

# TERMS OF REFERENCE



**APPOINTMENT OF A SERVICE PROVIDER TO DEVELOP AND MAINTAIN A WEB-BASED NATIONAL DISASTER LOSS, DAMAGE AND KNOWLEDGE DATABASE SYSTEM AND MOBILE APP FOR THE NATIONAL DISASTER MANAGEMENT CENTRE (NDMC) WITHIN A PERIOD OF THREE (3) YEARS INCLUDING DATA COLLECTION, MIGRATION, SYSTEM MAINTENANCE AND SUPPORT.**

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## **1. PURPOSE**

- 1.1 The purpose of this Terms of Reference (ToR) is to appoint a service provider to develop and maintain a national web-based disaster loss, damage and knowledge database system and mobile app, that complies with the Sendai Framework for Disaster Risk Reduction (SFDRR), for the National Disaster Management Centre (NDMC) within a period of three (3) years, including data collection, migration, system maintenance and support.

## **2. BACKGROUND**

- 2.1 The National Disaster Management Centre is governed by the Disaster Management Act 57 of 2002; **Section 17(1)** requires that the National Disaster Management Centre (NDMC) must act as a repository of, and conduit for, information concerning disasters and disaster management, and must for this purpose:

- (a) Collect information on all aspects of disasters and disaster management.
- (b) Process and analyze such information.
- (c) Develop and maintain an electronic database.
- (d) Take steps to disseminate such information, especially to communities that are vulnerable to disasters.

- 2.2 The current COVID-19 pandemic has prompted the use of the Disaster Operation Centre (DOC) to provide information and advisory services that allows for high levels of situational awareness to be conducted to guide local government interventions and decisions.

- 2.3 The current common functions of a DOC are the following:

- (a) Collect, gather, and analyse data both numerically and spatially.
- (b) Collate information to allow decision making that protect life and property.
- (c) Maintain continuity of the organization, within the scope of applicable laws to support operational functioning of sector resources.
- (d) Disseminate those decisions to all concerned stakeholders; and
- (e) Monitor and measure progress in terms of the strategic operational objectives.

2.4 **Section 17(2)** stipulates that the National Centre must contain extensive information concerning disasters that occurs or may occur in Southern Africa and disaster management issues, including information on **(c)** recurring occurrences that result in loss, but which are not classified as disasters in terms of this Act; **Section 24**, **Section 32(1) (b)** and **Section 46(1) (b)** outline reporting requirements. Furthermore, **Section 17(4) (a)** and **Section 17(4) (b)** describe security standards of the system.

### 3. **PROBLEM STATEMENT**

The NDMC is unable to comprehensively record, manage and report on both historical and current disaster losses and damages. Data and information about the losses and damages from disasters are not systemically recorded, resulting in and causing poor understanding of emerging patterns and trends about disaster risks and thus disabling targeted action and contribution to developmental processes.

There exist fragmented pockets of information hosted by different stakeholders with no proper central database and repository to enable regular update and ongoing maintenance of the disaster losses and damages. The key stakeholders are Provincial Disaster Management Centres (PDMCs), Municipal Disaster Management Centres (MDMCs), sector departments across all spheres of government, State Owned Entities such as CSIR, academic institutions and some private sector companies. Operational disaster registers are kept in spreadsheets and are not easily accessible by authorised stakeholders, while some information is in the annual reports. The National Treasury also publishes allocations of disaster funding to provinces, municipalities, and sectors and this should also find expression as part of the disaster loss and damage database to enable a single version of the truth of the disaster losses and damages.

The Sendai Framework for Disaster Risk Reduction (2015-2030) furthermore requires national governments to report on a set of 38 indicators which were identified to measure global progress in the implementation of the Framework. The **indicators** will measure progress in achieving the global targets of the **Sendai Framework** and determine global trends in the reduction of risk and losses. South Africa does not have a national loss database to support this global process.

The NDMC plans to lessen its financial burden by implementing this project over a three (3) year period and related cost model through an agile methodology and phased approach. It is envisaged that the first phase will deliver user requirements definition, detailed requirements, specifications, design, system architecture and national loss and damage database system prototype; followed by phase two during which the prototype will be enhanced to develop a fully functional system including end user training. The third and final phase will include enhancement, maintenance, and support of the developed system.

#### **4. SCOPE OF ASSIGNMENT**

The NDMC needs a well-defined and structured database system and mobile app that will bring about improvements on the ability to identify data sources, collect, aggregate, manage data; and report on both historical and current disaster losses and damages in compliance and alignment to the Sendai framework (4 priorities, 7 targets and 38 indicators). The project will be developed through a phased approach over a 3-year period. All disaster loss and damage data need to be collected from at least the year 2005 up to present (current) and be uploaded on the integrated disaster loss database of the envisaged Disaster Management Information and Knowledge System. The system shall have the capability to track disaster damages and losses, identify and generate patterns of exposure and hotspots of vulnerabilities. This web-based online system shall record several parameters such as affected population by categories, death, injury, economic losses and services disruptions in sectors such as education, health, housing, agriculture, industries, critical infrastructure such as roads, bridges and building, cultural heritage etc. disaggregated by geographic area, gender, age and disability when appropriated by the type of hazard.

