public works
& infrastructure

Department:
Public Works and Infrastructure
REPUBLIC OF SOUTH AFRICA

Department Of Public Works And Infrastructure Hereby Invites Request For information for Immovable Asset Register (IAR) Digitalization

Terms of Reference are downloadable for free of charge from National Treasury's eTender Portal: (http://www.etenders.gov.za) or from the Department of Public Works and Infrastructure website (http://www.publicworks.gov.za/teners.html).

Closing date and time: 07 June 2022 at 11:00 AM

Briefing session date and time: 11 May 2022 at 10:00 AM

Delivery address: Department of Public Works and Infrastructure, Private Bag X65,

Pretoria, 0001

OR

Deposit the required information in a sealed envelope indicating, RFI number, closing date and your company name at

Department of Public Works and Infrastructure

256 Corner Bosman and Madiba Street

Reception Area, Tender box

Submissions should be submitted in clearly marked sealed envelopes indicating the relevant request for information reference number and deposited in the addresses stated above. It is the responsibility of the bidder/s to ensure that proposals are submitted on or before closing time at the correct location as the department will not take responsibility of wrong delivery.

Service Providers who are using courier services for delivery of their bid documents must ensure the delivery is at the correct place / location and time as the department will not be held responsible for wrong delivery. The will be a non-compulsory briefing session. Technical enquiries shall be directed to Mr Bheki Zwane at bheki.zwane@dpw.gov.za (012 406 1578 082 9090 203) and Supply Chain Management enquiries to Ms Phuti Mahlanya at phuti.mahlanya@dpw.gov.za (012 406 1658) within office hours.

Request For Information(RFI) for Immovable Asset Register (IAR) digitalization

22/04/2022

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1. Introduction

The Constitution of the Republic of South Africa (1996) is the supreme law of the country. It makes provision for other legislations regarding planning and performance monitoring across the three spheres of government.

The Constitutional mandate for the department is provided in Schedule 4, Part A, of the Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996) [The Constitution] which refers to "Functional Areas of Concurrent National and Provincial Legislative Competence," the mandate being derived from Public Work as a function of Government implemented by all spheres of Government.

DPWI's mandate is to ensure that National government departments' accommodation needs are met through accommodation in state-owned buildings (under the custodianship of DPWI), leases in externally-owned buildings and some instances in housing acquired employing public-private partnerships (PPP). According to the DPWI's asset register, the immovable asset portfolio under the custodianship of the DPWI comprises 30 494 registered and unregistered land parcels on which 81 573 are improvements (buildings and structures).

Vendors must note that this is a request for information and must not create an expectation that DPWI will award a contract to the respondents of this RFI.

2. Purpose

DPWI requests RFIs for the IAR digitalization from the leading and reputable bidders with the requisite experience in planning, designing, building, training, deploying, monitoring, reporting, and closing as per the scope of this document.

3. Background

The struggle against poverty, unemployment, and social injustice is at the core of the South African Government priorities to respond to the nation's challenges confronting the country. The economy has been shrinking in the pre and post-pandemic periods. As a result, the fiscal space has been diminishing. Therefore there is a need to look at innovative ways to enable infrastructure-led economic growth.

DPWI plays an important role to enable and accelerate the efforts to implement the National Infrastructure Plan and in line with investment and infrastructure economic recovery by providing the technical knowledge, resources and leveraging on the IAR.

In October 2020, the president announced the economic reconstruction and recovery plan. The program aims to create jobs, re-industrialize the economy, accelerate economic reforms, and fight crime and corruption while improving the state's capability. The plan has several interventions, and the ones that are relevant to DPWI are:

- R340 BN Infrastructure programme.
- Secure and sustainable energy supply. R1 trillion over the next four years
- 800K job opportunities in the medium term.
- Broadening the manufacturing and industrial base. Absorbing the supply side of construction.

During the latest cabinet lekgotla, the president made a clarion call for Ministers to find innovative ways to stimulate the sluggish economy in line with the economic reconstruction and recovery plan. In this regard, DPWI has identified possible use

cases of the IAR to respond to the president request, which are captured under
section 5.

4. Project objectives

The objective of the project is to:

- Enhance the digitalization of the IAR as the core tool that DPWI utilizes to execute its mandate.

- Review and enhancement of lease register (i.e. properties and facilities contracted for use with other parties).

