

United Nations Development Programme



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Resilient nations.*

REQUEST FOR PROPOSAL

Supply, Design, Installation, Testing and Commissioning of a Modern Statistics Platform (MauStats) for Statistics Mauritius

RFP No.: RFPMUS2021-012

Project: Strengthened Resilience through Digitalization and Community Engagement

Country: Mauritius

Issued on: 29 November 2021

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SECTION 1. LETTER OF INVITATION

The United Nations Development Programme (UNDP) hereby invites you to submit a Proposal to this Request for Proposal (RFP) for the above-referenced subject.

This RFP includes the following documents and the General Terms and Conditions of Contract which is inserted in the Bid Data Sheet (BDS):

- Section 1: This Letter of Invitation
- Section 2: Instruction to Bidders
- Section 3: Bid Data Sheet (BDS)
- Section 4: Evaluation Criteria
- Section 5: Terms of Reference
- Section 6: Returnable Bidding Forms
 - o Form A: Technical Proposal Submission Form
 - o Form B: Bidder Information Form
 - o Form C: Joint Venture/Consortium/Association Information Form
 - o Form D: Qualification Form
 - o Form E: Format of Technical Proposal
 - o Form F: Financial Proposal Submission Form
 - o Form G: Financial Proposal Form

If you are interested in submitting a Proposal in response to this RFP, please prepare your Proposal in accordance with the requirements and procedure as set out in this RFP and submit it by the Deadline for Submission of Proposals set out in Bid Data Sheet.

Please acknowledge receipt of this RFP by sending an email to procurement.mu@undp.org, indicating whether you intend to submit a Proposal or otherwise. You may also utilize the “**Accept Invitation**” function in **eTendering** system, where applicable. This will enable you to receive amendments or updates to the RFP. Should you require further clarifications, kindly communicate with the contact person/s identified in the attached Bid Data Sheet as the focal point for queries on this RFP.

UNDP looks forward to receiving your Proposal and thank you in advance for your interest in UNDP procurement opportunities.

Issued by:



Name: Fatuma Musa

Title: Operations Manager

Date: **November 25, 2021**

Approved by:



Name: Amanda Serumaga

Title: Resident Representative

Date: **November 25, 2021**

SECTION 2. INSTRUCTION TO BIDDERS

A. GENERAL PROVISIONS	
1. Introduction	<p>1.1 Bidders shall adhere to all the requirements of this RFP, including any amendments in writing by UNDP. This RFP is conducted in accordance with the UNDP Programme and Operations Policies and Procedures (POPP) on Contracts and Procurement which can be accessed at https://popp.undp.org/SitePages/POPPBSUnit.aspx?TermID=254a9f96-b883-476a-8ef8-e81f93a2b38d</p> <p>1.2 Any Proposal submitted will be regarded as an offer by the Bidder and does not constitute or imply the acceptance of the Proposal by UNDP. UNDP is under no obligation to award a contract to any Bidder as a result of this RFP.</p> <p>1.3 As part of the bid, it is desired that the Bidder registers at the United Nations Global Marketplace (UNGM) website (www.ungm.org). The Bidder may still submit a bid even if not registered with the UNGM. However, if the Bidder is selected for contract award, the Bidder must register on the UNGM prior to contract signature.</p>
2. Fraud & Corruption, Gifts and Hospitality	<p>2.1 UNDP strictly enforces a policy of zero tolerance on proscribed practices, including fraud, corruption, collusion, unethical or unprofessional practices, and obstruction of UNDP vendors and requires all bidders/vendors observe the highest standard of ethics during the procurement process and contract implementation. UNDP's Anti-Fraud Policy can be found at http://www.undp.org/content/undp/en/home/operations/accountability/audit/office_of_audit_andinvestigation.html#anti</p> <p>2.2 Bidders/vendors shall not offer gifts or hospitality of any kind to UNDP staff members including recreational trips to sporting or cultural events, theme parks or offers of holidays, transportation, or invitations to extravagant lunches or dinners.</p> <p>2.3 In pursuance of this policy, UNDP</p> <p>(a) Shall reject a proposal if it determines that the selected bidder has engaged in any corrupt or fraudulent practices in competing for the contract in question;</p> <p>(b) Shall declare a vendor ineligible, either indefinitely or for a stated period of time, to be awarded a contract if at any time it determines that the vendor has engaged in any corrupt or fraudulent practices in competing for, or in executing a UNDP contract.</p> <p>2.4 All Bidders must adhere to the UN Supplier Code of Conduct, which may be found at https://www.un.org/Depts/ptd/about-us/un-supplier-code-conduct</p>
3. Eligibility	<p>3.1 A vendor should not be suspended, debarred, or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization. Vendors are therefore required to disclose to UNDP whether they are subject to any sanction or temporary suspension imposed by these organizations.</p> <p>3.2 It is the Bidder's responsibility to ensure that its employees, joint venture</p>

	members, sub-contractors, service providers, suppliers and/or their employees meet the eligibility requirements as established by UNDP.
4. <i>Conflict of Interests</i>	<p>4.1 Bidders must strictly avoid conflicts with other assignments or their own interests, and act without consideration for future work. Bidders found to have a conflict of interest shall be disqualified. Without limitation on the generality of the above, Bidders, and any of their affiliates, shall be considered to have a conflict of interest with one or more parties in this solicitation process, if they:</p> <ul style="list-style-type: none"> a) Are or have been associated in the past, with a firm or any of its affiliates which have been engaged by UNDP to provide services for the preparation of the design, specifications, Terms of Reference, cost analysis/estimation, and other documents to be used for the procurement of the goods and services in this selection process; b) Were involved in the preparation and/or design of the programme/project related to the services requested under this RFP; or c) Are found to be in conflict for any other reason, as may be established by, or at the discretion of UNDP. <p>4.2 In the event of any uncertainty in the interpretation of a potential conflict of interest, Bidders must disclose to UNDP, and seek UNDP's confirmation on whether or not such a conflict exists.</p> <p>4.3 Similarly, the Bidders must disclose in their proposal their knowledge of the following:</p> <ul style="list-style-type: none"> a) If the owners, part-owners, officers, directors, controlling shareholders, of the bidding entity or key personnel are family members of UNDP staff involved in the procurement functions and/or the Government of the country or any Implementing Partner receiving services under this RFP; and b) All other circumstances that could potentially lead to actual or perceived conflict of interest, collusion or unfair competition practices. <p>Failure to disclose such an information may result in the rejection of the proposal or proposals affected by the non-disclosure.</p> <p>4.4 The eligibility of Bidders that are wholly or partly owned by the Government shall be subject to UNDP's further evaluation and review of various factors such as being registered, operated and managed as an independent business entity, the extent of Government ownership/share, receipt of subsidies, mandate and access to information in relation to this RFP, among others. Conditions that may lead to undue advantage against other Bidders may result in the eventual rejection of the Proposal.</p>
B. PREPARATION OF PROPOSALS	
5. <i>General Considerations</i>	<p>5.1 In preparing the Proposal, the Bidder is expected to examine the RFP in detail. Material deficiencies in providing the information requested in the RFP may result in rejection of the Proposal.</p> <p>5.2 The Bidder will not be permitted to take advantage of any errors or omissions in the RFP. Should such errors or omissions be discovered, the Bidder must notify the UNDP</p>
6. <i>Cost of Preparation</i>	<p>6.1 The Bidder shall bear any and all costs related to the preparation and/or submission of the Proposal, regardless of whether its Proposal was selected</p>

<i>of Proposal</i>	or not. UNDP shall not be responsible or liable for those costs, regardless of the conduct or outcome of the procurement process.
<i>7. Language</i>	7.1 The Proposal, as well as any and all related correspondence exchanged by the Bidder and UNDP, shall be written in the language (s) specified in the BDS.
<i>8. Documents Comprising the Proposal</i>	8.1 The Proposal shall comprise of the following documents: <ul style="list-style-type: none"> a) Documents Establishing the Eligibility and Qualifications of the Bidder; b) Technical Proposal; c) Financial Proposal; d) Proposal Security, if required by BDS; e) Any attachments and/or appendices to the Proposal.
<i>9. Documents Establishing the Eligibility and Qualifications of the Bidder</i>	9.1 The Bidder shall furnish documentary evidence of its status as an eligible and qualified vendor, using the Forms provided under Section 6 and providing documents required in those forms. In order to award a contract to a Bidder, its qualifications must be documented to UNDP's satisfaction.
<i>10. Technical Proposal Format and Content</i>	<p>10.1 The Bidder is required to submit a Technical Proposal using the Standard Forms and templates provided in Section 6 of the RFP.</p> <p>10.2 The Technical Proposal shall not include any price or financial information. A Technical Proposal containing material financial information may be declared non-responsive.</p> <p>10.3 Samples of items, when required as per Section 5, shall be provided within the time specified and unless otherwise specified by UNDP, and at no expense to UNDP</p> <p>10.4 When applicable and required as per Section 5, the Bidder shall describe the necessary training programme available for the maintenance and operation of the services and/or equipment offered as well as the cost to the UNDP. Unless otherwise specified, such training as well as training materials shall be provided in the language of the Bid as specified in the BDS.</p>
<i>11. Financial Proposals</i>	<p>11.1 The Financial Proposal shall be prepared using the Standard Form provided in Section 6 of the RFP. It shall list all major cost components associated with the services, and the detailed breakdown of such costs.</p> <p>11.2 Any output and activities described in the Technical Proposal but not priced in the Financial Proposal, shall be assumed to be included in the prices of other activities or items, as well as in the final total price.</p> <p>11.3 Prices and other financial information must not be disclosed in any other place except in the financial proposal.</p>
<i>12. Proposal Security</i>	<p>12.1 A Proposal Security, if required by BDS, shall be provided in the amount and form indicated in the BDS. The Proposal Security shall be valid up to thirty (30) days after the final date of validity of the Proposal.</p> <p>12.2 The Proposal Security shall be included along with the Technical Proposal. If Proposal Security is required by the RFP but is not found along with the Technical Proposal, the Proposal shall be rejected.</p>

	<p>12.3 If the Proposal Security amount or its validity period is found to be less than what is required by UNDP, UNDP shall reject the Proposal.</p> <p>12.4 In the event an electronic submission is allowed in the BDS, Bidders shall include a copy of the Bid Security in their proposal and the original of the Proposal Security must be sent via courier or hand delivery as per the instructions in BDS.</p> <p>12.5 The Proposal Security may be forfeited by UNDP, and the Proposal rejected, in the event of any one or combination, of the following conditions:</p> <p>a) If the Bidder withdraws its offer during the period of the Proposal Validity specified in the BDS, or;</p> <p>b) In the event that the successful Bidder fails:</p> <p>i. to sign the Contract after UNDP has issued an award; or</p> <p>12.6 to furnish the Performance Security, insurances, or other documents that UNDP may require as a condition precedent to the effectivity of the contract that may be awarded to the Bidder.</p>
13. <i>Currencies</i>	<p>13.1 All prices shall be quoted in the currency or currencies indicated in the BDS. Where Proposals are quoted in different currencies, for the purposes of comparison of all Proposals:</p> <p>a) UNDP will convert the currency quoted in the Proposal into the UNDP preferred currency, in accordance with the prevailing UN operational rate of exchange on the last day of submission of Proposals; and</p> <p>b) In the event that UNDP selects a proposal for award that is quoted in a currency different from the preferred currency in the BDS, UNDP shall reserve the right to award the contract in the currency of UNDP's preference, using the conversion method specified above.</p>
14. <i>Joint Venture, Consortium or Association</i>	<p>14.1 If the Bidder is a group of legal entities that will form or have formed a Joint Venture (JV), Consortium or Association for the Proposal, they shall confirm in their Proposal that : (i) they have designated one party to act as a lead entity, duly vested with authority to legally bind the members of the JV, Consortium or Association jointly and severally, which shall be evidenced by a duly notarized Agreement among the legal entities, and submitted with the Proposal; and (ii) if they are awarded the contract, the contract shall be entered into, by and between UNDP and the designated lead entity, who shall be acting for and on behalf of all the member entities comprising the joint venture.</p> <p>14.2 After the Deadline for Submission of Proposal, the lead entity identified to represent the JV, Consortium or Association shall not be altered without the prior written consent of UNDP.</p> <p>14.3 The lead entity and the member entities of the JV, Consortium or Association shall abide by the provisions of Clause 9 herein in respect of submitting only one proposal.</p> <p>14.4 The description of the organization of the JV, Consortium or Association must clearly define the expected role of each of the entity in the joint venture in delivering the requirements of the RFP, both in the Proposal and the JV, Consortium or Association Agreement. All entities that comprise the JV, Consortium or Association shall be subject to the eligibility and qualification</p>

	<p>assessment by UNDP.</p> <p>14.5 A JV, Consortium or Association in presenting its track record and experience should clearly differentiate between:</p> <ul style="list-style-type: none"> a) Those that were undertaken together by the JV, Consortium or Association; and b) Those that were undertaken by the individual entities of the JV, Consortium or Association. <p>14.6 Previous contracts completed by individual experts working privately but who are permanently or were temporarily associated with any of the member firms cannot be claimed as the experience of the JV, Consortium or Association or those of its members, but should only be claimed by the individual experts themselves in their presentation of their individual credentials.</p> <p>14.7 JV, Consortium or Associations are encouraged for high value, multi-sectoral requirements when the spectrum of expertise and resources required may not be available within one firm.</p>
<i>15. Only One Proposal</i>	<p>15.1 The Bidder (including the individual members of any Joint Venture) shall submit only one Proposal, either in its own name or as part of a Joint Venture.</p> <p>15.2 Proposals submitted by two (2) or more Bidders shall all be rejected if they are found to have any of the following:</p> <ul style="list-style-type: none"> f) they have at least one controlling partner, director or shareholder in common; or g) any one of them receive or have received any direct or indirect subsidy from the other/s; or h) they have the same legal representative for purposes of this RFP; or i) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about, or influence on the Proposal of, another Bidder regarding this RFP process; j) they are subcontractors to each other's Proposal, or a subcontractor to one Proposal also submits another Proposal under its name as lead Bidder; or k) some key personnel proposed to be in the team of one Bidder participates in more than one Proposal received for this RFP process. This condition relating to the personnel, does not apply to subcontractors being included in more than one Proposal.
<i>16. Proposal Validity Period</i>	<p>16.1 Proposals shall remain valid for the period specified in the BDS, commencing on the Deadline for Submission of Proposals. A Proposal valid for a shorter period may be rejected by UNDP and rendered non-responsive.</p> <p>16.2 During the Proposal validity period, the Bidder shall maintain its original Proposal without any change, including the availability of the Key Personnel, the proposed rates and the total price.</p>
<i>17. Extension of Proposal Validity Period</i>	<p>17.1 In exceptional circumstances, prior to the expiration of the proposal validity period, UNDP may request Bidders to extend the period of validity of their Proposals. The request and the responses shall be made in writing, and shall</p>

	<p>be considered integral to the Proposal.</p> <p>17.2 If the Bidder agrees to extend the validity of its Proposal, it shall be done without any change in the original Proposal.</p> <p>17.3 The Bidder has the right to refuse to extend the validity of its Proposal, and in which case, such Proposal will not be further evaluated.</p>
<i>18. Clarification of Proposal</i>	<p>18.1 Bidders may request clarifications on any of the RFP documents no later than the date indicated in the BDS. Any request for clarification must be sent in writing in the manner indicated in the BDS. If inquiries are sent other than specified channel, even if they are sent to a UNDP staff member, UNDP shall have no obligation to respond or confirm that the query was officially received.</p> <p>18.2 UNDP will provide the responses to clarifications through the method specified in the BDS.</p> <p>18.3 UNDP shall endeavor to provide responses to clarifications in an expeditious manner, but any delay in such response shall not cause an obligation on the part of UNDP to extend the submission date of the Proposals, unless UNDP deems that such an extension is justified and necessary.</p>
<i>19. Amendment of Proposals</i>	<p>19.1 At any time prior to the deadline of Proposal submission, UNDP may for any reason, such as in response to a clarification requested by a Bidder, modify the RFP in the form of an amendment to the RFP. Amendments will be made available to all prospective bidders.</p> <p>19.2 If the amendment is substantial, UNDP may extend the Deadline for submission of proposal to give the Bidders reasonable time to incorporate the amendment into their Proposals.</p>
<i>20. Alternative Proposals</i>	<p>20.1 Unless otherwise specified in the BDS, alternative proposals shall not be considered. If submission of alternative proposal is allowed by BDS, a Bidder may submit an alternative proposal, but only if it also submits a proposal conforming to the RFP requirements. UNDP shall only consider the alternative proposal offered by the Bidder whose conforming proposal ranked the highest as per the specified evaluation method. Where the conditions for its acceptance are met, or justifications are clearly established, UNDP reserves the right to award a contract based on an alternative proposal.</p> <p>20.2 If multiple/alternative proposals are being submitted, they must be clearly marked as "Main Proposal" and "Alternative Proposal"</p>
<i>21. Pre-Bid Conference</i>	<p>21.1 When appropriate, a Bidder's conference will be conducted at the date, time and location specified in the BDS. All Bidders are encouraged to attend. Non-attendance, however, shall not result in disqualification of an interested Bidder. Minutes of the Bidder's conference will be disseminated on the procurement website and shared by email or on the e-Tendering platform as specified in the BDS. No verbal statement made during the conference shall modify the terms and conditions of the RFP, unless specifically incorporated in the Minutes of the Bidder's Conference or issued/posted as an amendment to RFP.</p>