The resultant data is expected to provide a basis for monitoring loss and damage, spatial patterns, and temporal trends, allowing to compare and adjust investments in disaster risk management, enabling improvement of vulnerability curves and calculation of risks of future losses, providing baseline information for establishing national, provincial, and local level risk reduction strategies and allowing the evaluation the efficiency and efficacy of risk reduction measures. Disaggregated data on loss and damage will be a critical input for disaster risk management generally and specifically for implementation and reporting on the Sendai

Framework and disaster-related Sustainable Development Goals (SDG) indicators. The scope includes development of guidelines, user manuals and training packages targeting different system users and development of capacities of disaster management entities and officials to maintain disaster loss databases and collect disaster damage and loss data particularly disaggregated data for gender, age, and disability to be used in the Sendai Framework Monitor and thus provide technical support to the Sendai Framework Focal Point in reporting national data on the online Sendai Framework Monitor.

The system should cater for uploading documentation and promotion of best practices. Standard operating procedures for disaster impact data capturing, validation and/or publication must be developed with templates and standards for disaster reports and dashboards. The system must enable extraction of data from the database system and/or to be exported to different data visualisation software packages/platforms to be used in dashboards, interactive maps, geographic information systems and/or published as infographics. The disaster loss and damage information system must have interoperability pathways with other relevant information systems, including sector-specific information systems and analytical platforms.

There must be appropriate linkages with provincial and/or districts' disasters damage and loss assessments' protocols, methodologies and tools and disaster

damage and loss databases variables and disaggregation levels. Since access to the system need to be opened for many and varied stakeholders, a data access policy with processes and procedures on data access must be developed to address conditions for using the database and, amongst others, data validation by relevant national authorities before and after being uploaded or imported into the database.

#### 4.1 **Project Management**

- a) The project must be managed through project management principles and methodologies from project initiation, planning, execution, monitoring and control until closure applying an agile project management process.
- b) Develop project management artifacts/documentation.

#### 4.2 **Requirements Analysis**

- a) Analyse current available data, data structures, information, information flows, procedures, existing systems related to disaster loss and damage databases; highlight gaps to inform the design phase.
- b) Develop detailed business / user requirements (functional and non-functional).

#### 4.3 **Stakeholder gap analysis** including identification, engagement, and consolidation.

- a) Conduct evaluation of available data in the National, provincial and municipal Disaster Management Centres, and entities in the public sector, private sector, academic sector who are gathering and hosting disaster loss and damage information, including but not limited to Department of Forestry, Fisheries and the Environment (DFFE), South African Weather Services (SAWS), Department of Health (DoH), South African Environmental Observation Network (SAEON), Council for Scientific and Industrial Research (CSIR), various Universities , Agricultural Research Council (ARC), African Centre for Disaster Studies (ACDS), Statistics South Africa (Stats SA). Determine data formats, information exchange methodologies and processes, etc. to be implemented by the NDMC. This entails an assessment of current data sources, identification of additional ones so that any existing gaps may be closed. Systematic procedures, methods and standards of data collection should be put in place to enable information flow, exchange, and regular reporting processes.
- b) Collect data about occurrence and impacts of disasters specifying the date, time, geographical unit (location) and consider requirements on storage; retrieval and compilation of data and information; sharing of data and information between and amongst stakeholders; analysis of data to understand patterns and trends of disaster losses and damages.
- c) The disaster loss and damage data need to be collected from at least the year 2005 up to now and be uploaded into the envisaged database system,

catering for amongst other things, disaster events; assets; losses; damages, impacts; location and to meet the reporting requirements of the Sendai Framework for Disaster Risk Reduction, 2015-2030.

