

Technical specifications Business case: Data Analytics Tool

1. PURPOSE

The purpose of this bid request Appointment of a service provider to supply data analytics tool, implementation, maintenance and support of the tool. The contract period is 36 months, the first six months being system implementation and the next 30 months being the post-implementation and on-going support.

2. BACKGROUND

- 2.1 Data analytics is defined as the systematic computational analysis of data to discover, interpret and communicate meaningful patterns in data.
- 2.2 The Auditor General of South Africa (AGSA) took a strategic decision that data analytics will form an integral part of the audit process. Data analytics will unlock diagnostic, descriptive, predictive and prescriptive analytics that will allow auditors gain insights into the auditee's environment thus informing the audit strategy. The insights gained will improve the relevance of the audit by steering the audit to what matters and will unearth unknown risks, which in turn will reduce the audit risk.
- 2.3 Although the AGSA data analytics journey is in progress, the audits are still to be supported through the use of Computer Assisted Audit Techniques (CAATs) until such time the data analytics journey is completed. CAATs is embedded as part of the audit process and referenced in the current audit methodology. As a subset of data analytics solutions within the AGSA, the current CAATs solution provides the functionality to translate raw data into a readable format to be used in the audit process. It supports the audit testing process (i.e. exception testing, analysis, etc.), the auditing of the metros revenue assets, supply chain management and other key processes. The Audit Command Language (ACL) software, recently renamed Galvanize, is the data analytics solution that is currently utilised within the AGSA.



3. SPECIFICATIONS

Data access
The tool/software must have the ability to read/import a wide range of data formats. At minimum the following should be proven: <ul style="list-style-type: none">• Database files• Delimited text files• Fixed length text files• Report/ print files• Excel files• Adobe Acrobat files
The tool/software must have the ability to read/import ODBC compliant databases directly.
The tool/software must have the ability to read/import data directly from different databases such as SAP, Oracle, JDE, PeopleSoft etc. An add-on ability to the tool/software is acceptable.
The data layouts must have the ability to be reused for importing data across projects.
Data integrity
The tool/software should not be able to change the source data, thus reading the data files without altering it.
Data export
3.3.1 The tool/software should be able to export manipulated results into a wide range of application data formats. At a minimum the following should be proven: <ul style="list-style-type: none">• Database files• Delimited files• Excel files



Data manipulation/testing
Apply filters to data sets
Extract data to a sub-dataset – new data file, also by applying filtering criteria
Append two similar tables into one table
Join/relate tables on unique fields
Sort/index data sets
Standard menu selectable data analysis should be proven to cover at a minimum the following: <ul style="list-style-type: none">• Number sequence checking• Gaps detection in a sequence• Duplicate testing• Age• Statistics• Stratification• Summarisation• Cross tabulation
Standard sampling capability covering different methods of sampling: <ul style="list-style-type: none">• Random• Stratified• Interval• Monetary unit
Standard additional functions <ul style="list-style-type: none">• Financial functions, e.g. net present value• Mathematical functions, e.g. absolute, maximum, minimum• Character, e.g. upper case, lower case, substring, mid-string, length• Date and time, e.g. age• Conversion, e.g. character to numeric and vice versa



Application/ automated solutions
The tool/software should have scripting capability (repeatability/automation)
The tool/software should be able to automatically locate and import data
The use of variables within scripts is a must
Variables must be determined from user input via selection options and/or manual input
Variables should be able to be used as part of the naming convention of data files
Scripts should be able to access tool/software executables/peripherals as part of the solution
The tool/software should provide for automated solutions to be developed of which should be available from customised menu lists.
To script in the tool, number of years' experience required
Scripting is embedded in the tool, no additional tools required
The tool/software must include the capability for Machine learning and artificial intelligence
Record of work done
The tool/software should log all activities performed on the data sets
Training
Are training certifications offered by the supplier ranging from Novice to Advanced levels
Support infrastructure
The tool has a dedicated technical support team available for assistance and query handling

4. EVALUATION PROCESS

The evaluation criteria is included as **Annexure B** as part of the bidding documentation. The minimum qualifying score is 80%. Bidders that fail to achieve the minimum qualifying score will be disqualified and not considered for the next stage of evaluation (Demo evaluation).

Selected bidders will be requested to provide a demonstration of their proposed data analytics solution functionality and technical architecture in evaluation workshops. The functionality must show how the solution addresses the desired capabilities identified in section 3 and the requirements. The demonstration workshops will:

- Allow the bidders to present their company and demonstrate their proposed data analytics tool. This will allow the supplier to set up a mock environment that allows the evaluation team to walkthrough the specific scenarios.
- Allow the AGSA's appointed evaluation team to view and evaluate system features and technical ability.
- Bidders must note that points will only be awarded for functionality, features and capabilities that are actually demonstrated during the demo session.
- An invitation to, and the agenda for, the evaluation workshops will be sent to short-listed suppliers.



5. COSTING

Suppliers are required to quote on the items listed below:

5.1 Software licences costs

Suppliers are requested to provide a detailed specification of user license costs for internal users and for external users. Scalability of the software bundling to also be included.

5.2 Hardware costs

Suppliers are requested to provide a detailed specification as well as the estimated cost of the hardware components required to support the solution. If the specification will take into account a phased approach the pricing to consider those

5.3 Support and maintenance costs

- a. Suppliers should provide detailed pricing on available support and maintenance offerings beyond those included with the base system. Support services include technical support, software maintenance and version updates.
- b. Business-hours support
 - 24/7 support
 - New version support
 - Incremental version or maintenance version support costs
 - Support portals / knowledge centres.

5.4 Training costs

Suppliers should provide detailed pricing on available training costs beyond those included with the base system. **For training, please include a recommendation for the number and type of classes for suggested development and support organisations in the pricing, as well as a separate schedule of pricing for training on both a per-user-per-class and a per on-site class basis.**

Differentiate between required, recommended and optional training and note the duration, location and the type of individual(s) who should attend. Also indicate any free training that is included within the scope of your proposed solution.



5.5 Professional service costs

Since the AGSA views this purchase as strategic, suppliers should provide pricing on the availability of implementation/consulting service professionals to assist in the design and implementation.

Please provide a fixed price of your various levels of professional services. The professional services are outlined in the pricing schedule as project management, analysis and design, development and configuration, integration, testing and deployment.

5.6 Other costs

Provide the details of any additional costing information required, or relevant, to implementing the proposed software such as estimated travel costs and accommodation. Use this section to specify any additional software requirements for the proposed solution, for which you may not necessarily provide direct licensing, for example database software.

6 Implementation

Considerations of implementing the solution should be addressed in the response. This should include information that describes the suppliers' system integration approach and the steps involved in implementing the solution.

The supplier should provide:

- An overview of the methodology that will be used for implementation, including duration and resource/effort estimation across the implementation methodology, including the role of the supplier during implementation
- Multiple examples of implementation timelines that span the simple and complex
- The skill set required from AGSA technical resources to implement and maintain the solution and the specific role they will play.