- Confirm the extent of these assets, number of parking bays and storage as recorded in the lease contracts.

- Ownership status of leased buildings contracted by the department.

- Condition assessment of lease properties.

- Ensure optimal utilization and revenue generation

- Leverage on the IAR and technology to contribute towards youth employment.

5. Current Status

DPWI has started the implementation of its ERP solution in 2015. The focus of the
ERP solution is on digitization of the core business functions namely, Real Estate
Investment Service (REIRS), Real Estate Information and Registry Services
(REIRS), Real Estate Management Management Services (REMS), Construction
Project Management (CPM) and Facilities Management (FM).

The current ERP solution comprises of two systems. One system collects and
collates data on the core business activities, and the other system does the financial

transactions. The two IT systems are interfacing to one another through an Enterprise Service Bus (ESB).

In terms of the ERP solution, three modules have gone live: LeaseIN, Immovable Assets Management and Unscheduled Maintenance modules. The other modules are at different levels of completion: Schedule/ Preventative, LeaseOut, Condition Assessment, Movable Assets Management and Capital Budgeting & Project Management modules.

Therefore the IAR digitalization project is not meant to replace or duplicate the ERP solution but complement it by focusing on ensuring the baseline data coming from the IAR(the heart of DPWI's core business) is complete, accurate and reliable. Similarly, the data used for the lease management, condition assessment and facilities management must comply with the quality standard of completeness, accuracy and reliability.

6. Project key principles

In line with the economic reconstruction and recovery plan, a digitalized IAR will assist DPWI Minister to identify assets which can be used for the following:

- Vacant land for farming co-operatives targeting rural women and youth, in line with the land reform programmes.
- Vacant land for construction of solar energy farms. The local community will use these farms to generated power for local industries and households and sell the surplus to the local municipality network.

- Vacant buildings that can be repurpose for residential or student housing in line with integrated spatial programmes. The empty buildings can be used for aquaponics, hydroponics and vertical farming.

The proposed solution must meet the following principles:

- be driven by innovation and technology.

- Use efficient, sustainable and environmentally friendly technologies like renewable energy,

- Economic growth and job creation. Targeting the unemployed youth and women.

- Have interdependence/ close system and element of scalability and linkage the economic reconstruction and recovery plan.

- 3D Visualization of IAR data (land, property and infrastructure), existing and simulation.

- Cross-pollinate different data sets

7. Project scope

This section defines the department's requirements for comprehensive asset management services inclusive of the following as a minimum, and that must be clearly defined in the methodology:

7.1. Immovable Asset Register digitalization

a) Automated software/ solution.

b) Single repository for all state asset

c) Expropriation register

d) Coastal asset surveying and verification of

e) Componentisation of the IAR.

f) Accounting policy review.

7.2. Review of the lease register

The department has a lease register but is not updated regularly. The following functions will need to be performed.

a) Development and review of lease register.

b) Review the existing leased properties and facilities against the details in the lease contracts. Review and enhancement of lease register (i.e. properties and facilities contracted for use with other parties).

c) Confirm the extent of these assets and the number of parking bays and storage recorded in the lease contracts. Confirm the size of these assets and the number of parking bays and storage registered in the lease contracts.

d) Ownership status of leased buildings contracted by the department.

e) Condition assessment of lease properties.

f) The geographical location of the leased properties (coordinates)

7.3. Training

a) Training Plan

b) Training Method

c) Unit cost.

7.4. Project Management

7.5. Technology solution

a) Tablet and smartphone app for field workers.

b) Dashboards for management and political leadership

7.6. Facilities Management

a) ICT platform for collecting, collating and reporting information in compliance with the GIAMA 5-year cycle reporting requirement.

b) Develop handyman capability for DPWI by bringing artisans into a cluster of facilities to do low-level maintenance.

c) Develop data standards for each component for data to be collected by field workers on conditioning assessment and componentization.

d) Plan, execute, monitor and control the collection of data on condition assessment and componentization. Ensure that the collected data is subject to a QA process and migrated to the ERP module through the interfaced mobile application. FM will use the collected data to develop maintenance plans and schedules and Finance for GRAP reporting

e) Liaise with TVET colleges to bring in graduates to collect information on condition assessment and componentization. The successful bidder must facilitate acquiring of graduates and oversee their work.

8. Technology solution principles

The following are the technology solution principles:

- Mobile, ease-of-use, scalability, robustness and security.
- Integration with current ERP solution.