#### 4.4 Disaster loss and damage database system design and development

- a) Develop an architectural design to describe views, models, behavior, and structure of the system.
- b) Convert system analysis descriptions into logical design to represent data flow, inputs, and outputs of the system (e.g., Entity Relational Diagram) and physical system specification data models and storage.
- c) Design input/output interfaces of the system.
- d) The system must have a workflow engine that will enable multiple levels catering for at least three levels for data publication, ranging from data capturing, data validation and approval to publish, thus ensuring the integrity and credibility of data is upheld.
- e) Based on a solid loss-database architecture and the technical guidance specifications provided for the Sendai Framework for DRR, the data captured by the database should include the direct impact of an event such as:
  - i. Disaster type such as *floods, fire, drought, etc.*
  - ii. Event details such as *date, location, intensity; Impact on Population such as Number of people affected, death, injuries, missing, displaced, food insecure, nutritional needs, Water Sanitation and Hygiene (WASH) service's needs, learners out of school, etc.*
  - iii. Impact (Damages) on infrastructure such as Type (Police station, school, hospital, transport, communications, sewerage, etc.) & financial losses for each infrastructure item.
  - iv. Impact on livelihood – Crops (e.g., Crop type, Hectares destroyed, Hectares financial losses).
  - v. Analysis undertaken at local, provincial level to derive emerging trends and patterns of events and impacts which is used to inform national planning.
- f) The disaster knowledge database system component will cater for multiple levels of at least three levels for data publication, ranging from data capturing, data validation and approval to publish, for example, reports (including dashboard, articles, etc. This part of the system must have data analytics capabilities to enhance management decision making.
- g) The service provider must establish what ICT infrastructure is required to adequately host the disaster loss centralised database, evaluate the current NDMC infrastructure and provide hardware and software specifications required to run the proposed database system both in the short, medium, and long term.
- h) The service provider must ensure that there is seamless interoperability with the Desinventar system and the Sendai Framework Monitoring tool.

- i) The service provider resource gap analysis report must also specify the technical and data capture human resources roles and responsibilities and processes required to keep the database populated and maintained adequately.
- j) System operation and maintenance: The system must be populated with historical and current information through data capturing, verification and ongoing maintenance.

#### 4.5 System features

The system must cater for the following:

- a) Must be browser based, secure and password protected.
- b) Must have capability to capture field data on disaster risk management from stakeholders such as national, provincial, district, local organs of state as well as civil society and the private and academic sectors.
- c) The system must capture the metadata set out in the Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for Disaster Risk Reduction published in 2017 by the UNISDR.
- d) Have a workflow(s) module(s) for escalating. The workflow must define managerial hierarchy approval flow, that is, automation of the reporting protocol. The module must encompass an email/ SMS notification functionality for each workflow status change.
- e) Must have the capability/functionality for system generated alerts and capturing user generated alerts and disseminate them to all the role player(s) of the affected area to alert them, for example, about new information on losses and damages. Such alerts may be communicated using the Short Message Service (SMS)/email functionality mentioned above.
- f) Must have capability to produce various reports as per user requirements, including real-time reporting where applicable.
- g) Have an advanced search feature which includes drill down search, integrating with maps and text related searches. It must also provide for a search function per province, district municipality and local municipality and other detailed criteria as shall be specified during the detailed requirements definition.
- h) Record audit trail for all the activities and produce detailed audit reports.
- i) Compatibility with wide choice of browsers when it comes to accessing browsed based systems. It is therefore the responsibility of designers and developers to ensure that websites are compatible with most of the commonly used browsers. Cross browser compatibility that is internet explorer, Firefox, Opera, Google Chrome, and Safari.
- j) The display must automatically resize, hide, shrink, or enlarge, the web pages, to make it look presentable on all devices (desktops, tablets, and phones).

- k) The solution must have an optimized version of the website for mobile device usage. The site will have to be functional with smartphone browsers and other portable devices. It must be a mobile enabled solution that is compatible with various handheld devices and web browsers.
- l) Ability to upload supporting documentation such as text documents, spreadsheets and multimedia. No restrictions on size.
- m) It must provide for report features in a dashboard type functionality as part of the main features of the system.
- n) It must provide seamless interoperability with the Desinventar system, the Sendai Framework Monitoring tool and any other systems that may be identified during detailed requirements definition process.

#### 4.6 System Integration

The system must have capabilities to integrate with both new and existing disaster management systems, including spatial components.

#### 4.7 Security

The approach to security must be based on three main elements to IT security and these are: confidentiality, integrity, and availability. In relation to confidentiality, IT users and providers need the assurance that data stored will be used and shared only among people authorised to do so; while Integrity means the information processed, stored, and retrieved should be authentic; and availability refers to users being able to access the information as and when needed. The system will be made accessible to external stakeholders across the three spheres of government. The external users will be expected to register on the system and be authorised to access the system by administrator(s).

