# **TERMS OF REFERENCE**



## APPOINTMENT OF A SERVICE PROVIDER(S) TO PROVIDE EQUIPMENT AND SERVICES TO TSHWANE SOUTH TVET COLLEGE, CENTURION, CITY OF TSHWANE IN SOUTH AFRICA

## **CUT AWAY MODELS OF VEHICLE MAIN COMPONENTS**



## APPOINTMENT OF A SERVICE PROVIDER(S) TO PROVIDE EQUIPMENT AND SERVICES TO TSHWANE SOUTH TVET COLLEGE, CENTURION, CITY OF TSHWANE IN SOUTH AFRICA: CUT AWAY VEHICLE COMPONENT MODELS

#### 1. PURPOSE

- 1.1 To appoint a service provider(s) to:
- 1.1.1 Provide a range of equipment to Tshwane South TVET College, Centurion, City of Tshwane.
- 1.1.2 Install and commission (inclusive of training of relevant lecturers) the equipment supplied; and
- 1.1.3 Train six selected lecturers in the use, care and maintenance of the equipment supplied.

#### 2. BACKGROUND

- 2.1 The public TVET Colleges are governed by the Continuing Education and Training Act, Act 16 of 2006 and fall within the jurisdiction of the Department of Higher Education and Training (DHET). According to the Act, the task of a public TVET College is to -
  - (a) Register students for all learning and training programmes leading to qualifications at levels 2 to 4 of the National Qualifications Framework or such further education and training levels determined by SAQA and 50 contemplated in the South African Qualifications Authority Act, 1995 (Act No. 58 of 1995), which levels are above general education but below higher education; and;
  - (b) take responsibility for the registration of students, the provision and delivery of the curriculum and the assessment of students.
- 2.2 The UNDP, in association with DHET identified three public TVET Colleges to be supported to improve their offerings to students in engineering studies with a focus on the automotive manufacturing sector.
- 2.3 The three beneficiary colleges are –
- 2.3.1 Northlink College, Belville and Wingfield Campuses, Cape Town, Western Cape
- 2.3.2 Coastal KZN College, Swinton Road Campus, Mobeni, eThekwini
- 2.3.3 Tshwane South TVET College, Centurion, City of Tshwane.

#### 3. PROBLEM STATEMENT

Research and feedback from employers indicate that graduates are not sufficiently prepared for the world of work. The reasons are plentiful but at the core are their inability to work with modern, 4IR equipment and a lack of soft skills. Combined these are the two main reasons for graduates not being able to find employment.

- 3.1 Colleges do not have modern digital equipment that are aligned to factory needs in a new 4IR environment.
- 3.2 Colleges do not sufficiently train students in soft skills such as innovative/creative thinking, teamwork, work ethics, leadership and problem solving). At the same time college lecturers are not trained in the delivery of soft skills.
- 3.3 COVID-19 has elevated the need for blended on-line and remote learning. The pandemic has also illustrated that lecturers are not well prepared to work in a digital learning environment.

#### 4 SCOPE OF SERVICES

The successful bidder(s) is expected to provide the following:

- 4.1 Equipment that meets the specifications as set out below.
- 4.2 Brand the equipment supplied with branded stickers or materials provided by the UNDP
- 4.3 Deliver, install and commission (where necessary) the equipment supplied
- 4.4 Provide training to relevant college lecturers in the use, care and maintenance of the equipment supplied.
- 4.5 Undertake the maintenance for a one-year period including transfer of skills.

General information on the scope of services

- 4.6 Delivery campuses will be clearly indicated in the equipment lists.
- 4.7 All delivery costs, installation, commissioning and training should be included in the price offering.
- 4.8 The bidder can suggest where such training should take place. It can be on-site or if appropriate, virtual.
- 4.9 All equipment should have a three-year warranty.
- 4.10 After sales services for one year after installation and a 24-hour turn-around time for support service and defects.

#### 5. DELIVERABLES

- a) Bidders should bid for complete the complete list below. No partial bids will be considered.
- b) The successful bidder(s) must provide a project schedule that corresponds to the supply, delivery, installation, configuration, training and warranty related to the following:

<u>CUT AWAY VEHICLE COMPONENT MODELS</u>: This batch is for 4 real life models of large parts of vehicles, properly cut open with moving parts, mounted on mobile frames

to be used to illustrate the working of components to automotive mechanic students. The proposed solution should target TVET Colleges.