- Capability to integrate with other 4IR technologies like blockchain, internet of things, artificial intelligence, BIM, cloud.
- Dashboard and reporting capabilities for different levels of management and political leadership.

9. Project design and methodology

10. Response format

Bidders must submit their RFI of interest proposals in the format specified below:

- Company capability – list of previous projects, maximum 5, of similar nature and size not older than ten(10) years and reference letters. Must be submitted as per the format in Annexure A.
- Resources - A list of team members covering the project lead, project manager, accountants, engineers, valuers, leasing and facilities management subject matter experts. Must be submitted as per the format in Annexure B.
- Project design and methodology
- Project Implementation Plan
- Hourly rate for resources as well as work to be done on the project.

11. Indicative procurement schedule

Activity	Due Date
Issuing of the RFI	Quarter 4 of 2021/22
Consideration of the RFI received from Vendors	Quarter 1 of 2022/23
RFP	Quarter 2 of 2022/23
Contracting	Quarter 3 of 2022/23
Project Commencement	Quarter 3 of 2022/23

1. ANNEXURE B - RESOURCE REQUIREMENTS

This is an indicative resource capability requirements, the prospective vendors are allowed to add other appropriate resources or capabilities that may not be listed below that will add value to the project.

Project Lead (x1)		
Qualifications	Capability Requirements	Relevant Experience
Masters degree in business administration and a relevant qualification in Enginneering/ Property Management	• Experience in working in the South African built-environment context is required, which implies a clear understanding of the government infrastructure led economic growth as outlined in the government priorities. • Capability to develop strategies and plans and understanting of the governance, policy and legislative environment. Extensive experience in the design and facilitation of engagements aimed at : • Employement creation and poverty alleviation programmes • Public infrastrucuture development programmes. • Stakeholder engagement with diversify role players • Decision-making and capability development and empowerment of built environment practitioners, teams and SMMe's	• A minimum of ten(10) years' demonstrated experience in leading public infrastructure programmes • Experience in supporting diverse stakeholders to bridge the challenges of collaboration and joint prioritisation and visioning; • Experience in facilitation processes designed to enable engagement in diverse, multi-cultural, multi-disciplinary, multi-language ,and other contexts; • Experience with the design and implementation of government capacity development initiatives; and • Proven track record and ability to generate innovative and powerful visual tools, reports and capturing of work sessions.

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- Work that centres around visions for a new future, involving local and global sustainability agendas like sustainable enery, global warming, climate change, smart cities, floating cities, etc.
- Capabilities which supports transformation, partnerships and supports collaboration, co-ownership and knowledge creation;
- Co-design approach involving clients to enable understanding the root causes of the challenges an organisation/community is dealing with and co-ownership of process.

Project Manager (x1)		
Qualifications	Capability Requirements	Relevant Experience
Accountants (X2)		
Qualifications	Capability Requirements	Relevant Experience
Electrical engineers(X9)		
Qualifications	Capability Requirements	Relevant Experience
Property valuers(X3)		
Qualifications	Capability Requirements	Relevant Experience

	Qualifications	Capability Requirements	Relevant Experience
Real estate subject matter experts (X3)		Capability Requirements	Relevant Experience
Interns – IAR (X)		Capability Requirements	Relevant Experience
Interns – REMS (X)		Capability Requirements	Relevant Experience
Interns – FM (X)		Capability Requirements	Relevant Experience
DBA (X2)	• Certificate in Database Administration • 3 year National Diploma/Degree in Information Technology	• Maintaining a Microsoft SQL Server • ORACLE(Database Administration and maintenance including ORACLE spatial components • Database Administration through the following environments: development,	• 5 years' experience working as a SQL / Oracle Database Administrator

Testing, QA, Pilot training,
Production and Disaster
recovery environments

- Quality Assurance
- Performance Tuning
- Including Replication through
  firewalls and Replications To
  ORACLE
- Integration, Analysis
  Services/DTS
- SQL Scheduled Jobs, SQL
  Server Clustering
- Data warehousing
- Troubleshooting, Debugging
  and problem solving skills,
  Database development quality
  assurance, Enterprise Data
  project Modeling
- Team Player
- Ability to conduct training and
  research

Analyst Developer (X3)