#### 4.8 Application development environment

The NDMC application development environment (Microsoft Windows, SharePoint, SQL Server, Nintex workflow, C#, GIS) is provided below. The required solution must preferably, without limitation, be developed using (or on) the NDMC application development environment technology and tools as specified, or on similar/compatible/interoperable software considering the current NDMC application hosting environment which is currently being upgraded as outlined below:

- a) **Current:** Operating System – Windows Server 2012r2; **Future:** Windows server 2016 / server 2019
- b) **Current:** Application - MS SharePoint 2016 Enterprise; **Future:** MS SharePoint 2019 Enterprise
- c) **Current:** Database – MS SQL Server 2016 Enterprise; **Future:** MS SQL Server 2019 Enterprise
- d) **Current:** Workflow and forms – Nintex 2016; **Future:** Nintex 2016
- e) **Current:** External Users System Access – Form Based Authentication (FBA); **Future:** Form Based Authentication (FBA)



- f) **Current:** Exchange Server – Microsoft Exchange 2016; **Future:** Microsoft Exchange 2019
- g) **Current:** GIS Software – ESRI; **Future:** GIS Software – ESRI (GIS Image, GIS Live, GIS DB live, and GIS License) on server 2019
- h) **Current:** C# programming language; **Future:** C# programming language
- i) **Current & Future:** Microsoft Power BI – Business Analytics service

The service provider will be required to conduct ICT infrastructure gap analysis and develop a business case with recommendations for cloud-based hosting options in future.

## 5. DELIVERABLES

The expected output of the assignment is a national web-based disaster loss and damage database encompassing all the items specified in the scope of assignment (section 4 above) and deliverables. The developed database must include data migrated or transferred from existing data sources/systems in cooperation with data custodians and service providers. This will be achieved through the following deliverables:

- a) Project management documentation required at different project phases based on a well-defined project management methodology to enable successful implementation, which without limitation must include: project charter, statement of work, project management plans including Project Integration Management; Project Scope Management; Project Schedule Management; Project Cost Management; Project Quality Management; Project Resource Management; Project Communications Management; Project Risk Management; Project Procurement Management; Project Stakeholder Management.
- b) User Requirements Definition and Specification; Functional Specifications & Systems design including a disaster loss and damage database architecture.
- c) National Disaster loss and damage database system developed, tested and functional according to user requirements including User Acceptance Testing (UAT).
- d) A centralised database that is securely accessible by multiple disaster risk management practitioners, other authorised stakeholders, and also allow other planning and decision-making platforms to extract information.
- e) District, provincial and national disaster loss, and database views that are aligned to the District Development Model (DDM). Engagements may be initiated with the relevant DDM managers to provide interfaces and/or access should a need arise.
- f) A data exchange link established between the national loss and damage database and the Green Book (an online tool developed by CSIR that supports municipal planning with the development of climate change resilient settlements – refer to section 7 (references) for more information).

- g) Stakeholder analysis, engagements and consolidation report based on detailed evaluation of all the entities and private sector organisations gathering relevant data, e.g., SAWS, AFIS, SAEON, NWU, UFS, ARC, RADAR, Insurance Industry, Fire Protection Association of SA, and those identified in par 4.4, etc. (methods, format, resolutions, exchange, intervals etc.); stakeholder process consultation, process mapping and enhancement).
- h) Training Plan that includes training guidelines, user manuals, training packages targeting three categories of trainees, namely technical staff, super users, and general end users. These will include system developers/database administrators providing second level support, super users providing first level support and data management users (data entry personnel, data validators, general users, etc.). The service provider will initially provide overall support and gradually move to third level support once identified internal support staff is sufficiently capable to provide support service levels mentioned above. The training plan must incorporate Training of Trainer (ToT) model to also address long term training needs. It is estimated that the total potential number of trainees maybe 337 (NDMC (28); PDMCs (18); MDMCs (104; National sector departments (40); Provincial sector departments (103); State Owned Enterprises (44), however by implementing ToT model, the target number of trainees are estimated at 119 as follows: (NDMC (28); PDMCs (27); MDMCs (0); National sector departments (40); Provincial sector departments (0); State Owned Enterprises (24). In the light of COVID-19, the training must cater for both virtual and physical sessions divided into 4 physical sessions (1 technical training, 1 super user training and 2 end user training) in Gauteng and 8 virtual sessions for the other provinces. The training plan costing must provide two options, where option 1 is the costing for ToT (188 trainees) while option 2 is the costing for 337 trainees (i.e., no ToT), taking into consideration the above mode of training and number of training sessions.
- i) Identification of data sources; New data sources established, data collection, collation, migration, uploading and deployment to production environment. This includes establishment of mechanisms to ensure sustainable data collection through architecture that defines frequency of data collection.
- j) The service provider will be required to conduct ICT infrastructure gap analysis and develop a business case with recommendations for cloud-based hosting options in future. This will be informed by the gap analysis reports catering for ICT infrastructure, human resources, and business processes, which include hardware, software, stakeholder roles & responsibilities, information exchange flows including reporting structures and processes.
- k) Maintenance and Support Services: Operational, maintained, and supported system including user/system/training documentation (Maintenance and Support Services).

- l) Integration and seamless interoperability with the Desinventar system, the Sendai Framework Monitoring Tool, and any other relevant existing systems for purposes of reporting on the implementation of the SFDRR.
- m) Disaster loss and damage mobile app.
- n) Data access policy, processes and procedures must be developed to clearly define the conditions applicable for using the database.