C. SUBMISSION AND OPENING OF PROPOSALS	
<i>22. Submission</i>	<p>22.1 The Bidder shall submit a duly signed and complete Proposal comprising the documents and forms in accordance with the requirements in the BDS. The submission shall be in the manner specified in the BDS.</p> <p>22.2 The Proposal shall be signed by the Bidder or person(s) duly authorized to commit the Bidder. The authorization shall be communicated through a document evidencing such authorization issued by the legal representative of the bidding entity, or a Power of Attorney, accompanying the Proposal.</p> <p>22.3 Bidders must be aware that the mere act of submission of a Proposal, in and of itself, implies that the Bidder fully accepts the UNDP General Contract Terms and Conditions.</p>
Hard copy (manual) submission	<p>22.4 Hard copy (manual) submission by courier or hand delivery allowed or specified in the BDS shall be governed as follows:</p> <ul style="list-style-type: none"> a) The signed Proposal shall be marked "Original", and its copies marked "Copy" as appropriate. The number of copies is indicated in the BDS. All copies shall be made from the signed original only. If there are discrepancies between the original and the copies, the original shall prevail. b) The Technical Proposal and the Financial Proposal envelopes MUST BE COMPLETELY SEPARATE and each of them must be submitted sealed individually and clearly marked on the outside as either "TECHNICAL PROPOSAL" or "FINANCIAL PROPOSAL", as appropriate. Each envelope SHALL clearly indicate the name of the Bidder. The outer envelopes shall: <ul style="list-style-type: none"> i. Bear the name and address of the bidder; ii. Be addressed to UNDP as specified in the BDS iii. Bear a warning that states "<i>Not to be opened before the time and date for proposal opening</i>" as specified in the BDS. <p>If the envelopes and packages with the Proposal are not sealed and marked as required, UNDP shall assume no responsibility for the misplacement, loss, or premature opening of the Proposal.</p>
Email Submission	<p>22.5 Email submission, if allowed or specified in the BDS, shall be governed as follows:</p> <ul style="list-style-type: none"> a) Electronic files that form part of the proposal must be in accordance with the format and requirements indicated in BDS; b) The Technical Proposal and the Financial Proposal files MUST BE COMPLETELY SEPARATE. The financial proposal shall be encrypted with different passwords and clearly labelled. The files must be sent to the dedicated email address specified in the BDS. c) The password for opening the Financial Proposal should be provided only upon request of UNDP. UNDP will request password only from bidders whose Technical Proposal has been found to be technically responsive. Failure to provide correct password may result in the proposal being rejected.

eTendering submission	<p>22.6 Electronic submission through eTendering, if allowed or specified in the BDS, shall be governed as follows:</p> <ul style="list-style-type: none"> a) Electronic files that form part of the proposal must be in accordance with the format and requirements indicated in BDS; b) The Technical Proposal and the Financial Proposal files MUST BE COMPLETELY SEPARATE and each of them must be uploaded individually and clearly labelled. d) The Financial Proposal file must be encrypted with a password so that it cannot be opened nor viewed until the password is provided. The password for opening the Financial Proposal should be provided only upon request of UNDP. UNDP will request password only from bidders whose technical proposal has been found to be technically responsive. Failure to provide the correct password may result in the proposal being rejected. c) Documents which are required to be in original form (e.g. Bid Security, etc.) must be sent via courier or hand delivery as per the instructions in BDS. d) Detailed instructions on how to submit, modify or cancel a bid in the eTendering system are provided in the eTendering system Bidder User Guide and Instructional videos available on this link: http://www.undp.org/content/undp/en/home/operations/procurement/business/procurement-notice/resources/
23. <i>Deadline for Submission of Proposals and Late Proposals</i>	<p>23.1 Complete Proposals must be received by UNDP in the manner, and no later than the date and time, specified in the BDS. UNDP shall only recognize the date and time that the bid was received by UNDP</p> <p>23.2 UNDP shall not consider any Proposal that is submitted after the deadline for the submission of Proposals.</p>
24. <i>Withdrawal, Substitution, and Modification of Proposals</i>	<p>24.1 A Bidder may withdraw, substitute or modify its Proposal after it has been submitted at any time prior to the deadline for submission.</p> <p>24.2 Manual and Email submissions: A bidder may withdraw, substitute or modify its Proposal by sending a written notice to UNDP, duly signed by an authorized representative, and shall include a copy of the authorization (or a Power of Attorney). The corresponding substitution or modification of the Proposal, if any, must accompany the respective written notice. All notices must be submitted in the same manner as specified for submission of proposals, by clearly marking them as "WITHDRAWAL" "SUBSTITUTION," or "MODIFICATION"</p> <p>24.3 eTendering: A Bidder may withdraw, substitute or modify its Proposal by Canceling, Editing, and re-submitting the proposal directly in the system. It is the responsibility of the Bidder to properly follow the system instructions, duly edit and submit a substitution or modification of the Proposal as needed. Detailed instructions on how to cancel or modify a Proposal directly in the system are provided in Bidder User Guide and Instructional videos.</p> <p>24.4 Proposals requested to be withdrawn shall be returned unopened to the Bidders (only for manual submissions), except if the bid is withdrawn after the bid has been opened</p>

25. <i>Proposal Opening</i>	25.1 There is no public bid opening for RFPs. In the case of e-Tendering submission, bidders will receive an automatic notification once their proposal is opened.
D. EVALUATION OF PROPOSALS	
26. <i>Confidentiality</i>	<p>26.1 Information relating to the examination, evaluation, and comparison of Proposals, and the recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process, even after publication of the contract award.</p> <p>26.2 Any effort by a Bidder or anyone on behalf of the Bidder to influence UNDP in the examination, evaluation and comparison of the Proposals or contract award decisions may, at UNDP's decision, result in the rejection of its Proposal and may be subject to the application of prevailing UNDP's vendor sanctions procedures.</p>
27. <i>Evaluation of Proposals</i>	<p>27.1 The Bidder is not permitted to alter or modify its Proposal in any way after the proposal submission deadline except as permitted under Clause 24 of this RFP. UNDP will conduct the evaluation solely on the basis of the submitted Technical and Financial Proposals.</p> <p>27.2 Evaluation of proposals is made of the following steps:</p> <ol style="list-style-type: none"> Preliminary Examination Minimum Eligibility and Qualification (if pre-qualification is not done) Evaluation of Technical Proposals Evaluation of Financial Proposals
28. <i>Preliminary Examination</i>	28.1 UNDP shall examine the Proposals to determine whether they are complete with respect to minimum documentary requirements, whether the documents have been properly signed, and whether the Proposals are generally in order, among other indicators that may be used at this stage. UNDP reserves the right to reject any Proposal at this stage.
29. <i>Evaluation of Eligibility and Qualification</i>	<p>29.1 Eligibility and Qualification of the Bidder will be evaluated against the Minimum Eligibility/ Qualification requirements specified in the Section 4 (Evaluation Criteria).</p> <p>29.2 In general terms, vendors that meet the following criteria may be considered qualified:</p> <ol style="list-style-type: none"> They are not included in the UN Security Council 1267/1989 Committee's list of terrorists and terrorist financiers, and in UNDP's ineligible vendors' list; They have a good financial standing and have access to adequate financial resources to perform the contract and all existing commercial commitments, They have the necessary similar experience, technical expertise, production capacity where applicable, quality certifications, quality assurance procedures and other resources applicable to the provision of the services required; They are able to comply fully with UNDP General Terms and Conditions of Contract; They do not have a consistent history of court/arbitral award decisions against the Bidder; and They have a record of timely and satisfactory performance with their

	clients.
30. <i>Evaluation of Technical and Financial Proposals</i>	<p>30.1 The evaluation team shall review and evaluate the Technical Proposals on the basis of their responsiveness to the Terms of Reference and other RFP documents, applying the evaluation criteria, sub-criteria, and point system specified in the Section 4 (Evaluation Criteria). A Proposal shall be rendered non-responsive at the technical evaluation stage if it fails to achieve the minimum technical score indicated in the BDS. When necessary and if stated in the BDS, UNDP may invite technically responsive bidders for a presentation related to their technical proposals. The conditions for the presentation shall be provided in the bid document where required.</p> <p>30.2 In the second stage, only the Financial Proposals of those Bidders who achieve the minimum technical score will be opened for evaluation. The Financial Proposals corresponding to Technical Proposals that were rendered non-responsive shall remain unopened, and, in the case of manual submission, be returned to the Bidder unopened. For emailed Proposals and e-tendering submissions, UNDP will not request for the password of the Financial Proposals of bidders whose Technical Proposal were found not responsive.</p> <p>30.3 The evaluation method that applies for this RFP shall be as indicated in the BDS, which may be either of two (2) possible methods, as follows: (a) the lowest priced method which selects the lowest evaluated financial proposal of the technically responsive Bidders; or (b) the combined scoring method which will be based on a combination of the technical and financial score.</p> <p>30.4 When the BDS specifies a combined scoring method, the formula for the rating of the Proposals will be as follows:</p> <div style="border: 1px solid black; padding: 10px; margin-top: 10px;"> <p><u>Rating the Technical Proposal (TP):</u></p> <p>TP Rating = (Total Score Obtained by the Offer / Max. Obtainable Score for TP) x 100</p> <p><u>Rating the Financial Proposal (FP):</u></p> <p>FP Rating = (Lowest Priced Offer / Price of the Offer Being Reviewed) x 100</p> <p><u>Total Combined Score:</u></p> <p>Combined Score = (TP Rating) x (Weight of TP, e.g. 70%) + (FP Rating) x (Weight of FP, e.g., 30%)</p> </div>
31. <i>Due Diligence</i>	<p>31.1 UNDP reserves the right to undertake a due diligence exercise, also called post qualification, aimed at determining to its satisfaction, the validity of the information provided by the Bidder. Such exercise shall be fully documented and may include, but need not be limited to, all or any combination of the following:</p> <p style="margin-left: 40px;">a) Verification of accuracy, correctness and authenticity of information provided by the Bidder;</p>

	<ul style="list-style-type: none"> b) Validation of extent of compliance to the RFP requirements and evaluation criteria based on what has so far been found by the evaluation team; c) Inquiry and reference checking with Government entities with jurisdiction on the Bidder, or with previous clients, or any other entity that may have done business with the Bidder; d) Inquiry and reference checking with previous clients on the performance on on-going or contracts completed, including physical inspections of previous works, as necessary; e) Physical inspection of the Bidder's offices, branches or other places where business transpires, with or without notice to the Bidder; f) Other means that UNDP may deem appropriate, at any stage within the selection process, prior to awarding the contract.
<i>32. Clarification of Proposals</i>	<p>32.1 To assist in the examination, evaluation and comparison of Proposals, UNDP may, at its discretion, ask any Bidder for a clarification of its Proposal.</p> <p>32.2 UNDP's request for clarification and the response shall be in writing and no change in the prices or substance of the Proposal shall be sought, offered, or permitted, except to provide clarification, and confirm the correction of any arithmetic errors discovered by UNDP in the evaluation of the Proposals, in accordance with RFP.</p> <p>32.3 Any unsolicited clarification submitted by a Bidder in respect to its Proposal, which is not a response to a request by UNDP, shall not be considered during the review and evaluation of the Proposals.</p>
<i>33. Responsiveness of Proposal</i>	<p>33.1 UNDP's determination of a Proposal's responsiveness will be based on the contents of the Proposal itself. A substantially responsive Proposal is one that conforms to all the terms, conditions, TOR and other requirements of the RFP without material deviation, reservation, or omission.</p> <p>33.2 If a Proposal is not substantially responsive, it shall be rejected by UNDP and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.</p>
<i>34. Nonconformities, Repairable Errors and Omissions</i>	<p>34.1 Provided that a Proposal is substantially responsive, UNDP may waive any non-conformities or omissions in the Proposal that, in the opinion of UNDP, do not constitute a material deviation.</p> <p>34.2 UNDP may request the Bidder to submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Proposal related to documentation requirements. Such omission shall not be related to any aspect of the price of the Proposal. Failure of the Bidder to comply with the request may result in the rejection of its Proposal.</p> <p>34.3 For Financial Proposal that has been opened, UNDP shall check and correct arithmetical errors as follows:</p> <ul style="list-style-type: none"> a) if there is a discrepancy between the unit price and the line item total that is obtained by multiplying the unit price by the quantity, the unit price shall prevail and the line item total shall be corrected, unless in the opinion of UNDP there is an obvious misplacement of the decimal point in the unit price; in which case the line item total as quoted shall govern and the unit price shall be corrected;

	<p>b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and</p> <p>c) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail.</p> <p>34.4 If the Bidder does not accept the correction of errors made by UNDP, its Proposal shall be rejected.</p>
E. AWARD OF CONTRACT	
35. <i>Right to Accept, Reject, Any or All Proposals</i>	35.1 UNDP reserves the right to accept or reject any Proposal, to render any or all of the Proposals as non-responsive, and to reject all Proposals at any time prior to award of contract, without incurring any liability, or obligation to inform the affected Bidder(s) of the grounds for UNDP's action. UNDP shall not be obliged to award the contract to the lowest priced offer.
36. <i>Award Criteria</i>	36.1 Prior to expiration of the proposal validity, UNDP shall award the contract to the qualified Bidder based on the award criteria indicated in the BDS.
37. <i>Debriefing</i>	37.1 In the event that a Bidder is unsuccessful, the Bidder may request a debriefing from UNDP. The purpose of the debriefing is to discuss the strengths and weaknesses of the Bidder's submission, in order to assist the Bidder in improving its future proposals for UNDP procurement opportunities. The content of other proposals and how they compare to the Bidder's submission shall not be discussed.
38. <i>Right to Vary Requirements at the Time of Award</i>	38.1 At the time of award of Contract, UNDP reserves the right to vary the quantity of services and/or goods, by up to a maximum twenty-five per cent (25%) of the total offer, without any change in the unit price or other terms and conditions.
39. <i>Contract Signature</i>	39.1 Within fifteen (15) days from the date of receipt of the Contract, the successful Bidder shall sign and date the Contract and return it to UNDP. Failure to do so may constitute sufficient grounds for the annulment of the award, and forfeiture of the Proposal Security, if any, and on which event, UNDP may award the Contract to the Second Ranked Bidder or call for new Proposals.
40. <i>Contract Type and General Terms and Conditions</i>	40.1 The types of Contract to be signed and the applicable UNDP Contract General Terms and Conditions, as specified in BDS, can be accessed at http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html
41. <i>Performance Security</i>	41.1 40.1 A performance security, if required in BDS, shall be provided in the amount specified in BDS and form available at https://popp.undp.org/_layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PSU_Solicitation_Performance%20Guarantee%20Form.docx&action=default within fifteen (15) days of the contract signature by both parties. Where a performance security is required, the receipt of the performance security by UNDP shall be a condition for rendering the contract effective.

42. <i>Bank Guarantee for Advanced Payment</i>	<p>42.1 Except when the interests of UNDP so require, it is UNDP's preference to make no advance payment(s) (i.e., payments without having received any outputs). If an advance payment is allowed as per BDS, and exceeds 20% of the total contract price, or USD 30,000, whichever is less, the Bidder shall submit a Bank Guarantee in the full amount of the advance payment in the form available at</p> <p>https://popp.undp.org/layouts/15/WopiFrame.aspx?sourcedoc=/UNDP_POPP_DOCUMENT_LIBRARY/Public/PSU_Contract%20Management%20Payment%20and%20Taxes_Advanced%20Payment%20Guarantee%20Form.docx&action=default</p>
43. <i>Liquidated Damages</i>	<p>43.1 If specified in BDS, UNDP shall apply Liquidated Damages resulting from the Contractor's delays or breach of its obligations as per the Contract.</p>
44. <i>Payment Provisions</i>	<p>44.1 Payment will be made only upon UNDP's acceptance of the work performed. The terms of payment shall be within thirty (30) days, after receipt of invoice and certification of acceptance of work issued by the proper authority in UNDP with direct supervision of the Contractor. Payment will be effected by bank transfer in the currency of contract.</p>
45. <i>Vendor Protest</i>	<p>45.1 UNDP's vendor protest procedure provides an opportunity for appeal to those persons or firms not awarded a contract through a competitive procurement process. In the event that a Bidder believes that it was not treated fairly, the following link provides further details regarding UNDP vendor protest procedures:</p> <p>http://www.undp.org/content/undp/en/home/operations/procurement/business/protest-and-sanctions.html</p>
46. <i>Other Provisions</i>	<p>46.1 In the event that the Bidder offers a lower price to the host Government (e.g. General Services Administration (GSA) of the federal government of the United States of America) for similar services, UNDP shall be entitled to same lower price. The UNDP General Terms and Conditions shall have precedence.</p> <p>46.2 UNDP is entitled to receive the same pricing offered by the same Contractor in contracts with the United Nations and/or its Agencies. The UNDP General Terms and Conditions shall have precedence.</p> <p>46.3 The United Nations has established restrictions on employment of (former) UN staff who have been involved in the procurement process as per bulletin ST/SGB/2006/15</p> <p>http://www.un.org/en/ga/search/view_doc.asp?symbol=ST/SGB/2006/15&referer</p>

SECTION 3. BID DATA SHEET

The following data for the services to be procured shall complement, supplement, or amend the provisions in the Request for Proposals. In the case of a conflict between the Instructions to Bidders, the Data Sheet, and other annexes or references attached to the Data Sheet, the provisions in the Data Sheet shall prevail.