In preparing the college to implement the solution, bidders should make proposals on how training will take place – on-site or on-line. The proposed solution should be described and reflected in the price.

The list below describes in more detail what is required from bidders.

It is the intention to procure four cut away models of main vehicle components. These will be delivered, installed, commissioned and the necessary training will be provided at the Centurion Campus of Tshwane South College.

### 6. TIME FRAME

The specified requirements are expected to be delivered immediately post award and contract signature and service providers must align their timeframes service requirements as stipulated in section 4 above in line with UNDP procurement processes.

## 7. BID PRICES

Bidders must express prices for their services in South African currency (Rand). All prices must be inclusive of Value Added Tax and costs to be incurred that are necessary for the execution and completion of the contract in accordance with the bid document. Prices will remain firm for the duration of the contract.

#### 8. BID EVALUATION SYSTEM

The evaluation system will be as per UNDP supply chain management processes.

#### 9. AWARDING OF BID

The awarding of bid will be as per UNDP supply chain management processes.

## CUT AWAY MODELS OF MAJOR VEHICLE COMPONENTS

# Site: Tshwane South College, Centurion Campus, Tshwane

Item	Description	Description of Make and Model offered	Qty	Nett unit price excl Vat	Nett Total Price excl Vat				
MECHANICAL POWER TRANSMISSION, FWD UNIT									
1	<ul> <li>The unit should feature a sectioned engine with manual transmission that is connects to an axle/drive system. The system should be motorized and ideal for showing the operation of the engine, clutch system, transmission and axle.</li> <li>Method of power transmission from the engine to the wheels should be clearly seen</li> <li>Gears could be shifted and output observed</li> <li>Consist of original automotive parts, carefully sectioned so that internal parts and operation can be observed</li> <li>Engine completely sectioned along with the transmission, differential and axle system</li> <li>Engine should be rotated by an electric motor at reduced speed for safety</li> <li>Entire unit should be mounted on steel stand with wheels for easy mobility</li> <li>Include explanatory brochures/descriptions</li> </ul>		1						
MANUAL TRANSMISSION, FWD UNIT									
2	<ul> <li>Sectioned manual transmission for transverse mounted engine, FWD</li> <li>Model should be made from original transmission</li> <li>Movement and operation of gears should be fully visible</li> <li>Transmission should be carefully sectioned to show all internal parts</li> <li>Transmission should be sectioned in such a way that all internal parts and shifting mechanisms are clearly visible</li> <li>To be rotated by hand crank and gears shifted via gearshift lever.</li> <li>Entire unit should be mounted on steel stand with wheels for easy mobility</li> <li>Include explanatory brochures/descriptions</li> </ul>		1						

AUTOMATIC TRANSMISSION, FWD UNIT							
3	<ul> <li>Sectioned FWD automatic transmission with 4 forward and 1 reverse speed</li> <li>Model should be made from original transmission</li> <li>Movement and operation of gears should be fully visible incl. torque converter, epicyclical braking system, multiple clutches and control valves</li> <li>Transmission should be carefully sectioned to show all internal parts</li> <li>Transmission should be sectioned in such a way that all internal parts and shifting mechanisms are clearly visible</li> <li>To be rotated by hand crank and gears shifted via gearshift lever.</li> <li>Entire unit should be mounted on steel stand with wheels for easy mobility</li> <li>Include explanatory brochures/descriptions</li> </ul>		1				
FUEL INJECTION TRAINER, MULTIPOINT EFI SYSTEM							
4	<ul> <li>The trainer should consist of a complete fully operational Multipoint EFI system.</li> <li>ECU</li> <li>Test Point Panel for ECU Input/Outputs</li> <li>Fuel tank reservoir</li> <li>Electric fuel pump with pressure gauge</li> <li>Fuel filter</li> <li>Fuel distributor rail with pressure gauge</li> <li>Fuel injectors</li> <li>Fuel pressure regulator</li> <li>Graduated fuel volume meter for each injector</li> <li>Complete ignition system</li> <li>Variable speed drive for ignition with Tachometer</li> <li>Engine diagram showing layout of components</li> <li>Throttle position sensor</li> <li>Entire unit should be mounted on steel stand with wheels for easy mobility</li> <li>Include explanatory brochures/descriptions</li> </ul>		1				
Total excluding VAT							
VAT (15%)							
Total including VAT							