## **6. OWNERSHIP OF SOURCE CODE AND OTHER INTELLECTUAL PROPERTY**

The NDMC/COGTA will be the rightful owners of the Source Code and all Intellectual Property associated with the disaster loss and database system and they will have full rights over the ways they can use these resources. The disaster loss and database system so developed will be the sole property of the NDMC/COGTA or any agencies designated by them. The Software Development Vendor will have no right to commercially use or apply the software elsewhere.

## **7. LINKS TO REFERENCE SOURCES**

The following are important references that must be perused in preparation for responses to the ToR and during project implementation.

- a) Disaster Management Act 57 of 2002 ([https://www.cogta.gov.za/cgta\\_2016/wp-content/uploads/2016/06/DISASTER-MANAGEMENT-ACT.pdf](https://www.cogta.gov.za/cgta_2016/wp-content/uploads/2016/06/DISASTER-MANAGEMENT-ACT.pdf)).
- b) Disaster Management Framework (<https://www.gov.za/documents/disaster-management-act-policy-framework-disaster-risk-management-south-africa>).
- c) Sendai Framework for Disaster Risk Reduction (2015 – 2030) ([https://www.preventionweb.net/files/43291\\_sendaiframeworkfordrren.pdf](https://www.preventionweb.net/files/43291_sendaiframeworkfordrren.pdf)).
- d) Desinventar Sendai ([https://www.desinventar.net/migrate\\_Sendai.html](https://www.desinventar.net/migrate_Sendai.html)).
- e) Technical Guidance for Monitoring and Reporting on Progress in Achieving the Global Targets of the Sendai Framework for Disaster Risk Reduction ([https://www.unisdr.org/files/54970\\_techguidancefdigitalhr.pdf](https://www.unisdr.org/files/54970_techguidancefdigitalhr.pdf)).
- f) Green Book online tool (<https://greenbook.co.za/>).

## **8. SKILLS AND KNOWLEDGE REQUIREMENTS**

The organisation and project team members must both have at least 5 years' experience in Information and Communication Technologies and specifically have practical experience in the fields of internet technologies, database/application development and maintenance for web-based environments. The successful bidder must have extensive experience in Systems Development Life Cycle (SDLC) (systems analysis, design, development, integration and testing and implementation, operation, and maintenance of database systems) and demonstrate capability to deliver in a well-defined project management methodology (project initiation, planning, execution, monitoring & control, and closure).

Knowledge and experience in disaster loss and damage databases systems will serve as an added advantage.

Technical competencies required, with a minimum of five (5) years, are listed below:

- a) Business and user needs analysis and user/business requirements definition.
- b) Computer systems analysis, design, and experience in system development lifecycle.
- c) Programming / Coding skills in C# or similar language, workflow (Nintex 2016 or similar), MS SharePoint 2016/2019 or similar. Application/Database development on environments and programming language compatible or able to integrate with the NDMC application environment as described in section 4.8 above.
- d) Data modelling skills.
- e) Database query development skills using tools (MS SQL or similar) with data import/export capabilities.
- f) Web/Internet Technologies.
- g) Technical skills to develop training plans for both technical staff and end users, including training guidelines, user manuals, training packages targeting different system users (database administrators, data entry personnel, data validators, general users, etc.).

## **9. TIME FRAME**

- 9.1 The contract with the successful service provider will be for the period of three (3) years to complete the project. The project will follow a 3-year phased implementation approach which must be aligned to the costing model.
- 9.2 The project will commence upon date of signing of the Service Level Agreement (SLA) between the DCoG and the successful bidder/ service provider and the project will be implemented on a phased approach.

## **10. PERFORMANCE MEASUREMENT/ REPORTING**

To facilitate the performance of Service Providers and monitor their scope of work, DCoG will:

- 10.1 Enter into a Service Level Agreement (SLA) that will govern the relationship between DCoG and the Service Provider.
- 10.2 Make sure the SLA includes project assignments that will address each of the project deliverables.
- 10.3 Establish a Project Steering Committee to manage, monitor and oversee the project. This committee will ensure that:
  - a) Services are rendered timeously.
  - b) Timeframes as far as possible are not extended.
  - c) quality assurance function is applied.
  - d) additional costs are not incurred unnecessarily.

- e) The Service Provider tables progress reports for each deliverable/ milestone contained in the implementation plan as agreed and in terms of the SLA.
- f) The Service Provider is available for regular management meetings to monitor progress on the project.
- g) A monitoring matrix and payment schedule is in place and payments will therefore only be approved and processed based on the achievement of deliverables as per the implementation plan and/or project plan and related performed project tasks.
- h) Deliverables and related payments are duly approved as recommended by the Project Manager.