BDS No.	Ref. to Section.2	Data	Specific Instructions / Requirements
1	7	Language of the Proposal	English
2		Submitting Proposals for Parts or sub-parts of the TOR (partial bids)	Not Allowed
3	20	Alternative Proposals	Shall not be considered
4	21	Pre-proposal conference	<p>Will be Conducted</p> <p>Time: [11.30 hrs and Mauritian time zone]</p> <p>Date: December 3, 2021 11:30 AM</p> <p>Venue: Zoom platform</p> <p>Link:</p> <p>https://undp.zoom.us/j/82757868557?pwd=WndZQVVPRWZsQlpONGQ2WFdIQ0lXZz09</p> <p>Meeting ID: 827 5786 8557</p> <p>Passcode: 268307</p> <p>The UNDP focal point for the arrangement is:</p> <p>Vichitra Purdassee, Project Manager</p> <p>E-mail: vichitra.purdassee@undp.org</p> <p>All queries, both technical and administrative, will be responded to during the pre-proposal conference. Minutes of the pre-proposal conference will be disseminated to all potential proposers, regardless of offerors attending the site inspection and pre-proposal conference. The minute will be posted at https://etendering.partneragencies.org</p>
5	10	Proposal Validity Period	120 days
6	14	Bid Security	Required in the amount of USD 90,000
7	41	Advanced Payment upon signing of contract	Not Allowed

8	42	Liquidated Damages	Will not be imposed
9	40	Performance Security	<p>Will be required in case the contract allocated to one bidder exceeds USD 500,000. The value of the performance security would be equal to 10% of the contract amount.</p> <p>A performance security should be denominated in the currency of the contract and shall only be in one of the following forms:-</p> <ul style="list-style-type: none"> i. Bank Guarantee issued by a reputable Bank ii. Certified Check issued by a reputable Bank iii. Percentage of total payment held as retention money until Certificate of Final Completion. <p>Within (7) days of contract signature and before issuance of the notice to proceed, the successful Bidder shall furnish a Performance Security to UNDP in the amount of 10% of the contract Value.</p> <p>The Performance Security shall be valid until a date 30 days from the date of issue by UNDP of a certificate of satisfactory performance and full completion of services by the Contractor.</p> <p>The proceeds of the Performance Security shall be payable to the UNDP as a compensation for any loss resulting from the Contractors' failure to complete its obligations under the contract.</p>
10	18	Currency of Proposal	United States Dollar (However, locally registered companies should bid in Mauritian Rupees, MUR)
11	31	Deadline for submitting requests for clarifications/ questions	10 days before the submission deadline i.e. 10 December 2021 at 16.00 hrs (Mauritius Time)
12	31	Contact Details for submitting clarifications/ questions	Focal Person in UNDP: Deepa Seeburn, Procurement Assistant E-mail address: procurement.mu@undp.org
13	18, 19 and 21	Manner of Disseminating Supplemental Information to the RFP and responses/ clarifications to queries	Posted directly to eTendering
14	23	Deadline for Submission	For eTendering submission - as indicated in eTendering system. Note that system time zone is in EST/EDT (New York) time zone.
14	22	Allowable Manner of Submitting Proposals	Online submission in e-Tendering
15	22	Proposal Submission Address	To be submitted in e-Tendering system: https://etendering.partneragencies.org

			<u>Insert BU Code – MUS 10 and Event ID number – 0000011043</u>
16	22	Electronic submission (email or eTendering) requirements	<ul style="list-style-type: none"> ▪ Format: PDF files only ▪ File names must be maximum 60 characters long and must not contain any letter or special character other than from Latin alphabet/keyboard. ▪ All files must be free of viruses and not corrupted. ▪ Password for financial proposal <u>must</u> not be provided to UNDP until requested by UNDP ▪ Max. File Size per transmission: 35 MB ▪ Documents which are required in original (e.g. Proposal Security) should be sent to the below address with a PDF copy submitted as part of the electronic submission
17	27 36	Evaluation Method for the Award of Contract	<p>Combined Scoring Method, using the 70%-30% distribution for technical and financial proposals respectively</p> <p>The minimum technical score required to pass is 70%.</p>
18		Expected date for commencement of Contract	<i>February 21, 2022</i>
19		Maximum expected duration of contract	12 months
20	35	UNDP will award the contract to:	One Proposer Only
21	39	Type of Contract	<p>Purchase Order and Contract for Goods and Services for UNDP</p> <p>http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html</p>
22	39	UNDP Contract Terms and Conditions that will apply	<p>UNDP General Terms and Conditions for Professional Services</p> <p>http://www.undp.org/content/undp/en/home/procurement/business/how-we-buy.html</p>
23		Other Information Related to the RFP	<i>Not Applicable</i>

SECTION 4. EVALUATION CRITERIA

Preliminary Examination Criteria

Proposals will be examined to determine whether they are complete and submitted in accordance with RFP requirements as per below criteria on a Yes/No basis:

- Appropriate signatures
- Power of Attorney
- Minimum documents provided
- Technical and Financial Proposals submitted separately
- Bid Validity
- Bid Security submitted as per RFP requirements with compliant validity period

Note: The recommended period of validity for the security shall equal the period of validity of the tender plus the time allowed for the Offeror to provide the performance security i.e. 120 days

Conference Room Pilot (CRP)/Demonstration

Bidders who pass the Technical Evaluation Score will be invited to conduct a demo of the proposed solution as part of a final evaluation stage at their own cost.

The purpose of the demonstration is to describe the major contents and highlights of the technical proposal submitted. Besides, the demonstration should be a prototype of the system and not a PowerPoint or video presentation. Moreover, the shortlisted bidders will have to make use of the items proposed in the bid for the purpose of the demonstration.

Date and time for same will be communicated in due course.

As part of the demo, selected bidders will demonstrate the features of the system including a Data Warehouse, ETL and Analytics and BI tool. The simulation can be conducted on sample data.

Minimum Eligibility and Qualification Criteria

Eligibility and Qualification will be evaluated on **Pass/Fail basis**.

If the Proposal is submitted as a **Joint Venture/Consortium/Association**, each member should meet minimum criteria, unless otherwise specified in the criterion.

Subject	Criteria	Document Submission requirement
ELIGIBILITY		
Legal Status	Vendor is a legally registered entity.	Form B: Bidder Information Form
Eligibility	Vendor is not suspended, nor debarred, nor otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization in accordance with ITB clause 3.	Form A: Technical Proposal Submission Form
Conflict of Interest	No conflicts of interest in accordance with ITB clause 4.	Form A: Technical Proposal Submission Form
Bankruptcy	Not declared bankruptcy, not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against the vendor that could impair its operations in the foreseeable future.	Form A: Technical Proposal Submission Form
QUALIFICATION		
History of Non-Performing Contracts¹	Non-performance of a contract did not occur as a result of contractor default for the last 3 years.	Form D: Qualification Form
Litigation History	No consistent history of court/arbitral award decisions against the Bidder for the last 3 years.	Form D: Qualification Form
Previous Experience	Minimum 5 years of relevant experience in delivering similar assignment. Eligible Assignments include: (i) Assignment involving web interface with 500+ active users viewing interactive reports with backend consisting of data warehousing from 1TB+ data volumes; or (ii) Assignment involving data mining on 1TB+ data with interactive visualization to showcase the results; or Having experience in natural language processing will be an advantage (iii) Assignment involving information retrieval based search or natural language understanding on 1TB+ unstructured textual data, structured and semi structured data; or	Form D: Qualification Form

¹ Non-performance, as decided by UNDP, shall include all contracts where (a) non-performance was not challenged by the contractor, including through referral to the dispute resolution mechanism under the respective contract, and (b) contracts that were so challenged but fully settled against the contractor. Non-performance shall not include contracts where Employers decision was overruled by the dispute resolution mechanism. Non-performance must be based on all information on fully settled disputes or litigation, i.e. dispute or litigation that has been resolved in accordance with the dispute resolution mechanism under the respective contract and where all appeal instances available to the Bidder have been exhausted.

	<p>(iv) Assignment involving intuitive and easy navigation based web interface which has more than 5,000+ daily traffic.</p> <p>(v) Assignments involving implementation of a Data Lake, ETL tools, Data Warehouse, Data Marts.</p>			
	<p>Minimum 3 contracts of similar value, nature and complexity implemented over the last 5 years. <i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i></p>	Form Form	D:	Qualification
Financial Standing	<p>Minimum average annual turnover of USD 500,000 for the last 3 years. <i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i></p>	Form Form	D:	Qualification
	<p>Bidder must demonstrate the current soundness of its financial standing and indicate its prospective long-term profitability. <i>(For JV/Consortium/Association, all Parties cumulatively should meet requirement).</i></p>	Form Form	D:	Qualification

Technical Evaluation Criteria

Summary of Technical Proposal Evaluation Forms		Points obtainable
1.	Expertise of Firm / Organization	300
2.	Proposed Methodology, Approach and Implementation Plan	2,000
3.	Management Structure and Key Personnel	2,200
	Total	4,500

Detailed Technical Evaluation Criteria

Section 1. Expertise of Firm/ Organisation		Points obtainable
1.1	Must have at least 5 years of proven experience in leading and implementing complex integrated data management solutions including Data Lake, Data Warehouse, sustainable ETL tools, Analytics and Business Intelligence with automated procedures.	100
1.2	General Organizational Capability which is likely to affect implementation: management structure, financial stability and project financing capacity, project management controls, extent to which any work would be subcontracted	50
1.3	Relevance of specialized knowledge and experience on similar engagements done in the region/ country Specific experience in carrying similar projects (Number of projects) - 1-2 projects (50 points) - 3-5 projects (60 points) - More than 5 projects (75 points) - At least one project at national level (25 points)	100
1.4	Quality Assurance Procedures, ISO certifications	50
Total Section 1		300

Section 2. Proposed Methodology, Approach and Implementation Plan		Points obtainable
2.1	Understanding of the requirement: Have the important aspects of the task been addressed in sufficient detail? Did the Bidder understand the phasing approach and scope of work detailed in the Terms of Reference.	100
2.2	Description of the Bidder's approach and methodology for meeting or exceeding the requirements of the Terms of Reference.	200
2.3	Details on how the different service elements shall be organized, controlled and delivered.	50
2.4	Proposed Functionality of MauStats as per Appendix 1.2, Appendix 2 and 3.	1,500
2.5	Assessment of the implementation plan proposed including whether the activities are properly sequenced and if these are logical and realistic, deliverables, project milestones.	100
2.6	Training and Knowledge Transfer	50
Total Section 2		2,000

Section 3. Management Structure and Key Personnel			Points obtainable
3.1	Composition and structure of the team proposed. Are the proposed roles of the management and the team of key personnel suitable for the provision of the necessary services?		50
3.2	Qualifications of key personnel proposed		
3.2 a	Team Leader		250
	Education	30	
	Adequacy for the assignment - Number of Similar Projects undertaken	70	
	Overall Experience in the field	150	
3.2 b	Technical Architect		400
	Education	30	
	Adequacy for the assignment - Number of Similar Projects undertaken	220	
	Overall Experience in the field	150	
3.2 c	Statistics Expert		250
	Education	30	
	Adequacy for the assignment - Number of Similar Projects undertaken	150	
	Overall Experience in the field	70	
3.2 d	Data Modeler/Analyst		250
	Education	30	
	Adequacy for the assignment - Number of Similar Projects undertaken	150	
	Overall Experience in the field	70	
3.2 e	Developers (Minimum 3)		600
	Education	30	
	Adequacy for the assignment - Number of Similar Projects undertaken	100	
	Overall Experience in the field	70	
3.2 f	Database Administrator		250
	Education	30	
	Adequacy for the assignment - Number of Similar Projects undertaken	150	
	Overall Experience in the field	70	
3.2 g	Infrastructure, Network and Security Experts		150
	Education	30	
	Adequacy for the assignment - Number of Similar Projects undertaken	70	
	Overall Experience in the field	50	
Total Section 3			2,200

TERMS OF REFERENCE

A. BACKGROUND INFORMATION AND RATIONALE, PROJECT DESCRIPTION

Statistics Mauritius ("SM") previously known as Central Statistics Office, was set up in 1945 and is the central statistical authority and depository of all official statistics produced in Mauritius. SM is the official organisation responsible for collection, compilation, analysis and dissemination of the official statistical data relating to the economic and social activities of the country with a few exceptions such as fisheries, health and banking which is managed by respective Ministries and Bank of Mauritius

SM as the central authority responsible for producing official statistics in Mauritius, is increasingly providing statistical data to public and private sectors, as well as international organisations and research bodies within and outside the country.

Approximately 138 publications are released each year on Statistics Mauritius Website (<https://statsmauritius.govmu.org>). These includes:

- Monthly Reports
- Economic and Social Indicators (ESIs)
- Digests of Statistics
- Census and Survey reports
- Mauritius in Figures
- Adhoc Reports

Statistics Mauritius graduated from IMF's Special Data Dissemination Standard (SDDS) in 2012 and is now working towards becoming fully compliant with SDDS+.

SM classifies its data in classes based on international level standards, while adapting them to the national context. Some of the classifications used by Statistics Mauritius are as follows:

Classification Standards	Description
NSIC	National Standard Industrial Classification of Economic Activities Rev.2 (NSIC Rev. 2) adapted from the UN International Standard Industrial Classification of Economic Activities, ISIC Rev.4 of 2007.
NASCO	National Standard Classification of Occupations (NASCO-08) adapted from the UN International Standard Classification of Occupations, ISCO-08, adopted by the International Conference of Labour Statisticians (ICLS) in December 2007.
NSCED	National Standard Classification of Education (NSCED-97) adapted from the UNESCO International Standard Classification of Education, ISCED-97.
SITC	Standard International Trade Classification.
COICOP	National Classification of Individual Consumption According to Purpose based on UNSD classifications, COICOP 2000.

Classification Standards	Description
CPC	Central Product Classification.
Country Code	Country Code based on International Organisation for Standardisation (ISO 3166-1).
Codes for administrative areas of the Republic of Mauritius	1. Codes for Municipal Wards and Village Council Areas (MWVCAs) of the Island of Mauritius based on Local Government Act 2011. 2. Codes for administrative regions of the Island of Rodrigues based on Rodrigues Regional Assembly Act 2001.

Table 1: International Standards for Data Classification

SM currently produces official statistics on the following subject areas:

- Population and vital statistics
- Agriculture and fishing
- Construction
- Education
- Energy and water
- Environment and climate change
- External trade
- Government and public finance
- Housing and households
- Household income and expenditure
- Industrial production
- International travel and tourism
- Labour force, employment and unemployment
- National accounts
- Crime, justice and security
- Poverty
- Prices and inflation
- Productivity
- Road transport and accidents
- Social security
- Gender
- Information and communication technology

Refer to Appendix 4 for existing data sources.

B. INTRODUCTION

To keep up with the digital acceleration pace, global trends and standards, new demands and most importantly to align with Government of Mauritius Digital Transformation Strategy 2018 - 2022, it is therefore important for SM to look beyond the next three (3) years, and think about long-term business model, particularly based on innovative and modern data architecture. SM needs to rethink its e-Business Plan 2021-2024 objectives and approach towards modernising its business operations. The objectives for the e-Business Plan 2021-2024 have been defined as follows:

1. **One Stop Data Hub** to improve user and stakeholder experience with SM.
2. **Improving service delivery** while adopting emerging technologies and modernising its ICT Operations.
3. **Achieving operational efficiency** by eliminating duplicate and non-value-added tasks.
4. **Enhancing security and confidentiality** across data life cycle.
5. **Adopting e-government principles** and staying relevant with Government Digital Strategy.
6. **Becoming resilient**, business as usual operations during crisis, disaster and pandemic situations.

The implementation of a Modern Statistics Platform (MauStats) will help achieve the above objectives by automating and integrating SM's data lifecycle from acquisition to dissemination using Generic Statistical Business Process Model (GSBPM) framework. It will comprise a robust and scalable data layer with interfacing capabilities to collect data via APIs from external stakeholders. It will promote a single source of truth on data assets and also comprise a One Stop Data Hub for users to have interactive visualisation with Do Your Own Analysis (Self-Service) capabilities.

The diagram below illustrates SM data lifecycle with MauStats.