Qualifications	Capability Requirements	Relevant Experience
• Minimum 3 year National Diploma/Degree in Information Technology /Computer science	• Conduct Joint Application Development (JAD)/SCRUM sessions; • Analysis and visualisation of solutions; • Design solutions by using applicable programming languages; • Design solutions by using applicable development methodologies; • Develop and write the programme; • Implement the solution; • Create the plan and test cases • Test the solution; • Updating the developed system; • Attend to user queries regarding the solution ; • Assist users for training and support	• 2 years' working as an Analyst Developer

Data analyst (X3)

Qualifications	Capability Requirements	Relevant Experience

• Certificate in Database Administration • 3 year National Diploma/Degree in Information Technology	• Using automated tools to extract data from primary and secondary sources • Removing corrupted data and fixing coding errors and related problems • Developing and maintaining databases, data systems – reorganizing data in a readable format • Performing analysis to assess quality and meaning of data • Filter Data by reviewing reports and performance indicators to identify and correct code problems • Using statistical tools to identify, analyze, and interpret patterns and trends in complex data sets that could be helpful for the diagnosis and prediction • Assigning numerical value to essential business functions so that business performance can be assessed and compared over periods of time. • Analyzing local, national, and global trends that impact both the organization and the industry • Preparing reports for the management stating trends,

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	patterns, and predictions using relevant data • Working with programmers, engineers, and management heads to identify process improvement opportunities, propose system modifications, and devise data governance strategies. • Preparing final analysis reports for the stakeholders to understand the data-analysis steps, enabling them to take important decisions based on various facts and trends.	

GIS Developer (X3)

Qualifications	Capability Requirements	Relevant Experience
• 3 year National Diploma/Degree in Geo-Informatics/ computer science • Certificate in GIS	• Design, develop and support geospatial GIS templates. • Work closely with the DPW/PMTE software development team to ensure that GIS Map templates and widgets are developed • Define, design and build varied components of complex, distributed, high-performance web-based and Mobile applications. Should be functional with technologies across most of the application stack including	• 5 years' working as a GIS Developer

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Qualifications	Capability Requirements	Relevant Experience
- user interface, middle tier, and database systems - Including Replication through firewalls and Replications To ORACLE - User interface capability usually includes implementation using HTML, JavaScript, CSS, REST/JSON and various third-party frameworks. - Spatial database design and implementation - Knowledge of object-oriented programming - Ability to conduct training and research		

Trainners (X 2)

Qualifications	Capability Requirements	Relevant Experience
• 3 year National Diploma/Degree in Information Technology	- Conduct training needs analysis and define the skill sets needed to accomplish different roles - Conduct performance appraisal to establish the skills gap between current and desirable learner skill levels - Present training to end-users - Perform technology training sessions for IT department o as required	• 5 years' working as a trainner

	• Revise training presentations and schedules for Site IT department training as needed
	• Design training programs equip employees/end-users with the appropriate skills
	• Develop a suitable mix of formal and informal development activities
	• Responsible for the set-up of the learning environment and resources
	• Deliver training program in group and or online (e.g. ms teams and webinar) settings.

Project Administrators(X2)

Qualifications	Capability Requirements	Relevant Experience
• 3 year National Diploma/Degree Information and Knowledge Management	• Facilitate project plans development & manage them from inception to completion	• 3 years' Working experience as a project administrator
	• Organize and implement formulated policies and procedures	
	• Maintain and update budgets as project progresses	
	• Analyse project data and produce progress reports.	
	• Execute all project/s administration functions and processes.	

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Change Manager		
Qualifications	Capability Requirements	Relevant Experience
• 3 year National Diploma/Degree in Information Technology	• Create or significantly contribute to change enablement strategies and plans, including training and communications • Conduct effective change impact assessments, readiness assessments, and stakeholder analysis • Define, plan and execute change management plans to support communication and transition activities • Develop, deliver and manage communication, stakeholder, training, engagement, adoption, and resistance management plans • Integrate change management activities into project plans • Ensure that information is communicated to impacted audiences throughout the duration of the program • Manage stakeholder relationships • Define and measure success metrics and monitor change progress • Collaborate with project teams to ensure the successful execution of	• 5 years' Working experience as a change manager

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- the end-to-end change management strategy
- Proactively identify and implement improvements to the change management strategy & methodology
- Build executive presentations and identify risks and issues relating to change management functions
- Managing effective internal strategic communications programs
- Comprehending detailed technical updates and translating them into consumable insights for non-technical teams