## 11. FORM OF PROPOSAL

11.1 Bidders are required to complete the official bidding documents in all respects and be tax compliant. In addition to this requirement, bidders are also requested to attach the following documents in support of their bids:

- (a) Proposal should include at list the following:
  - (i) Previous and current contracts awarded to the bidder as well as client references.
  - (ii) Bidder understands of these Terms of Reference, with particular focus on the scope of the assignment and the deliverables, and the creative and innovative design and layout proposed by the bidder.
  - (iii) The team proposed by the bidder and the *curriculum vitae* of each team member.
  - (iv) Proposed programme for the transfer of skills and knowledge to COGTA/ NDMC officials.

**NB: Each page of the proposal must have a company stamp and a signature of delegated official as a confirmation that the bidder has read and understood every sentence of the document.**

- b) Pricing of the proposal should be based on:
 

The pricing schedule of the proposal must be linked to the deliverables, clearly stating the cost per deliverable. The pricing schedule must be supported by a detailed costing breakdown indicating how the price for each deliverable was arrived at.
- c) BEE/Preferential procurement:
  - (i) BEE/Preferential procurement submission must be based on current legislations

11.2 Bidders must include a **detailed work-plan/methodology** with the **detailed** budget reflecting all costs and the implementation plan as per proposal in their bid. **Failure to submit the detailed work-plan with implementation plan and budget containing cost-breakdowns according to the deliverables (as per the**

**proposal) together with the bid will result in the bidder's bid to be viewed as invalid and therefore rejected.**

The following information must be included in the work plan:

- (a) Project implementation Plan that indicates the following:
  - i. Clearly defined milestones that are 100% aligned to each of the key objectives as well as each of the expected outputs/ deliverables as outlined in the scope of work.
  - ii. Well defined timelines for each of the activities and deliverables.
- (b) Proposed Governance Arrangements to support project implementation which may include but not limited to:
  - i. The establishment of a project steering committee.
  - ii. The establishment of a project management team inclusive of the service provider and the NDMC team.
  - iii. Provision of secretariat support for the governance structures that will be established.
- (c) Training Plan developed in line with the Terms of Reference.
- (d) Previous and current similar contracts awarded to the bidder as well as client references.

**Failure to include the above information together with the bid document on the closing date and time will invalidate the bid.**

## **12. 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.

## **13. BID EVALUATION SYSTEM**

All bids duly lodged will be evaluated to determine compliance with bid requirements and conditions. Bids with obvious deviations from the bid requirements/conditions of bid and not acceptable to the evaluation committee will be eliminated from the adjudication process i.e., will not be shortlisted. All bid proposals submitted will be evaluated in accordance with the 80/20 principle and the evaluation criteria should be as follows:

- (a) Functionality Scoring:  
**The system comprises the following three elements:**

- (i) **Functionality.....100**
- (ii) **Price.....80**
- (iii) **B-BBEE Contributor level.....20**

(b) Evaluation Stages/Phases:

All received quotations / proposals will be evaluated in two stages - First Stage: functionality - will be assessed as per Scorecard, and then Second Stage: Price and BBEE contributor level - the qualifying bidders in the First Stage will be evaluated further on price and BEE Contributor Level using 80/20 preference point system as prescribed in Preferential Procurement Policy Framework Act 2000, Preferential Procurement Regulation 2011, and approved CoGTA Supply Chain Management Policy 2013.

**Stage 1: Compliance with minimum requirements of bid**

- (i) All bids duly lodged will be evaluated to determine compliance with requirements and conditions of the bid. All proposals that do not comply with the requirements/conditions of the bid will be disqualified.
- (ii) All bids that comply with the administrative requirements/conditions of the bid will be evaluated in two stages - **First Stage**: Functionality will be assessed as per Scorecard and then **Second Stage**: The qualifying bidders in the **First Stage** will be evaluated further on price and BEE Contributor Level using 80/20 preference point system as prescribed in Preferential Procurement Policy Framework Act 2000, Preferential Procurement Regulation 2017 and approved CoGTA Supply Chain Management Policy 2017. The evaluation will be done as follows. If presentations are required, this should be stated in the TOR and the shortlisted bidders should be given at least 3 working days' written notice to prepare for their presentations.