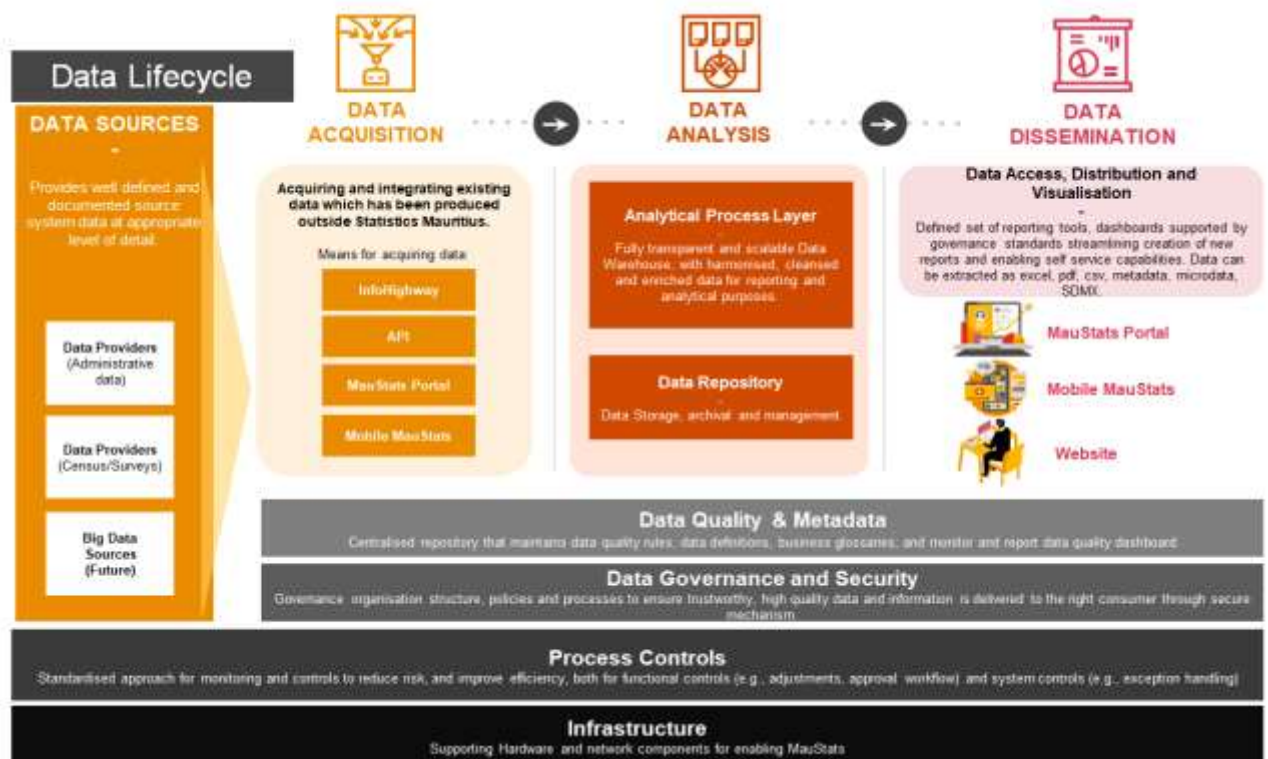


Figure 1 MauStats Data Lifecycle

C. SPECIFIC OBJECTIVES

The UNDP Mauritius Country Office seeks to procure the services of a solution provider for the **Supply, Design, Installation, Testing and Commissioning of a Modern Statistics Platform (MauStats)**.

MauStats will serve as a single point for collecting, analysing and accessing statistical data combined with intuitive visualisation and self-service analytics. The platform has been conceptualised around 12 critical capability areas as follows:



Figure 2 MauStats capabilities

The overall benefits envisaged with the implementation of MauStats includes:



Figure 3 Envisaged benefits of MauStats

D. SCOPE

As part of the modernisation programme, SM is looking for suitably qualified bidders to implement MauStats. The scope of this bidding exercise is listed below:

Item	Description	Remarks
Scope of System Implementation		
1	Supply, Installation, Testing, Training, Commissioning and Maintenance of MauStats.	Mandatory
Infrastructure Scope		
2	Deployment, installation, testing, commissioning of MauStats hardware, network, security and other infrastructure equipment.	Mandatory
Channel Enablement		
3	Channel Enablement – SM Website, MauStats Portal, Mobile MauStats (Mobile / Tablet), Emails and External Publication Sites among others.	Mandatory
4	Channel Enablement – Social Media.	Optional
Integration Scope		
5	Integration with existing e-Government Platforms, such as InfoHighway and National Authentication Framework (MauPass).	Mandatory
6	Integration with existing tools such as US Census Bureau CS Pro, WB Survey Solution, Arc GIS, ERETES, R Studio and STATA among others.	Mandatory
8	Revamp and Integration with SM Website.	Mandatory
9	Integration with external publication sites, such as, Open Data Portal (MTCI),	Mandatory

Item	Description	Remarks
	UN SDG Portal, International Data Portals (Prognoz, IMF) among others.	
10	Integration with API and email gateway.	Mandatory
12	Integration with payment gateway.	Optional
Warranty and Post Implementation Support		
13	1 year Warranty and post implementation support over a period of 4 years.	Mandatory
Business Continuity		
14	Provide adequate backup and restoration procedures to make sure that information can be recovered following unavailability of production environment.	Mandatory
15	Provide a contingency plan to ensure service continuity, availability and integrity of transactions.	Mandatory
Enhancement/Add-Ons to MauStats		
16	Data exchange in Statistical Data and Metadata eXchange (SDMX) format.	Optional
17	Implementation of Chatbots.	Optional
17	Subscriptions Module (Subscribers to MauStats against payment).	Optional
18	eCensus Module.	Optional

Notes to the above:

- Bidders must quote for Mandatory and Optional components separately.
- Integration scope is indicative and may change depending on SM or stakeholder requirements.
- Bidders must also include any other items/or alternative configurations necessary for MauStats to be fully operational.
- Selected bidder must comply with existing and applicable laws during the execution of this contract.
- Bidders may propose project timelines based on their experience in similar projects. However, timeframe should not exceed 12 months.
- Licensing Requirements (if required):
Bidders should clearly detail the **licensing structure (perpetual licenses, annual licenses, user based licenses, server based licenses, etc.) and associated costs** for the proposed system.

The table below provides a high level overview of SM's licensing requirements, but not limited to:

#	Components	Category of Users	Licensing requirements
A.	MauStats – SM	SM Staff	It is estimated that approximately 200-300 SM staff will be users of the MauStats.
		Public and stakeholders	The public in general and all registered stakeholders. Approximately 1,000+ should get access to the system based on their access rights.
B.	Any other supporting system	To be determined by the bidder	Bidders should propose any licences that should be procured for the MauStats to be

#	Components	Category of Users	Licensing requirements
			fully functional.
C.	MauStats Channels (Portal, Mobile App)	Public, Registered SM Staff	All SM stakeholders should have access to the channels identified.

Any modifications to the number of licences required may be made by SM at the time of contracting.

Key activities/tasks expected from the solution provider include:

- i. **Business Requirements Gathering** with SM and perform mapping against solution proposed.
 - a. Selected solution provider shall provide a Business Requirement Document detailing the business requirements, system standard functionalities, gaps and customisation and interfacing touchpoints.
- ii. **Data Discovery** to identify all sources for data collection and information input to MauStats.
- iii. **System Design and preparation of Solution Blueprint** document to demonstrate the system functionalities based on the business requirements gathered in points i and ii.
- iv. **Develop and/or customise MauStats** in accordance to approved Business Requirements Document and Solution Blueprint using DevOps, Rapid Application Development (RAD) or other similar agile methodologies.

As part of this stage, the solution provider is expected to:

- Validate infrastructure configured at GoC and thereafter perform installation and commissioning.
- Develop/Set up MauStats Data Lake, Data Warehouse and Data Marts based on business logics defined in Solution Blueprint.
- Develop MauStats modules allowing for Data Collection, Analysis and Dissemination.
- Configure Analytics and BI tools to meet SM requirements.
- Develop Interfacing touchpoints.
- Release modules for user validation and adjustments. Conditional Acceptance will be provided to solution provider on each release once SM is satisfied that developed module fulfills requirements and design defined.

Once Conditional Acceptance is obtained on all modules and developed components, the solution provider shall deploy MauStats, related operating systems and infrastructure components for testing, as applicable.

- v. **System and Performance Testing** to make sure that the system developed can be released for user acceptance testing. Such tests include unit testing, system testing, integration testing, stress testing and performance testing. Steps iv and v are to be performed in an agile manner to better optimise the development process of the system along the project evolution.
- vi. **Undertake formal training and capacity building** so that there is appropriate and adequate technology / knowledge transfer that would make end-users fully conversant with MauStats.

The training shall include, but shall not be limited to:

- Training to SM End Users.
- Technical and System Administration Training to SM IT team.

It is important to make sure that:

- Training starts at least 5 weeks prior to MauStats go live.
- The training covers all functionalities of MauStats vis a vis business requirements and Solution Blueprint.
- Training is timed with the availability of equipment to allow staff to put their newly acquired skills in place.

The following information will need to be provided:

- Details of courses to be covered.
- Number of training sessions.
- Duration of each training session.
- Proposed site where training will be conducted.
- Experience of trainers.

Training materials such as user manuals, video materials and technical documents among others, will have to be reviewed and approved by the Purchaser prior to training. SM reserves the right to reproduce the training materials for subsequent in-house training of other staff.

- vii. **Define IT contingency plan for the project.** IT Contingency Plans including process, application and infrastructure recovery mechanisms should be submitted by the selected bidder. Backup mechanisms should also be defined.

viii. **Assist Statistics Mauritius during User Acceptance Tests:**

- a. The selected solution provider shall assist Statistics Mauritius in the User Acceptance Testing (UAT) activities by providing sample UAT scenarios and UAT issue logging mechanisms.
- b. Following UAT, the solution provider will make necessary amendments to the system for acceptance and sign-off.
- c. Operational acceptance or commissioning of MauStats will also be undertaken at this stage.

The Acceptance Testing stage shall involve verification of the functionality and performance of:

- each functional module/business requirements.
- the integration of that module within MauStats and identified interfacing touchpoints.
- the operation of integrated modules within the entire network.

- ix. **Go Live, Hand-holding and Knowledge Transfer** for a period of 3 months post the Go-Live date. The selected bidder will provide knowledge transfer to Statistics Mauritius identified resources without any extra cost.

- x. **Provide warranty** that the solution in terms of – hardware, software, including Operating Systems, Database and Application are working with no issues from Go-Live date. Warranty shall be for a period of two (2) years and include resolution of system related bugs, new version releases and system updates at no additional costs.

- a. A support plan will be provided for the proposed solution, operating environment and any additional hardware proposed. Selected Solution Provider shall reach agreement on services to be provided as part of Support Plan at the time of contract finalisation. Annual

maintenance should cover trouble shooting, removing bugs/errors (if required). All upgrades / updates / new version releases will be provided during annual maintenance period free of cost. It is responsibility of the vendor to apply new patches, updates or upgrade if desired.

- b. Sample support and maintenance plan shall be provided by bidders as part of their response to this request for proposal.
- c. The successful bidder must provide 24 by 7 technical support. The successful bidder must provide fixes/workarounds based on criticality of the problem encountered as follows:

Criticality Level	Definition	Response time	Resolution time
High	Function or process is inoperative; unable to process critical transactions.	Within 30 minutes from the time of reporting the problem.	Within 1 hour from the time of reporting the problem.
Medium	System function is inoperative but can be circumvented in a manner reasonably acceptable to client.		Within 1 day from the time of reporting the problem.
Low	Minor problem which does not affect client's continued operations.		Within 3 days from the time of reporting the problem.

- d. A change request process will be detailed and shall be employed for identification and recording of significant changes, assessment of potential impacts including security impacts, fallback procedures.

xi. **Change Management and Communication**

- Bidders should clearly specify, in their Technical Proposals, the Change Management Framework that will be used to drive adoption of the platform within SM during the project implementation.
- Bidders should demonstrate how the Change Management Framework will be used to undertake change management activities throughout the project. These include, but are not limited to:
 - Conducting activities in the approved Change Management and Communication Plan.
 - Developing communication activities to gain user buy-in.
 - Conducting stakeholder assessment, readiness assessment, perception surveys to assess resistance to change, preparation of project communication workbook among others.
 - Supporting SM in conducting dissemination sessions with users and stakeholders.
 - Reviewing proactively the effectiveness of the Change Management and Communication activities and undertaking corrective actions.
 - Supporting SM in other such activities that will encourage adoption and usage

of MauStats.

xii. **Data Migration**

- a. The selected solution provider shall draft a clear Data Migration Strategy after business requirement gathering stage detailed in activity i above.
- b. The strategy will be validated and approved by SM.
- c. Selected solution provider shall assist SM in Data Migration exercise making sure that data existing in current Statistics Mauritius servers are migrated onto the MauStats central data repository. Current data storage at SM is approximately 6 TB stored on the existing Core Statistics System and 500 GB for Survey Solutions among others.
- d. The selected solution provider shall cater to the following, but not limited to, activities:
 - Data Discovery
 - Data Mapping
 - Data Extraction, Cleansing
 - Data Ingest and Transformation
 - Data Migration Test and Simulation
 - Final Data Migration

E. APPROACH AND METHODOLOGY

The bidder should submit a detailed project plan, methodology and approach in their submission for the implementation of the project in line with the prescribed scope and objectives as well as based on acceptable international best practices. The bidder must also include the relevant architecture (with details of technology, software versions, among others) in the technical proposal.

The bidder should also provide a project implementation schedule to carry out this project aligning with the various milestones/deliverables listed in Section i. Deliverables and Schedules/Expected Outputs.

F. RESPONSE TO SYSTEM REQUIREMENTS

Bidders must complete the following questions sheets and submit same in **MS-Word format**:

- Appendix 1: Non-Exhaustive Core Functionalities of MauStats
- Appendix 2: General Requirements for MauStats
- Appendix 3: Technical Specification Sheet for MauStats
- Appendix 4: Existing Data Sources
- Appendix 5: User Journeys

Bidders should complete the Compliance Column as follows:

- **Compliant (C):** Requirements are met in full by the proposed system.
- **Partially Compliant (PC):** Customisation is required. Customisation efforts are understood to be included in the Implementation Services.
- **Non-compliant (NC):** Requirements cannot be addressed. Constraints with proposed technology or requirements cannot be availed from open-source communities or developed by bidder.

Bidders shall briefly describe each requirement in the above Appendices with screenshots where possible. Bidders are advised to attach detailed technical literature, where required.

BIDDERS ARE ALSO ADVISED THAT ANY BLANKS IN THE "Compliance" COLUMN WILL BE TREATED AS NON-COMPLIANCE TO REQUIREMENT.

G. PROPOSED INFRASTRUCTURE FOR THE PROJECT

The GOC is the centralised data centre that provides Government services to its stakeholders. The GOC is equipped with state-of-the-art ICT infrastructure and managed by the National Computer Board (NCB). Bidders should leverage on the existing infrastructure currently available at the Government Online Centre as detailed below:

i. Servers at GOC

Virtual servers (hosts) are available at the GOC and they are connected to the existing common storage system. Servers will be configured as per bidder's requirement specification. Bidders to propose detail requirement and number of instances required for this project.

The servers operate as 2-server cluster architecture with load balancing. Each host on the servers have at least 2 network interfaces for high availability. All servers are connected through Fiber Channel Arbitrated Loop (FCAL) switches to external disk storage units (common storage system). The external disk storage units will host the database of MauStats. The internal hard disks of the servers can host the application and the operating systems. The internal as well as external disks will be mirrored for fault tolerance through RAID controllers.

The servers are identical to facilitate configuration and to eliminate potential compatibility problems. It is intended to run the proposed RDBMS on this cluster. The servers may also be used for ongoing development, training and testing.

ii. Networking and Security

- Routers
- Firewall
- Server Load Balancer
- Core Switch
- Intrusion Prevention System (IPS)
- Web Servers running in high availability (HA) mode
- Patch cords and Fibre connectivity between hardware
- Symantec Endpoint Protection (Client license to be provided by Statistics Mauritius)

iii. Storage

- Storage capacity-to be specified by service provider
- SAN Storage
- SAN Switches
- Rack with all accessories (Monitoring Unit, Power Delivery Unit, Wheels, Fan, amongst others.)
- Backup Software Solution

- GOC centralized NetBackup system (Capacity based license to be provided by Statistics Mauritius).

iv. **Computing**

- G-Cloud Infrastructure
 - Windows Based Virtual Machines – (Windows 2016R2 and 2019R2)
 - LINUX Based Virtual Machines – (Ubuntu, CentOS and Red Hat)
- Processor and Memory will depend on type of application and database requirement. The following is currently available at GOC:
 - 2 Virtual Central Processing Unit (VCPU) or 4 VCPU Processor
 - 8GB or 16 GB memory

v. **Secure Sockets Layer**

GOC has a wildcard certificate and bidders can make use of the same wildcard certificate if it stays only under a third level domain name. Otherwise bidders shall propose Secure Sockets Layer (SSL) certificates.

vi. **Server Clustering**

The web, application and database servers must be configured in clustered mode to ensure high availability. Bidders are expected to describe in detail how clustering will be done and how the fault-tolerance, high availability, scalability and simplified management will be achieved. Bidders will also describe how load sharing will operate between the servers.

vii. **Server Virtualisation**

The bidder should adopt the concept of server virtualization when planning for server deployment.

