered **as a student (not staff member e.g. post-doc)** at Tshwane University of Technology, University of South Africa (national), University of Pretoria, Sefako Makgatho University, Tshwane North TVET College and Tshwane South TVET College. Teams **do not (do)** need to be formally registered as a business with CIPC.

## Appendix 1 – Challenge 2

### BACKGROUND

The cemetery services within various City Regions have been capturing data manually into the following registers:

- Grave Registers-This register is used for recording of the deceased information as per the section and grave number they been buried in. It also has a provision for deceased burial date.
- Index Registers-This register is used for recording the deceased information alphabetically guided by the surname for ease of enquiry reference. It also has provision for date of burial and grave number.
- Cash Registers-This register is used for recording daily intake of burials and manages the finances thereof. The register has a provision for the deceased full name and surname, residential address at the time of death, age and gender, race, next of kin and address, nature of death, undertaker's name, service costs and form of payment (cash/account). Monthly reconciliation is done on information recorded on this register.
- Account Registers-This register is used for recording burial services rendered on account as per the account holder (undertaker).

The above form of record keeping has proven to be unreliable as it does not provide security on information recorded. Information is hand-written in these registers, the information fades as the registers get old and worn out. Also, in the case of fire or theft, the City fails to assist bereaved families as there are no duplicates/backup information available as the information is only available at a specific cemetery.

The manual record keeping format is not user-friendly and cost effective. The registers are kept in a safe daily and if full, new ones need to be procured and the old ones remain in the walk-in safes.

Mayoral Committee approved a report on 10 June 2015 titled “The Optimization of Electronic Burial Management and Information System in City-wide Cemeteries”. This Mayco resolution seeks to grant Environment and Agriculture Management Department approval to roll out the implementation of this system. This document seeks to provide an update on the implementation of the Electronic Burial Management and Information System (Cemetery and Crematorium Information System developed by K.C Solutions) to be utilized in City-wide cemeteries. This project was incorporated into the Departmental Performance Plan (SDBIP) of 2014/15 financial year.

#### **Benefits of the electronic burial system (Cemetery and Crematorium Information System)**

- It is designed to be a computerized application running on a centralized CoT server.

- It will make it possible for all cemeteries to capture their information and retrieve it as and when required.
- The data will be backed-up daily.
- Similar information being captured in the registers will automatically be captured onto the system.

**Progress that has been achieved with the implementation of the system.**

- Preliminary training was provided to Regional staff on how to capture data.
- Passwords and usernames were created for Admin Officers.
- Trial data was captured for system testing.

**PROBLEM STATEMENT**

- The Cemetery and Crematorium Information System is not being implemented across City cemeteries due to the following reasons:
  - There is no network connectivity in cemeteries and crematorium.
  - The 3G cards that were allocated did not have sufficient data bundles. This essentially means that when the data bundles are depleted, the official would then revert to the manual system.
  - The laptops and printers that were allocated were not sufficient. As a result, some of the cemeteries were unable to implement the system due these resources limitations.

## Appendix - Challenge 1 & 3

### 1. Tshwane Innovation Challenge

#### Key interests

Digital solution on the booking of municipal facilities, 2. Digitalization of the EPWP project and digital supervision of participants, 3. Heritage promotion and development app to promote the Cultural facilities of the city, 4. Research tools – Digital research tools to conduct research on homeless people and Virtual solutions for the Creative Sector.

#### Problem Statement

The Community and Social Development Department is mandated to implement the following service delivery mandates with particular focus on the vulnerable and marginalized

- Arts, Culture and Libraries
- EPWP
- Social Development and Strategic Interest Groups
- Sport and Recreation

Some of the above functions are national and provincial mandates which contribute to the department not receiving adequate funding to fulfill the mandate. Therefore, due to limited financial and human resources in this regard, it is critical that the department explores alternative methods of fulfilling its mandate. The digital evolution has presented solutions that can address the limitations of the department through creating virtual platforms that can connect the department with its stakeholders, document management and improving its research capacity through the use of technology.

- a. Identification of members who will be part of the adjudication team as well as mentors for the students – The CSDS reps will include the ADH Arts, Culture and Libraries, Acting Director: Indigent Management, Deputy Director: Social Integrated Welfare Services , ADH EPWP and Deputy Director: Creative Industries.

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