**(iii) Stage 1 Evaluation score card**

CRITERIA	SUB-CRITERIA	SCALE	WEIGHT	HIGHEST POSSIBLE SCORE
1. Organisation's experience in Information and Communications Technologies (ICTs); Web-based Application and database development; internet technologies; Systems Development Life Cycle (SDLC) encompassing systems analysis, design, development, integration &	0 - 2 years	1	5 x 6	30
	3 - 4 years	2		
	5 - 6 years	3		
	7 - 8 years	4		
	9 +	5		

<p>testing, implementation, operation and maintenance; Disaster Loss and damage database knowledge (added advantage) (Attach company profile and contactable references of at least three similar projects executed in the past 5 years).</p>				
<p>2. Bidder's understanding of Terms of Reference and quality of the proposed methodology to implement project from initiation, planning, execution, monitoring and control until closure and incorporate System Development Life Cycle (SDLC). Bidders must provide a proposal with clear execution plan / approach to deliver on identified scope and outputs/deliverables based on project management and innovation best practices.</p>	<p>Re-stating the scope of work.</p>	<p>1</p>	<p>5 X 9</p>	<p>45</p>
	<p>Submitted Proposal and execution plan with scope of work and deliverables.</p>	<p>2</p>		
	<p>Submitted Proposal and execution plan with scope of work, deliverables, detailed project schedule clearly indicating SDLC process integrated with project life cycle process groups.</p>	<p>3</p>		
	<p>Submitted Proposal and execution plan with scope of work, deliverables, detailed project schedule clearly indicating SDLC process integrated with project life cycle</p>	<p>4</p>		



	process groups including a stakeholder engagement plan.			
	Submitted Proposal and execution plan with scope of work, deliverables, detailed project schedule clearly indicating SDLC process integrated with project life cycle process groups including a stakeholder engagement plan and demonstrating an understanding of disaster loss and damage best practices.	5		
3. Experience of the proposed team members including (key account manager) to be assigned to the project and deployed to the department, with skills encompassing: Information and Communications Technologies (ICTs); Web-based Application and database development; Programming / Coding skills in C# or similar language, workflow (Nintex 2016 or similar), MS SharePoint 2016/2019 or similar.	0-1 year 2-3 years 4-5 years 6-7 years 8+ years	1 2 3 4 5	5 X 3	15

<p>Application/Database development on environments and programming language compatible or able to integrate with the NDMC application environment as described in section 4.8 above.</p> <p>Internet technologies; Systems Development Life Cycle (SDLC) - systems analysis, design, development, integration &amp; testing, implementation, operation, and maintenance; Disaster Loss and damage database knowledge. Bidders are required to attach CV(s) and certified copies of qualifications of proposed team highlighting expertise).</p>				
<p>4. Appropriateness for proposed training and transfer of skills, clearly demonstrating technical skills to develop a training plan for technical staff, super users, and general end users, including training guidelines, user manuals, training packages targeting different system users (database administrators, data entry personnel, data validators, general users, etc.). The bidders must also provide a training plan with two training costing options (1<sup>st</sup> being 188 trainees (ToT) and 2<sup>nd</sup> being 337 trainees (no ToT)), as described in the deliverable section above.</p>	<p>Poor: Training plan for technical staff, super users, and general end users.</p>	1	5 X 2	10
	<p>Fair: Training plan for technical staff, super users, and general end users catering for training guidelines and user manuals</p>	2		
	<p>Good: Training plan for technical staff, super users, and general end users catering for training guidelines, user manuals and training</p>	3		

	<p>packages for different categories of staff (database administrators, data entry personnel, data validators, general users, etc.).</p>			
	<p>Good: Training plan for technical staff, super users, and general end users catering for training guidelines, user manuals and training packages for different categories of staff (database administrators, data entry personnel, data validators, general users, etc.) and one training costing option.</p>	4		
	<p>Excellent: Training plan for technical staff, super users, and general end users catering for training guidelines, user manuals and training packages for different categories of</p>	5		

	staff (database administrators, data entry personnel, data validators, general users, etc.) and at least two training costing options.			
<b>TOTAL POSSIBLE SCORE</b>				<b>100</b>

**STAGE 1 SCORECARD FOR FUNCTIONALITY**

The following criteria will be applied for functionality to assess all the bidders who complied with minimum requirements:

- a) Bids will be rated in respect of each criterion on a scale of **1–5** i.e., **1 = Poor, 2 = Acceptable, 3 = Good, 4 = Very good and 5 = Excellent**. The maximum possible score that can be achieved for functionality is 100.
- (c) The percentage scored by a bidder for functionality will be calculated as follows:  
Total score achieved for functionality X 100/Maximum possible score that can be achieved.
- (d) The average score is calculated for each bid by adding the individual scores awarded by the members of the Bid Evaluation Committee and dividing the total by the number of members. **Bids that do not achieve a minimum score of 70 (out of 100) for functionality will not be evaluated further and will not pass to STAGE 2 of this Bid.**
- (e) Points for price will be calculated only for shortlisted bidder/s as follows:

$$P_s = 80 \left( 1 - \frac{P_t - P_{Min}}{P_{Min}} \right)$$

**Where:**

Ps = Points scored for competitive price of bid or offer under consideration.  
Pt = Competitive price of bid or offer under consideration; and  
Pmin = Competitive price of lowest acceptable bid or offer.