In the interest of effective integration, cost-effective technical support, and reduced re-training and staffing costs, bidders are required to offer the specified brand names and models for the following items, but not limited to:

- a) Open Source Software, if relevant;
- b) Antivirus software; and
- c) Anti-Spyware software.

Relevant ISO certificates for the manufacture/assembly will have to be submitted. In case of absence of relevant certificates at time of commissioning, payment will not be effected.

viii. **Guidelines for server infrastructure**

The servers shall be rack mountable and should cover following functionalities as part of MauStats:

- 1) **Scalability:** When the overall load for a clustered application exceeds the capabilities of clusters for the additional nodes is essential.

- 2) **Availability:** When a server fails, resources such as disk drives, capabilities should exist to automatically route the IP's address from a failed server to a surviving server on site; and/or When a system or application in cluster fails, the cluster software restarts the failed application on a surviving server or disperses the work from the failed node to the remaining nodes.
- 3) **Fall Back:** Capabilities should exist once the failed server is restored and get online, the workload is automatically re-balanced in the cluster.
- 4) **Manageability:** Bidders should give consideration to the following:
 - Management of the cluster as single cluster;
 - Management of applications as they are running on a single server;
 - Possibility to move the applications to different servers within the cluster to manually balanced server workloads and to unload the servers for planned maintenance; and
 - Monitoring of the cluster and resources from anywhere on the network.

The successful bidder will have to configure the system so that it has no single point of failure i.e. if any node fails; the system will automatically switch over to the other nodes and continue to provide its services.

ix. **Project Sites**

Primary Site

MauStats will be hosted at GOC. The system will be available through a secure access to authorised users over the internet and/or intranet. Wherever possible, the selected bidder must leverage on GOC network infrastructure on which MauStats will be deployed.

Disaster Recovery Site

A Disaster Recovery (DR) site will be connected to Statistics Mauritius through different network components. The service provider should provide specifications for the DR site.

x. **Government Intranet System (GINS)**

The Government Intranet System (GINS) provides the necessary infrastructure through which public sector institutions communicate and collaborate. GINS provides a common and highly secured platform for information sharing among government agencies through the GOC. The successful bidder shall leverage on the GINS that provides the necessary infrastructure through which public sector institutions communicate and collaborate. The selected bidder will be required to comply with all policies and security guidelines issued by the GOC.

xi. **Network Design**

System Performance or Reliability

MauStats must be highly available. All applications must conform to current industry standard performance benchmarks response times to ensure fast (sub-second) response to user-initiated transactions. The system is expected to be available at least 99% on 24x7 basis. To ensure the same, the successful bidder must take all necessary measures such as load balancing, clustering, redundant infrastructure component-based design, among others. In addition to the availability requirements, the system shall also adhere to (but not limited to) the following additional

performance requirements:

- The system shall support concurrent users and be scalable with increasing workload;
- Functional components must be highly reliable with appropriate fault tolerance, data integrity and automated recovery capabilities to minimise any unscheduled system downtime;
- System availability must conform to current industry resiliency standard to ensure maximum up-time of the system;
- System maintenance functions must be highly automated and allow any required periodic scheduled downtime for system maintenance to be minimal and able to be scheduled at user defined times; and
- The average response time for MauStats should be maximum 5 seconds.

MauStats deployment architecture

The deployment architecture depicts the mapping of a logical architecture to the physical environment of GOC and SM office. The following is a high level depiction of a deployment architecture for Statistics Mauritius on premise network and application / server hosting in GOC data centre.

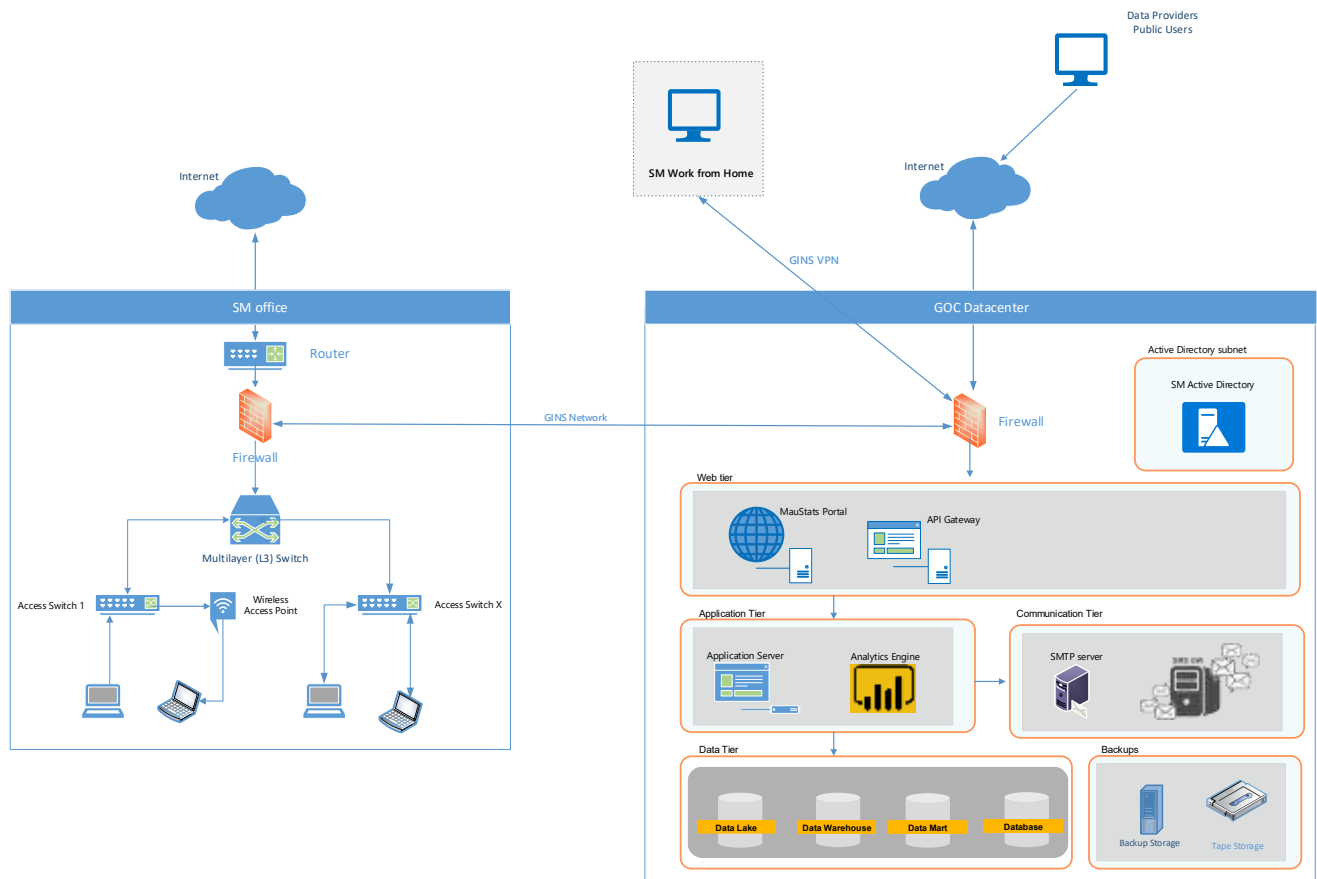


FIGURE 4 HIGH LEVEL DEPLOYMENT ARCHITECTURE FOR SM

H. OPEN SOURCE CODES AND RIGHTS

In the event bidders propose an open source solution, the source code should be provided to the

Statistics Mauritius without any royalty for use, modification and redistribution of the original/modified software. The list of third-party software licenses (like Database, application server etc.) required for the development and hosting of MauStats shall be proposed by the selected bidder for a fully operational system.

I. DELIVERABLES AND SCHEDULES/EXPECTED OUTPUTS

The selected bidder should provide high quality services. They will prepare necessary deliverables, to be sent to the UNDP Head of Environment Unit and SM Director. All deliverables shall be approved by the Project Steering Committee (PSC), comprising stakeholders from UNDP, SM, various Ministries, agencies and others, which has been set up for the implementation of this project. The selected bidder is expected to submit the following deliverables during the course of the project:

S.N.	Project Milestones	Associated Deliverables	Timeframe	Payment Terms
1.	Project Kick Off	<ul style="list-style-type: none"> Project Charter including Change Management and Communication Plan 	T + 2 weeks from Project Start date	10%
2.	Business Requirements Phase	<ul style="list-style-type: none"> Business Requirements Document Signed Off Data Migration Strategy Knowledge transfer and capacity building plan 	T + 2 month	5%
3.	Solution Design Phase	<ul style="list-style-type: none"> Signed Off Solution Blueprint Document, including Business rules for Data Marts, System Architecture, User Interfaces, Data catalog, Process Maps, Integration touchpoints, among others IT Contingency Plan and IT Risk Assessment Document (including risk mitigation plan) 	T + 5 months	5%
4.	Installation and Development Phase	<ul style="list-style-type: none"> Installation of software, hardware and related components Conditional Acceptance on all developed modules and components, including interfacing touchpoints Product Documentation. Data Migration iteration results 	T + 7 months	10%
5.	Pre-release for UAT Phase	<ul style="list-style-type: none"> Results of unit testing, system testing, integration testing, stress testing and performance testing signed off by selected supplier 	T + 8 Months	10%
6.	User Acceptance	<ul style="list-style-type: none"> Acceptance test plan UAT Environment 	T + 9 Months	10%

S.N.	Project Milestones	Associated Deliverables	Timeframe	Payment Terms
	Testing (UAT) Phase	<ul style="list-style-type: none"> • UAT Scenarios and scripts • UAT issue logging tool / alternative • Weekly issue tracking and resolution reports • Signed Off UAT • Commissioning of MauStats and related operating systems and infrastructure components 		
7.	Training and Capacity Building Phase	<ul style="list-style-type: none"> • Signed off Training Plan • Training to end users, Train the Trainer Signed Off • Signed Off Training Manuals, user guides for End Users, Technical and System Administrators 	T + 10 Months	10%
8.	IT Contingency Plan	<ul style="list-style-type: none"> • Signed off IT Contingency Plan and IT Risk Assessment Document (including risk mitigation plan) 	T + 10 Months	10%
9.	Go Live, Hand-holding and Knowledge Transfer	<ul style="list-style-type: none"> • Fully configured and operational system • Pilot run (Operational testing) with identified stakeholders for a period of 3 months • Signed Off on Acceptance • Support and Maintenance Agreement • Signed Off Knowledge Transfer 	T + 11 Months	30%
10.	Warranty	<ul style="list-style-type: none"> • Warranty period after go-live 	1 year	-
11.	Project Management	<ul style="list-style-type: none"> • Weekly Project Status Reports • Monthly Project Steering Committees 	<ul style="list-style-type: none"> • Weekly • Monthly 	-

Notes to the above:

- The above timeframe is indicative. Bidders may propose other timeframe based on past experience. However, this should not exceed 12 months.
- Payments are directly linked to deliverables.
- Price proposed must be in an all-inclusive fee, supported by a breakdown of costs.
- Contract price is fixed for the duration of the project.
- All deliverables must be submitted in an editable draft version in Word, Excel or other for comments and then final version, following incorporation of all comments and suggestions by the PSC.
- Contract signature does not warrant any advance payment.

J. WORKSHOPS/ ONLINE CONSULTATIONS

For purposes of the assignment, workshops shall be conducted by the selected bidder throughout the implementation of the project. This include, but not limited to: requirement gathering, data discovery, validation sessions (e.g. Conditional Acceptance on developed modules), and training. The workshops costs would be borne by UNDP.

K. GOVERNANCE AND ACCOUNTABILITY

The selected bidder will report to and will be supervised by Mr Shakil Beedassy, Environment Team Leader, a.i, UNDP Mauritius Country Office and any other UNDP personnel delegated by him, as well as Government counterparts who will be identified in due course. All deliverables, including software, shall be submitted to the following address:

Mr Shakil Beedassy, Environment Team Leader, a.i, UNDP Mauritius CO at shakil.beedassy@undp.org

There shall be no security restrictions on printing/editing in the deliverables. The Successful Bidder will have to submit all the deliverables where applicable, in draft form (in soft format - MS Word) in the first instance and should thereafter incorporate any comments the stakeholders may submit, prior to their finalisation. Draft reports and documentation would have to be submitted at least 2 weeks before the final reports/documentation are due so that ample time is available for review. Payment will be made only on the final deliverables, and these final deliverables should be to the satisfaction of the UNDP Country Office.

The Environment Team Leader will be responsible for further distribution. The deliverables should be of high quality in form and substance and with appropriate professional presentation. The selected bidder should fully comply with the requirements of UNDP in terms of content and presentation and respect UNDP visibility guidelines, since unsatisfactory performance may result in termination of contract.

All project implementation documents such as progress reports, draft project documents, templates, preliminary and intermediate designs, layouts, specification documents etc. shall be submitted in editable Microsoft Office Word Version and editable PDF Version, and in hard copies (4 copies) in a scale to be agreed with all stakeholders and in soft copy. The soft copy should not be secured with password(s) to allow printing or copy and paste of extract from the reports.

L. FACILITIES TO BE PROVIDED BY UNDP

The UNDP may act as facilitator between SM and selected bidder for the organisation of meetings and site visits. All transportation costs and administrative costs related to the execution of the assignment are to be borne by the selected bidder. In case awareness and validation workshops have to be organised, all costs will be borne by UNDP. No additional costs to those in the financial proposal would be borne by the UNDP.

M. DELIVERABLE REVIEW

The UNDP team will review all outputs/deliverables and their comments shall be communicated to the selected bidder within 14 days of submission of the output/deliverable. The selected bidder will then have to consider and incorporate the comments within a period of 2 weeks from the date of receipt of comments. The selected bidder will have to provide for justifications when comments are not incorporated in the output/deliverable.

N. DUTY STATION

The personnel assigned by the service provider should be locally based in Mauritius and could be required to work onsite at the SM for this assignment or work from home, owing to social distancing / lockdown requirements. In the latter case, they should be reachable by phone/email/video conference throughout the entire contract duration. The service provider should note that official hours of work are from 8:45 a.m. to 4:00 p.m. **However, the service provider may be required to work outside official hours including weekends and public holidays to monitor critical implementation phases and other issues encountered during the project implementation.**

O. PROFESSIONAL QUALIFICATIONS OF THE SUCCESSFUL CONTRACTOR AND ITS KEY PERSONNEL

Firm's General Experience

The selected bidder to be awarded the contract would be expected to have at least 3 years of experience in the implementation of Modern Statistics Platforms.

The selected bidder should have experience in carrying at least 3 similar projects during the last 5 years. Written evidence for experience claimed in the form of reference letters from the reference sites should be provided in the technical proposal. Experience in design of software solutions based on modern programming languages, reporting solutions, implementing large scale databases, data warehouses and visualization systems would be an advantage.

Experience with statistical processes, especially in the local context, would be an advantage.

Although seven profiles are presented, the assignment may be completed by a minimum of 4 personnel. Hence, it is acceptable that 1 person fulfils the requirements of 1 or more of the expertise listed below. In presenting the proposal, the bidders should indicate clearly the proposed experts for each of the required positions, and how they meet the criteria listed below. Bidders should also state clearly for which positions the personnel are being proposed. Additional resources such as Business Analyst, Trainers, Change Management and Data Quality/Assurance Experts may also be proposed.

Key Personnel Profiles

Written evidence for experience claimed by each proposed personnel should be provided in the technical proposal, in the form of reference letters from the client.

Role	Team Leader
Education	<ul style="list-style-type: none"> • Post graduate degree in IT/management or any other related field from a recognized university. • Specialisation in Data governance, Analytics, e-Government and/ or Project Management, will be an advantage. • Project Management Professional Certification or equivalent, will be an advantage.
Experience	<ul style="list-style-type: none"> • Has previous experience leading and implementing at least five (5) integrated data management solutions. • Has at least ten (10) years of experience in terms of project planning, development and review, resource planning, role and responsibility definition, coordination across multiple teams, project risk analysis and mitigation techniques related to this project, among others. • Experience working with National Statistics Offices of developed countries will be an advantage.
Skills	<ul style="list-style-type: none"> • Strong Project Management skills. • Strong leadership and planning skills. • Strong understanding of needs and issues of institutions. • Strong analytical skills.
Language	<ul style="list-style-type: none"> • Excellent written and spoken English is required. Report writing skills is a must.
Role	Technical Architect
Education	<ul style="list-style-type: none"> • Bachelors in Computer Sciences, Data Sciences and related fields.
Experience	<ul style="list-style-type: none"> • Has previous experience in design and implementing at least five (5) integrated data management solutions. • Has at least five (5) years of experience in terms of planning, solution design and development related to complex data platforms including Data Lake design and setup, Datawarehouse configuration, ETL development, testing and web based portals. • Has experience managing functional and technical team while validating data schema, data architecture design, security controls, data cleansing strategy and mapping, data quality and governance throughout project execution.

Skills	<ul style="list-style-type: none"> • Strong Business Analysis skills. • Excellent business process documentation skills. • Strong planning skills. • Strong understanding of business requirement. • Strong Analytical and programming skills. • Able to conceptualise system architecture across all layers (Data, Application and Presentation).
Language	• Excellent written and spoken English is required. Report writing skills is a must.
Role	Statistics Expert
Education	• A Degree in the field of Statistics or Economics or any other related field acceptable to the Client.
Experience	<ul style="list-style-type: none"> • Has at least five (5) years of experience in work related to this assignment in terms of business understanding, requirements, business process modelling, testing techniques for tracing and validating requirements and analysis of benefits and refining solutions, among others. • Has experience implementing at least three (3) similar projects in the last 5 years in a national statistical agency of a developed country dealing with official statistics with regard to: <ul style="list-style-type: none"> i. Design and implementation of Integrated Statistics Platform ii. Digital and Technology Services
Skills	<ul style="list-style-type: none"> • Strong Business Analysis skills. • Excellent business process documentation skills. • Strong planning skills. • Strong understanding of business requirement. • Strong Analytical and programming skills. • Able to translate highly technical specifications into clear non-technical requirements.
Language	• Excellent written and spoken English is required. Report writing skills is a must.
Role	Data Modeler/Analyst
Education	<ul style="list-style-type: none"> • Bachelors' degree holder or a masters' degree holder in information technologies, computer science or any other related domains. • Related certificates commensurate to the profile requirements.
Experience	<ul style="list-style-type: none"> • Has previous experience implementing at least five (5) integrated data management solutions. • Has at least five (5) years of experience in terms developing data schema to fit business requirement, data quality and governance, data cleansing, data mining and profiling. • Has at least five (5) years of experience developing statistical visualisations and reporting. • Has experience working with National Statistics Offices of developed

	countries will be an advantage.
Skills	<ul style="list-style-type: none"> • Strong technical skills. • Strong understanding of business requirement. • Strong analytical skills.
Language	• Excellent written and spoken English is required. Report writing skills is a must.
Role	Developers (Minimum 3 Resources)
Education	<ul style="list-style-type: none"> • Bachelors' degree holder or a masters' degree holder in information technologies, computer science or any other related domains. • Related certificates commensurate to the profile requirements.
Experience	<ul style="list-style-type: none"> • Has experience implementing at least three (3) similar projects in the last 5 years. • Has at least five (5) years of experience in software development using proven and tested methodologies. • Has experience in developing Data Lake/ Data Warehouse/Portals and deploying ETL tools, webservices APIs among others. • Certified developer. Programming languages such as R, Python, C/C++, Java and experience in machine learning is an advantage.
Skills	<ul style="list-style-type: none"> • Strong technical skills. • Strong understanding of business requirement. • Strong analytical skills.
Language	• Excellent written and spoken English is required. Report writing skills is a must.
Role	Database Administrator
Education	• Bachelors' degree holder or a masters' degree holder in information technologies, computer science or any other related domains.
Experience	<ul style="list-style-type: none"> • Has experience implementing at least three (3) similar projects in the last 5 years. • Experience in working on the environmental data management system in at least one of the following: Windows, Linux, Unix, PostgreSQL, MySQL, SQL Server. • Has at least five (5) years of experience managing databases for similar projects and in the areas of data management, designing and programming of information database system/software and equivalent.
Skills	<ul style="list-style-type: none"> • Strong technical skills. • Strong understanding of business requirement. • Problem-Solving and good analytical skills. • Knowledge in database performance tuning, database security configuration, and database continuity.
Language	• Excellent written and spoken English is required. Report writing skills is a must.

Role	Infrastructure, Network and Security Experts
Education	<ul style="list-style-type: none"> •Bachelors' degree holder or a masters' degree holder in information technologies, Information Security computer science or any other related domains. • Related certificates commensurate to the profile requirements.
Experience	<ul style="list-style-type: none"> •Has successfully deployed at least three (3) similar projects over the last 5 years. •Has at least five (5) years of experience in managing modern data platforms network, infrastructure and security design, setup and implementation. •Experience in defining IT security policies and governance. •Experience in defining security controls and testing.
Skills	<ul style="list-style-type: none"> • Strong technical skills • Expertise in monitoring CPU, memory, I/O, space, and dead lock issues using SQL Server Utilities. • Knowledge of troubleshooting insufficient resources, fatal database errors, hardware errors, and security breach. • Strong Knowledge in cyber security and privacy frameworks.
Language	<ul style="list-style-type: none"> • Excellent written and spoken English is required. Report writing skills is a must.

P. PRICE AND SCHEDULE OF PAYMENTS

The financial offer should be quoted as a lump sum amount, all-inclusive (professional fee, insurance, all travel costs (local and international), per diem, etc.). In general, UNDP would not accept travel costs exceeding those of an economy class ticket. Should the service provider wish to travel on a higher class they should do so using their own resources.

Payments would be effected based on deliverables as per above.

The bidder should also quote for local support for a period of 5 additional years (Cost for Year 2 to Year 5 must be quoted separately and will not be part of the financial proposal). The contract of the selected service provider may be renewed by the SM upon satisfactory performance and availability of funds.

SECTION 6: RETURNABLE BIDDING FORMS / CHECKLIST

This form serves as a checklist for preparation of your Proposal. Please complete the Returnable Bidding Forms in accordance with the instructions in the forms and return them as part of your Proposal submission. No alteration to format of forms shall be permitted and no substitution shall be accepted.

Before submitting your Proposal, please ensure compliance with the Proposal Submission instructions of the BDS 22.

Technical Proposal Envelope:

Have you duly completed all the Returnable Bidding Forms?	
▪ Form A: Technical Proposal Submission Form	<input type="checkbox"/>
▪ Form B: Bidder Information Form	<input type="checkbox"/>
▪ Form C: Joint Venture/Consortium/ Association Information Form	<input type="checkbox"/>
▪ Form D: Qualification Form	<input type="checkbox"/>
▪ Form E: Format of Technical Proposal	<input type="checkbox"/>
▪ Form H: Proposal Security Form	<input type="checkbox"/>
▪ Appendix 1,2,3 – SM Requirements	<input type="checkbox"/>
Have you provided the required documents to establish compliance with the evaluation criteria in Section 4?	<input type="checkbox"/>

Financial Proposal Envelope

(Must be submitted in a separate sealed envelope/password protected email)

▪ Form F: Financial Proposal Submission Form	<input type="checkbox"/>
▪ Form G: Financial Proposal Form	<input type="checkbox"/>

A. FORM A: TECHNICAL PROPOSAL SUBMISSION FORM

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
RFP reference:	[Insert RFP Reference Number]		

We, the undersigned, offer to provide the services for [Insert Title of services] in accordance with your Request for Proposal No. [Insert RFP Reference Number] and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal and our Financial Proposal sealed under a separate envelope.

We hereby declare that our firm, its affiliates or subsidiaries or employees, including any JV/Consortium /Association members or subcontractors or suppliers for any part of the contract:

- a) is not under procurement prohibition by the United Nations, including but not limited to prohibitions derived from the Compendium of United Nations Security Council Sanctions Lists;
- b) have not been suspended, debarred, sanctioned or otherwise identified as ineligible by any UN Organization or the World Bank Group or any other international Organization;
- c) have no conflict of interest in accordance with Instruction to Bidders Clause 4;
- d) do not employ, or anticipate employing, any person(s) who is, or has been a UN staff member within the last year, if said UN staff member has or had prior professional dealings with our firm in his/her capacity as UN staff member within the last three years of service with the UN (in accordance with UN post-employment restrictions published in ST/SGB/2006/15);
- e) have not declared bankruptcy, are not involved in bankruptcy or receivership proceedings, and there is no judgment or pending legal action against them that could impair their operations in the foreseeable future;
- f) undertake not to engage in proscribed practices, including but not limited to corruption, fraud, coercion, collusion, obstruction, or any other unethical practice, with the UN or any other party, and to conduct business in a manner that averts any financial, operational, reputational or other undue risk to the UN and we *embrace the principles of the United Nations Supplier Code of Conduct and adhere to the principles of the United Nations Global Compact.*

We declare that all the information and statements made in this Proposal are true and we accept that any misinterpretation or misrepresentation contained in this Proposal may lead to our disqualification and/or sanctioning by the UNDP.

We offer to provide services in conformity with the Bidding documents, including the UNDP General Conditions of Contract and in accordance with the Terms of Reference

Our Proposal shall be valid and remain binding upon us for the period of time specified in the Bid Data Sheet.

We understand and recognize that you are not bound to accept any Proposal you receive.

I, the undersigned, certify that I am duly authorized by [Insert Name of Bidder] to sign this Proposal and bind it should UNDP accept this Proposal.

Name: _____

Title: _____

Date: _____

Signature: _____

[Stamp with official stamp of the Bidder]

B. FORM B: BIDDER INFORMATION FORM

Legal name of Bidder	[Complete]
Legal address	[Complete]
Year of registration	[Complete]
Bidder's Authorized Representative Information	Name and Title: [Complete] Telephone numbers: [Complete] Email: [Complete]
Are you a UNGM registered vendor?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, [insert UGNM vendor number]
Are you a UNDP vendor?	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, [insert UNDP vendor number]
Countries of operation	[Complete]
No. of full-time employees	[Complete]
Quality Assurance Certification (e.g. ISO 9000 or Equivalent) (If yes, provide a Copy of the valid Certificate):	[Complete]
Does your Company hold any accreditation such as ISO 14001 related to the environment? (If yes, provide a Copy of the valid Certificate):	[Complete]
Does your Company have a written Statement of its Environmental Policy? (If yes, provide a Copy)	[Complete]
Contact person UNDP may contact for requests for clarification during Proposal evaluation	Name and Title: [Complete] Telephone numbers: [Complete] Email: [Complete]
Please attach the following documents:	<ul style="list-style-type: none"> ▪ Company Profile, which should <u>not</u> exceed fifteen (15) pages, including printed brochures and product catalogues relevant to the goods/services being procured ▪ Certificate of Incorporation/ Business Registration ▪ Tax Registration/Payment Certificate issued by the Internal Revenue Authority evidencing that the Bidder is updated with its tax payment obligations, or Certificate of Tax exemption, if any such privilege is enjoyed by the Bidder ▪ Trade name registration papers, if applicable ▪ Local Government permit to locate and operate in assignment location, if applicable ▪ Official Letter of Appointment as local representative, if Bidder is submitting a Bid in behalf of an entity located outside the country ▪ Power of Attorney

C. FORM C: JOINT VENTURE/CONSORTIUM/ASSOCIATION INFORMATION FORM

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
RFP reference:	[Insert RFP Reference Number]		

To be completed and returned with your Proposal if the Proposal is submitted as a Joint Venture/Consortium/Association.

No	Name of Partner and contact information <i>(address, telephone numbers, fax numbers, e-mail address)</i>	Proposed proportion of responsibilities (in %) and type of services to be performed
1	[Complete]	[Complete]
2	[Complete]	[Complete]
3	[Complete]	[Complete]

Name of leading partner (with authority to bind the JV, Consortium, Association during the RFP process and, in the event a Contract is awarded, during contract execution)	[Complete]
--	------------

We have attached a copy of the below document signed by every partner, which details the likely legal structure of and the confirmation of joint and severable liability of the members of the said joint venture:

☐ Letter of intent to form a joint venture **OR** ☐ JV/Consortium/Association agreement

We hereby confirm that if the contract is awarded, all parties of the Joint Venture/Consortium/Association shall be jointly and severally liable to UNDP for the fulfillment of the provisions of the Contract.

Name of partner: _____	Name of partner: _____
Signature: _____	Signature: _____
Date: _____	Date: _____
 Name of partner: _____	 Name of partner: _____
 Signature: _____	 Signature: _____
 Date: _____	 Date: _____

E. FORM D: QUALIFICATION FORM

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
RFP reference:	[Insert RFP Reference Number]		

If JV/Consortium/Association, to be completed by each partner.

Historical Contract Non-Performance

<input type="checkbox"/> Contract non-performance did not occur for the last 3 years			
<input type="checkbox"/> Contract(s) not performed for the last 3 years			
Year	Non- performed portion of contract	Contract Identification	Total Contract Amount (current value in US\$)
		Name of Client: Address of Client: Reason(s) for non-performance:	

Litigation History (including pending litigation)

<input type="checkbox"/> No litigation history for the last 3 years			
<input type="checkbox"/> Litigation History as indicated below			
Year of dispute	Amount in dispute (in US\$)	Contract Identification	Total Contract Amount (current value in US\$)
		Name of Client: Address of Client: Matter in dispute: Party who initiated the dispute: Status of dispute: Party awarded if resolved:	

Previous Relevant Experience

Please list only previous similar assignments successfully completed in the last 5 years.

List only those assignments for which the Bidder was legally contracted or sub-contracted by the Client as a company or was one of the Consortium/JV partners. Assignments completed by the Bidder’s individual experts working privately or through other firms cannot be claimed as the relevant experience of the Bidder, or that of the Bidder’s partners or sub-consultants, but can be claimed by the Experts themselves in their CVs. The Bidder should be prepared to substantiate the claimed experience by presenting copies of relevant documents and references if so requested by UNDP.

Project name & Country of Assignment	Client & Reference Contact Details	Contract Value	Period of activity and status	Types of activities undertaken

Bidders may also attach their own Project Data Sheets with more details for assignments above.

☐ Attached are the Statements of Satisfactory Performance from the Top 3 (three) Clients or more.

Financial Standing

Annual Turnover for the last 3 years	Year	USD
	Year	USD
	Year	USD
Latest Credit Rating (if any), indicate the source		

Financial information (in US\$ equivalent)	Historic information for the last 3 years		
	Year 1	Year 2	Year 3
	<i>Information from Balance Sheet</i>		
Total Assets (TA)			
Total Liabilities (TL)			
Current Assets (CA)			
Current Liabilities (CL)			
	<i>Information from Income Statement</i>		
Total / Gross Revenue (TR)			
Profits Before Taxes (PBT)			
Net Profit			
Current Ratio			

☐ Attached are copies of the audited financial statements (balance sheets, including all related notes, and income statements) for the years required above complying with the following condition:

- Must reflect the financial situation of the Bidder or party to a JV, and not sister or parent companies;
- Historic financial statements must be audited by a certified public accountant;
- Historic financial statements must correspond to accounting periods already completed and audited. No statements for partial periods shall be accepted.

F. FORM E: FORMAT OF TECHNICAL PROPOSAL

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
RFP reference:	[Insert RFP Reference Number]		

The Bidder's proposal should be organized to follow this format of Technical Proposal. Where the bidder is presented with a requirement or asked to use a specific approach, the bidder must not only state its acceptance, but also describe how it intends to comply with the requirements. Where a descriptive response is requested, failure to provide the same will be viewed as non-responsive.

SECTION 1: Bidder's qualification, capacity and expertise

- 1.1 Brief description of the organization, including the year and country of incorporation, and types of activities undertaken.
- 1.2 General organizational capability which is likely to affect implementation: management structure, financial stability and project financing capacity, project management controls, extent to which any work would be subcontracted (if so, provide details).
- 1.3 Relevance of specialized knowledge and experience on similar engagements done in the region/country.
- 1.4 Quality assurance procedures and risk mitigation measures.
- 1.5 Organization's commitment to sustainability.

SECTION 2: Proposed Methodology, Approach and Implementation Plan

This section should demonstrate the bidder's responsiveness to the TOR by identifying the specific components proposed, addressing the requirements, providing a detailed description of the essential performance characteristics proposed and demonstrating how the proposed approach and methodology meets or exceeds the requirements. All important aspects should be addressed in sufficient detail and different components of the project should be adequately weighted relative to one another.

- 2.1 A detailed description of the approach and methodology for how the Bidder will achieve the Terms of Reference of the project, keeping in mind the appropriateness to local conditions and project environment. Details how the different service elements shall be organized, controlled and delivered.
- 2.2 The methodology shall also include details of the Bidder's internal technical and quality assurance review mechanisms.
- 2.3 Explain whether any work would be subcontracted, to whom, how much percentage of the work, the rationale for such, and the roles of the proposed sub-contractors and how everyone will function as a team.
- 2.4 Description of available performance monitoring and evaluation mechanisms and tools; how they shall be adopted and used for a specific requirement.
- 2.5 Implementation plan including a Gantt Chart or Project Schedule indicating the detailed sequence of activities that will be undertaken and their corresponding timing.
- 2.6 Demonstrate how you plan to integrate sustainability measures in the execution of the contract.

- 2.7 Any other comments or information regarding the project approach and methodology that will be adopted.