- (f) **The maximum possible score that can be achieved for price is 80 points.**

**NB:** Bidders are required to, together with their bids submit original and valid B-BBEE status level verification certificates or certified copies to substantiate their B-BBEE rating claims. A bid will not be disqualified from the bidding process if the bidder does not submit a certificate substantiating the B-BBEE status level of contribution nor is a non-compliant contributor. Such a bidder will score 0 out of maximum of 10 points for B-BBEE.

<b>B-BBEE Status level of contributor</b>	<b>Number of Points</b>
<b>1</b>	<b>20</b>
<b>2</b>	<b>18</b>
<b>3</b>	<b>16</b>
<b>4</b>	<b>12</b>
<b>5</b>	<b>8</b>
<b>6</b>	<b>6</b>
<b>7</b>	<b>4</b>
<b>8</b>	<b>2</b>
<b>Non-compliant contributor</b>	<b>0</b>

**Note:** No preference will be awarded without submitting of a valid B-BBEE certificate or a consolidated B-BEE Certificate in case of a Joint Venture, Trust or Consortium and total points scored will be calculated by adding points scored for price and B-BBEE Contributor Level.

#### **14. AWARDING OF BID**

14.1. The bid will be awarded to the bidder who scored the highest total number of points as prescribed in the PPPFA, SCM Policy of 2017 and Preferential Procurement Regulations of 2017. In exceptional cases the bid may, on reasonable and justifiable grounds, be awarded to a bidder that did not score the highest number of points. Reasons for such decision must be approved and recorded for audit purposes and must be justifiable in the court of law (as prescribed on the Preferential Procurement Regulations 2017).

##### **(a) Joint Ventures, Consortiums and Trusts:**

- (i) A trust, consortium, or joint venture will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.
- (ii) A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.
- (iii) Bidders must submit concrete proof of the existence of joint ventures and/or consortium arrangements. DCoG will accept signed agreements as acceptable proof of the existence of a joint venture and/or consortium arrangement.
- (iv) The joint venture and/or consortium agreements must clearly set out the roles and responsibilities of the Lead Partner and the joint venture and/or consortium party. The agreement must also clearly identify the Lead Partner, who shall be given the power of attorney to bind the other party/parties in respect of matters pertaining to the joint venture and/or consortium arrangement.

(b) **Sub-contracting:**

Bidders/ tenderers who want to claim Preference points will have to comply fully with regulations **11(8)** and **11(9)** of the PPPFA Act regarding sub-contracting.

The following is an extract from the **PPPFA Act**:

- (i) “A person must not be awarded points for B-BBEE status level if it is indicated in the tender documents that such a tenderer intends sub- contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a tenderer qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.”
- (ii) “A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.”

**15. IN EVALUATING THE TECHNICAL INFORMATION CONTAINED IN THE BID, THE EVALUATION COMMITTEE WILL BE GUIDED BY THE FOLLOWING:**

- (i) Bidder’s understanding of the brief – The bid provides a clear indication that the bidder fully understands the purpose and scope of the work and the bidders’ own roles and functions in this regard. (Methodology).
- (ii) Capability and experience – The bid provides a clear indication that the bidder’s team comprises people with the necessary experience, skills, knowledge and required to ensure the efficient and effective generation of the required deliverables to the highest standards of quality.
- (iii) Track Record – The bid provides clear information on previous, relevant projects that confirm that the bidder has the required experience and success track record in general project management and management related projects.

**16. BRIEFING SESSION AND PRESENTATIONS BY SHORTLISTED BIDDERS**

The briefing session date and time are indicated in the tender advertisement and bid documents. The briefing session is not compulsory. Due to current COVID-19 regulations, the department cannot physically accommodate the expected number of bidders and the briefing will therefore be conducted online. Interested bidders must contact the SCM officials indicated below to request MS Teams meeting (briefing session) dial in details.

## 17. ENQUIRIES

All enquiries relating to this document should be directed to SCM officials indicated below:

*Tender documents*

Name of **DCoG** procurement Official: Kgaugelo Tselana

Telephone: (012) 334 0912

Email address: [Kgaugelot@cogta.gov.za](mailto:Kgaugelot@cogta.gov.za)

Name of **DCoG** procurement Official: Mogoma Sekgothe

Telephone: (012) 334 0586

Email address: [mogomas@cogta.gov.za](mailto:mogomas@cogta.gov.za)

Name of **DCoG** procurement Official: Nomvula Ntuli

Telephone: (012) 334 0820

Email address: [nomvulan@cogta.gov.za](mailto:nomvulan@cogta.gov.za)

Name of **DCoG** procurement Official: Busisiwe Masilela

Telephone: (012) 334 0774

Email address: [busisiwem@cogta.gov.za](mailto:busisiwem@cogta.gov.za)