SECTION 2A: Bidder's Comments and Suggestions on the Terms of Reference

Provide comments and suggestions on the Terms of Reference, or additional services that will be rendered beyond the requirements of the TOR, if any.

SECTION 3: Management Structure and Key Personnel

- 3.1 Describe the overall management approach toward planning and implementing the project. Include an organization chart for the management of the project describing the relationship of key positions and designations. Provide a spreadsheet to show the activities of each personnel and the time allocated for his/her involvement.
- 3.2 Provide CVs for key personnel that will be provided to support the implementation of this project using the format below. CVs should demonstrate qualifications in areas relevant to the Scope of Services.

Format for CV of Proposed Key Personnel

NAME OF PERSONNEL	[INSERT]
POSITION FOR THIS ASSIGNMENT	[INSERT]
NATIONALITY	[INSERT]
LANGUAGE PROFICIENCY	[INSERT]
EDUCATION/ QUALIFICATIONS	<i>[SUMMARIZE COLLEGE/UNIVERSITY AND OTHER SPECIALIZED EDUCATION OF PERSONNEL MEMBER, GIVING NAMES OF SCHOOLS, DATES ATTENDED, AND DEGREES/QUALIFICATIONS OBTAINED.]</i>
	[INSERT]
PROFESSIONAL CERTIFICATIONS	<i>[PROVIDE DETAILS OF PROFESSIONAL CERTIFICATIONS RELEVANT TO THE SCOPE OF SERVICES]</i>
	<ul style="list-style-type: none"> ▪ NAME OF INSTITUTION: [INSERT] ▪ DATE OF CERTIFICATION: [INSERT]
EMPLOYMENT RECORD/ EXPERIENCE	<i>[LIST ALL POSITIONS HELD BY PERSONNEL (STARTING WITH PRESENT POSITION, LIST IN REVERSE ORDER), GIVING DATES, NAMES OF EMPLOYING ORGANIZATION, TITLE OF POSITION HELD AND LOCATION OF EMPLOYMENT. FOR EXPERIENCE IN LAST FIVE YEARS, DETAIL THE TYPE OF ACTIVITIES PERFORMED, DEGREE OF RESPONSIBILITIES, LOCATION OF ASSIGNMENTS AND ANY OTHER INFORMATION OR PROFESSIONAL EXPERIENCE CONSIDERED PERTINENT FOR THIS ASSIGNMENT.]</i>
	[INSERT]
REFERENCES	<i>[PROVIDE NAMES, ADDRESSES, PHONE AND EMAIL CONTACT INFORMATION FOR TWO (2) REFERENCES]</i>
	REFERENCE 1: [INSERT] REFERENCE 2: [INSERT]

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly describe my qualifications, my experiences, and other relevant information about myself.

Signature of Personnel

Date (Day/Month/Year)

G. FORM F: FINANCIAL PROPOSAL SUBMISSION FORM

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
RFP reference:	[Insert RFP Reference Number]		

We, the undersigned, offer to provide the services for [Insert Title of services] in accordance with your Request for Proposal No. [Insert RFP Reference Number] and our Proposal. We are hereby submitting our Proposal, which includes this Technical Proposal and our Financial Proposal sealed under a separate envelope.

Our attached Financial Proposal is for the sum of [Insert amount in words and figures].

Our Proposal shall be valid and remain binding upon us for the period of time specified in the Bid Data Sheet.

We understand you are not bound to accept any Proposal you receive.

Name: _____
Title: _____
Date: _____
Signature: _____

[Stamp with official stamp of the Bidder]

H. FORM G: FINANCIAL PROPOSAL FORM

Name of Bidder:	[Insert Name of Bidder]	Date:	Select date
RFP reference:	[Insert RFP Reference Number]		

The Bidder is required to prepare the Financial Proposal following the below format and submit it in an envelope separate from the Technical Proposal as indicated in the Instruction to Bidders. Any Financial information provided in the Technical Proposal shall lead to Bidder’s disqualification.

The Financial Proposal should align with the requirements in the Terms of Reference and the Bidder’s Technical Proposal.

Currency of the proposal: [Insert Currency]

Table 1: Summary of Overall Prices

	Amount(s)
Professional Fees (from Table 2)	
Other Costs (from Table 3)	
Total Amount of Financial Proposal	

Table 2: Breakdown of Professional Fees

Name	Position	Fee Rate	No. of Days/months/ hours	Total Amount
		A	B	C=A+B
In-Country				
Home Based				
Subtotal Professional Fees:				

Table 3: Breakdown of Other Costs

Description	UOM	Quantity	Unit Price	Total Amount
International flights	Trip			
Subsistence allowance	Day			
Miscellaneous travel expenses	Trip			
Local transportation costs	Lump Sum			
Out-of-Pocket Expenses				
Other Costs: (please specify)				
Subtotal Other Costs:				

Table 4: Breakdown of Price per Deliverable/Activity

Deliverable/ Activity description	Time (person days)	Professional Fees	Other Costs	Total
Deliverable 1				
Deliverable 2				
Deliverable 3				
.....				

Table 5: Recurrent costs

Component No.	Component	Yr 2	Yr 3	Yr n
1.	Hardware Maintenance (Incl. in Warranty)				
2.	Software Licenses & Updates (Incl. in Warranty)				
2.1	System and General-Purpose Software (Incl. in Warranty)				
2.2	Application, Standard and Custom Software (Incl. in Warranty)				
3.	Technical Services				
3.1	Systems Analyst				
3.2	Programmer				
3.3	Network Specialist, etc.				
4.	Telecommunications costs [to be detailed]				
5.	[Identify other recurrent costs as may apply]				
	Annual Subtotals:				
Cumulative Subtotal (to [insert: line item] in the Recurrent Cost Summary Table)					

FORM H: FORM OF PROPOSAL SECURITY

**Proposal Security must be issued using the official letterhead of the Issuing Bank.
Except for indicated fields, no changes may be made on this template.**

To: UNDP

[Insert contact information as provided in Data Sheet]

WHEREAS [Name and address of Bidder] (hereinafter called "the Bidder") has submitted a Proposal to UNDP dated [Click here to enter a date.](#) to execute Services [Insert Title of Services] (hereinafter called "the Proposal"):

AND WHEREAS it has been stipulated by you that the Bidder shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security in the event that the Bidder:

- a) Fails to sign the Contract after UNDP has awarded it;
- b) Withdraws its Proposal after the date of the opening of the Proposals;
- c) Fails to comply with UNDP's variation of requirement, as per RFP instructions; or
- d) Fails to furnish Performance Security, insurances, or other documents that UNDP may require as a condition to rendering the contract effective.

AND WHEREAS we have agreed to give the Bidder such this Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you, on behalf of the Bidder, up to a total of [amount of guarantee] [in words and numbers], such sum being payable in the types and proportions of currencies in which the Price Proposal is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of [amount of guarantee as aforesaid] without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

This guarantee shall be valid up to 30 days after the final date of validity of bids.

SIGNATURE AND SEAL OF THE GUARANTOR BANK

Signature: _____

Name: _____

Title: _____

Date: _____

Name of Bank _____

Address _____

[Stamp with official stamp of the Bank]

APPENDIX 1: NON-EXHAUSTIVE CORE FUNCTIONALITIES OF MAUSTATS

1.1 CONCEPTUAL MODEL FOR MAUSTATS

The following diagram provides an overview of MauStats conceptual model.

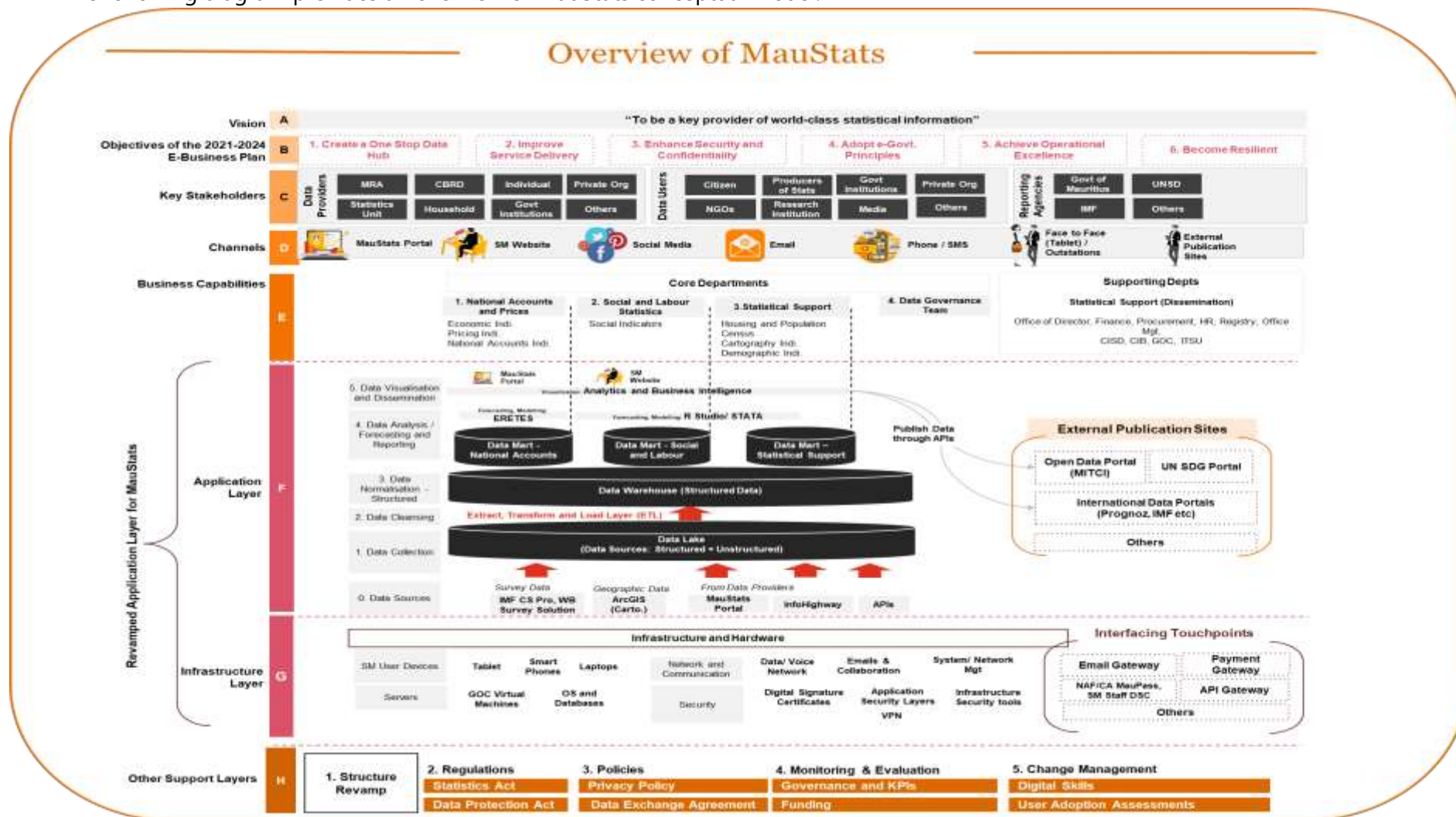


Figure 5 MauStats Conceptual Model

The following table provides a description of the different layers of the conceptual model.

Reference	FOM Layers	Description
A	Vision	The first layer represents SM existing vision.
B	Objectives of e-Business Plan 2021-2024	Layer B illustrates the set of strategic drivers defined for SM as part of its e-Business Plan 2021-2024.
C	Key Stakeholders	Layer C highlights key stakeholders of SM including data providers, data users and reporting agencies.
D	Channels	This layer showcases channels that SM can leverage to collect and disseminate information.
E	Business Capabilities	Layer E highlights functions within SM that is core services, corporate services and supporting functions.
F	Technology	Layer F highlights the application technologies, that is MauStats, existing system and tools and government owned system.
G	Support Layer/Enablers	Infrastructure layer elaborates on the hardware required across SM, such as user devices, servers, Network and Communication, Security infrastructure. It also demonstrates MauStats integration touchpoints.

b. Key Stakeholders and users of MauStats

The stakeholders of MauStats are classified into three main categories as follows:

1. Data Providers – Administrative sources
2. Data Providers – Survey and Census
3. Data Users

The table below illustrates key stakeholders and purpose of interaction with MauStats.

Stakeholder Category	S.No	Stakeholders	Description	Interaction with MauStats
Data Providers Administrative Data	1.	Ministry of Health and Quality of Life	Provide Health Statistics used produce consolidated analysis.	Access MauStats portal to upload data using predefined template or fill e-Forms.
	2.	Statistical units operating in Ministries, such as Ministry of Public Utilities (energy and water statistics), Ministry of Environment (environment statistics), among others	Share specific data sets as required by SM.	
	3.	Bank of Mauritius	Provide monetary, financial statistics,	Data push via APIs

Stakeholder Category	S.No	Stakeholders	Description	Interaction with MauStats
			external sector statistics and survey results as required by SM.	
	4.	Others, such as Mauritius Revenue Authority (MRA), Corporate Business Registration Department (CBRD), Civil Status Division, Ministry of Health and Wellness among others	Share source information and Transactional Data. E.g. VAT registration and income tax information the case of MRA; or, Business registration data in the case of CBRD.	Data is integrated in InfoHighway or API based.
Data Providers (Census/ Surveys/ Others)	5.	Include: <ul style="list-style-type: none"> - Households - Individuals or groups specified within organisations - Establishments - Government Ministries and Departments - Others as defined in survey/census frame 	Provide data as per survey and census questions.	<ul style="list-style-type: none"> • Access MauStats Portal or Mobile App to fill in Online questionnaire or Form. • Upload survey results on MauStats Portal. • Survey/ Census questions will be available on mobile/tablet and synchronised with MauStats.
Data Users	6.	<ul style="list-style-type: none"> - General Public - Media - Producers of statistics - Government ministries and institutions - Private sectors, such as Economic agents (business enterprises, associations, trade unions, retail outlets etc) - NGOs - Data Analysts - Decision makers such as government institutions 	Data Users include both general public or registered users who have access to information on SM website or MauStats Portal.	<ul style="list-style-type: none"> • Access to SM services via website or MauStats Portal, Mobile App. These include interactive dashboards, data portals, among others. Users will be able to derive their analytics and save results in desired format (pdf, excel, SDMX, microdata etc) • For External Reporting Agencies such as IMF, information is shared by Metadata/ SDMX

Stakeholder Category	S.No	Stakeholders	Description	Interaction with MauStats
		<ul style="list-style-type: none"> - Researchers - Regional and International organisation such as UNSD, IMF, COMESA, World Bank among others 		format as agreed with the external parties.

c. Components of MauStats (Mandatory)

The core components of MauStats are as follow:

- A. Presentation Layer - One Stop Data Hub
- B. Integrated Data, Application and Business Logic Layer
- C. Integration with InfoHighway and External Parties

A. Presentation Layer - One Stop Data Hub

The One Stop Data hub aims at enhancing service delivery to stakeholder including the general public and data providers. It is a combination of channels as follows:

- SM Revamped Website
- MauStats Portal
- Mobile MauStats
- Others – Contact Centres, SMS/Emails, External Publications Sites among others

SN	Channels	Purpose of each channel
1	SM Website	<ul style="list-style-type: none"> • Main channel accessed by the public and used for disseminating official statistics.
2	MauStats Portal	<ul style="list-style-type: none"> • Front end of the proposed system for Statistics Mauritius. • Registered users such as data providers will access this portal to submit the data either using e-Forms or upload of data file as per predefined template. • Also acts as the window through which SM users are able to perform day-to-day activities such as attend to requests made by external users, publish microdata sets for users to perform advanced analysis and initiate approval process. • Request for new data sets/ indicators or reports are submitted via this portal to SM.
3	Mobile MauStats (Mobile/Tablet)	<p>Mobile MauStats is a version of the MauStats portal which has been scaled down to match the layout of a mobile device. Key features include:</p> <ul style="list-style-type: none"> • For Data User/Providers - Personalized Content such as recent analytics, indicators of interest, trends and projection among others example pricing index. It also pushes notifications and alerts to users. • For SM users - Use of Mobile/Tablet to conduct face to face census and surveys. Data collected is synchronised with MauStats. Use Device features, such as the camera, GPS, among others for data capture.
4	Contact Centres	<ul style="list-style-type: none"> • Assist users to use the portal or submit data on MauStats. • Respond to general enquiries.
5	Emails/SMS	<ul style="list-style-type: none"> • Notification such as new releases or publications, registration, subscription renewals, reminders for submission of data and formal notices in case due dates have lapsed.
6	Social Media	<ul style="list-style-type: none"> • Big data collection such as perception surveys on specific topics. • Information dissemination to the general public.
7	Face to Face	<ul style="list-style-type: none"> • For Census or Surveys that require physical presence through Computer Assisted Personal Interviewing (CAPI) – Mobile/Tablet.
8	External Publication Sites	<ul style="list-style-type: none"> • To disseminate information to the public and other international organisations such as Open Data Portal, UN SG Portal, etc.

The channels will be used for specific purposes such as:

SN	Channels	Registration of users	Data Collection	Analysis and Reporting	Dissemination	Communication
1	SM Website	✓		✓	✓	✓
2	MauStats Portal	✓	✓	✓	✓	✓
3	Mobile MauStats (Mobile/Tablet)	✓	✓	✓	✓	✓
4	Contact Centres					✓
5	SMS/Emails				✓	✓
6	Social Media		✓		✓	✓
7	Face to Face		✓			✓
8	External Publication Sites				✓	

B. Integrated Data, Application and Business Logic Layer

Integrated Data Layer

The Integrated Data Layer plays a pivotal role in MauStats architecture. It is the central repository throughout the data lifecycle that is collection, processing and analysis and dissemination and consists of four (4) components:

1. Data Lake
2. Data Warehouse
3. Data Mart
4. Extract Transform Load tool

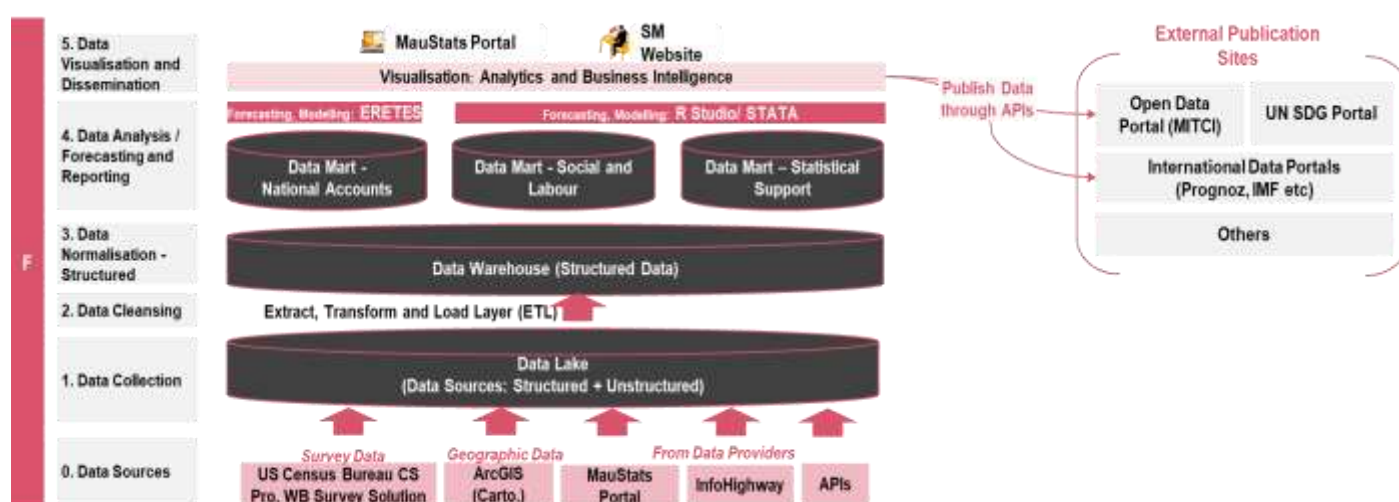


Figure 6 MauStats Application Layer

Data Layer component	Description
Data Lake (DL)	Foundation Layer where raw data (e.g. structured, semi-structured or unstructured) is stored and acts as the first point of entry to the pool of information maintained by Statistics Mauritius. E.g. information collected from survey or administrative sources through API.
Data Warehouse (DW)	DW is the core component which connects with the Data Lake and structure data set(s) for analysis and reporting. Information from various data source(s) are integrated and centralised.
Data Mart (DM)	Data Mart will be accessible for statisticians to design specific views, parameters and conditions and changes pushed to DW.
Extract Transform Load (ETL)	Extract, Transform and Load (ETL) tool is used to extract, process, transform, refine different data types from one repository and load into another preconfigured repository. This ETL tool must be configured between DL, DW and Analytics and BI Tool.

Application Layer

This layer consists of a set of specific application systems and business logic tools both new and existing SM tools that are fully integrated with data repository to allow SM perform its day to day activities.

Application Layer component	Description
Analytics and Business Intelligence Tools	To support full analytic workflow — from data preparation to visual exploration and insight generation — with an emphasis on self-service usage and augmented user assistance. Key features include user friendliness, visualisation, interactive dashboard, integration capabilities, benchmarks and forecasting and management reporting.
Statistical Modelling (Existing tools)	Include SPSS, R Studio, EViews, Stata and ERETES among others. Refer to section D below – Other integration touchpoints.
Online Survey tools (Existing tools)	Include US Census Bureau CPro, WB Survey Solutions among others. Refer to section D below – Other integration touchpoints.
ArcGIS (Existing tools)	Refer to section D below – Other integration touchpoints.

Business Logic Layer between Application and Data Layer

Business Logic Layer include components embedded onto the Data Layer to make sure information flow from one point to another seamlessly as per defined business rules and intended results are achieved.

Business logic component	Description
Communication Stack	Key elements of the communication stack include <ul style="list-style-type: none"> • API Gateway – The API gateway must be configured for interfacing with external stakeholder such as InfoHighway or 1:1 with data providers. API gateways uses webservice to push/pull data as per API contract/protocols. • Email Gateway – This channel will be used to send automated email notifications, updates or newsletters to subscribers. • Payment Gateway (Optional) – A secure payment gateway for subscribers of MauStats to effect online payment(s).
Technology Stack	Key elements of Technology Stack include: <ul style="list-style-type: none"> • Workflow and Business Rule – Statistical workflow management and business rule configuration to facilitates process execution, information flow and enforce series of events such as approvals. • Web Framework - Web framework used to assist in the development and publication of web applications and web sites. The proposed solution should allow web services and additional resources to be built on the web framework.

Business logic component	Description
	<ul style="list-style-type: none"> • Statistician's Workbench – will allow staff to access the data layer for the management of data and metadata. • Metadata Registry and Repository – provide end-to-end management, registration, storage and re-use of SM metadata. With the movement of huge amount of data occurring in SM's data layer, there is a need for SM to manage Metadata i.e. data storing information relative to other data.

C. Integration with existing e-Government Platforms

SM to leverage on existing infrastructure, such as **InfoHighway and National Authentication Framework** among others for service delivery.

1. InfoHighway

InfoHighway allows for sharing of data among Government Agencies and is designed as the service platform, which allows multiple Government agencies to share data via E-Services to other agencies. InfoHighway uses '**The Publish and Subscribe Model**' whereby the agency willing to share data is the **Publisher** and the one requesting data is the **Subscriber**.

2. National Authentication Framework and Certification Authority

The National Authentication Framework (NAF) for Mauritius, also known as '**MAUPASS**' provides a **single window for authentication of user** as well as **convenient and secured access to e-Government services**. NAF is a comprehensive framework launched to deliver e-services to the intended user in a secured manner.

Key channels where user authentication is required are the MauStats Portal and Mobile MauStats. **Digital Signature** Certificate will be used by following users in SM to digitally sign documents in MauStats.

Users	Transactions
Director	Approval of specific publications/releases.
Senior Statisticians	Approvals on all releases including data sets, reports, indicators for dissemination on the Website or MauStats portal.

D. Other integration touchpoints

Other integration touchpoints with MauStats have been earmarked as follows. Selected solution provider will need to assessed feasibility to automatically interface these tools with MauStats Data Marts.

SN	Integration touchpoints	Description
1.	Statistical Modelling , include SPSS, R Studio, EViews, Stata and ERETES among others.	Key features of these tools are: 1.Data Sampling 2.Cost Analysis 3.Basic Data Visualisation 4.Time Series Analysis 5.Statistical Analysis 6.Text Analytics 7.Predictive Analytics
2.	Online Survey Tool , include US Census Bureau CPro, WB Survey Solutions among others.	Key features of Online Survey Tools are: 1. Survey Design 2. Survey Testing 3. Survey Management 4. Synchronisation with MauStats Data Layer to push the survey responses in a centralised repository.
3.	ArcGIS	Information captured on the ArcGIS will need to be pushed to the Data warehouse allowing users to perform geographical analysis.
4.	Open Data Portals	Publication of reports and indicators on the Open Data Portal for public consumption.
5.	Government Email Services	Integration with email services.
6.	MS Office (Outlook, PowerPoint, Excel, Word) (if required)	Modifying, sharing and upload documents on the system.

d. Enhancement/Add-on on MauStats (Optional)

Add-ons to MauStats are also envisaged as follows:

- **Data exchange in SDMX format** - Statistical data must be accompanied by relevant metadata to make the data available completely useable and at present, SDMX standards have only been applied to the final steps in the statistical data production chain. Planned uses of SDMX include:
 - Collection of information from data providers.
 - Data exchanges between organisations.
 - Dissemination of information for public among others.
- **Implementation of Chatbots** – The envisaged Chatbot will be a virtual guide assisting users to

navigate around, search for information, take up queries and redirect users to specific contents when navigating the Statistics Mauritius Website.

- **Subscribers to MauStats against payment** - This will be implemented for Statistics Mauritius to provide Data as a paid Service to the users (subscribers) of the MauStats Portal.
- **eCensus Module** - This module shall base itself on citizen consent/confirmation with respect to the data available on the e-population register. Citizens shall authenticate themselves using MauPass and record their confirmation on MauStats portal.

Note: The above is non-exhaustive. Bidders propositions will be evaluated by UNDP and SM.

Appendix 1.2 elaborates on the detailed requirements for each component of MauStats.

1.2 CAPABILITIES OF THE PROPOSED MAUSTATS

A. Data Layer

Foundation Component where raw data (e.g. structured, semi-structured or unstructured) is stored and acts as the first point of entry to the pool of information maintained by Statistics Mauritius.

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
Data Lake				
1.	Data Ingestion and Delivery	The system shall include a robust and foundation layer comprising a Data Lake with all necessary services required for ingestion, filtering, enrichment and processing, workflow management as well as data stores such as distributed file system, RDMS and Open Source Databases among others.		
2.		The system must cater for data ingestion from multiple sources/systems for all data types including RDBMS, Open Source databases, Microsoft Excel, ArcGIS, third party applications such as Survey Solution, CSPro. The ingestion process shall standardize similar data types in the Data Lake to better identify erroneous information.		
3.		Data Lake must be scalable, flexible and reliable to accommodate changing nature of data, high volume and high frequency such as streaming data, sensor data, interaction among others		
4.	Data Lake Features	The Data Lake shall support data formats such as Structured, Semi Structured, Unstructured, Raw data.		
5.		Support Auto-Orchestration and Self-Service for big data jobs (e.g. ETL, Machine Learning, Adhoc)		
6.		The system must be flexible for users to configure data transfer protocols, business rules, data format and data size.		
7.		The system must support pre-data ingestion checks based on business logic and data formats. Users must have option to analyse anomalies in data and gather patterns for		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
		resolution.		
8.		The system must be user friendly for SM staffs to manage the Data Layer in the future, by connecting new data sources, formats, protocols and business rules.		
9.	Data Storage	The Data Lake must be agile with ability to quickly reconfigure for new workloads. Storage is coupled with compute – workloads must scale linearly and independently. Configurations should be changed dynamically.		
10.	Data Profiling	The Data Lake shall have data profiling functions to enable the organisation to understand the current data assets and their different conditions.		
11.	Deduplication	The Data Lake shall have the ability to compare data blocks or objects to identify and remove the duplicates present in order to improve data organisation and efficiently use the space available.		
12.	Data Catalog	The system must have a query-able interface of all assets stored in the data lake. The data catalog must be designed to provide a single source of truth about the contents of the data lake.		
13.	Access and reporting	The Data Lake shall have a user-friendly access to visualise data and reporting functionality to help the governance and compliance teams curate data for spot tests and audit requirements. Access to the Data Lake will enable the team of data scientists to access alternative parameters to enhance their analysis.		
14.	Fit for growth	The system should be scalable to accommodate new data sources in the future such as Sensors, Social Media, Cloud Analytics/ Databases among others.		
15.	Extract Transform and Load (ETL)	The Data Lake shall be coupled with ETL tools to schedule the different data movements to, from and within the Data Lake to streamline data management.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
		System must integrate/ pull data from existing statistical tools such as STATA, ERETES for National Accounts, CS PRO, Survey solution among others.		
16.	ACID (Atomicity, Consistency, Isolation, Durability) Transactions	The Data Lake shall have the ability to carry out ACID transactions to enable data reliability, integrity and worthiness by preventing data contamination.		
17.	Metadata Management	The Data Lake shall have the ability to carry out Metadata Management functions capturing technical metadata (e.g. data type, format, schema), operational metadata (e.g. interrelationship, data origin, lineage) and business metadata (e.g. business objects and description) Metadata Management shall take comply with the best practises to abide to the SDMX requirements. This is applicable across the data later, that is Data Lake, Data Warehouse and Data Marts.		
18.	Compatibility	The supplier shall make sure that the Data Lake suggested shall be fully compatible to work with the proposed Data Warehouse and Data Marts.		
Data Warehouse				
19.	General	The system must have an Autonomous and Centralised Data Warehouse with limited manual administration. The Data Warehouse shall follow an Update-Driven Approach to integrate information from different sources and data types.		
20.		The Data Warehouse must seamlessly connect to Analytics and BI tools. Current and Historical statistical data will be stored in the Data Warehouse.		
21.		The repository shall also store calculated/ analytics results generated by Statisticians back in the warehouse.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
22.	Data Normalisation	Bidders to abide by the normalisation approach to address requirements of Statistics Mauritius e.g. 3NF, 2NF or BCNF among others to organise data in the Data Warehouse and avoid data redundancies, insertion anomaly, update anomaly & deletion anomaly.		
23.	Data Cleaning	The Data Warehouse shall have the functionality to extract, clean, find and correct errors found in the data and rewrite the data in an optimized format before exposing visualizations to end users.		
24.	Data Transformation	The Data Warehouse shall have the functionality to convert different data types to the required formats in the data warehouse.		
25.	Data Enrichment	Data warehouse must have the option to enrich datasets based on information available in the data layer		
26.	Data Loading	The Data Warehouse shall have the functionality to sort, summarize, consolidate, check integrity and build indices and partitions as needed for the different types of information being stored in the Data Warehouse.		
27.	Data Schema	The Data Warehouse shall have the functionality to maintain relationships between the data as per the Star, Snowflake or Galaxy Schemas to best meet the organisation's requirements.		
28.	Data Refresh	The Data Warehouse shall have the ability to automatically refresh data present in the Data Warehouse/Data Lake as per the requirements of SM.		
29.	OLAP/ OLTP	Data Warehouse should enable querying methods such as OLAP, OLTP or any other (depending on the proposed solution) for data analysis.		
30.	Data indexing	The system must enable indexing and other relevant techniques to the data warehouse.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
31.	Data Administration	The Data Warehouse shall provide a view/user interface to the organisation to manually perform activities such as queries, spot checks and data integrity checks among others.		
32.	Extract Transform and Load (ETL)	The Data Warehouse shall be coupled with ETL tools to schedule the different data movements to, from and within the Data Warehouse to streamline data processing and management.		
33.	SDMX readiness	The Data Warehouse shall be scalable and flexible to accommodate SDMX data formats in future. The Data Warehouse shall be SDMX coupled with SDMX tools and toolkits to support the export of data in the SDMX-ML data format.		
Data Mart				
34.	Data Requirements and Scope	Data Marts must be configured for specific statistical purposes example Social and Economic Indicators such as National Accounts, Consumer Price Index, Trade Statistics, Construction Price Index among others. The scope of the data mart must be designed as per SM requirements.		
35.	Data Integration	Analysis, computations and outcomes recorded in the data mart must be pushed to the Data Warehouse automatically with the use of ETL tools. This activity is crucial as data produced by individual statistics units are used across several other departments/units.		
36.	Data Classifications	Bidders design the right schema to suite SM needs. Table structures shall be broken down into Facts and Dimension tables.		
37.	Data Sizing	Data Mart should be sized to match the workload and data movement of the particular departments.		
38.	Metadata Management	Data Mart shall have a Metadata component to provide a directory of technical and business views of the data mart.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
39.	Data Mart Approach	The Data Mart shall be designed to be in "Update Mode" to make sure that linked data marts are refreshed with new data sets only. This eliminates duplication of data across the data marts and improves consistency in data management and processing without disrupting the data flow.		
40.	Data Mart Management	The Organisation shall have the option to manage the different data marts by a team or data architects. Administrator access shall only be provided to a select few users who will take on the role to manage the data marts.		
41.		Data Mart management shall also include a user friendly interface for managing the data marts including adding, modifying table structures, business logics and computations mechanisms.		
42.	Fit for growth	The Data Marts shall be designed so as to meet the need of the organisation to work with Statistical/ Analytics and BI Tools such as R Studio, BI tools among others.		
Extract, Transform and Load (ETL)				
43.	ETL Tool	The ETL tool shall have the ability to process different data type and multiple data sources to easily and efficiently move information between different layers across MauStats. ELT tool must integrate with Data Lake, Data Warehouse, Data Marts as required.		
44.		ETL tool must also support connections to Databases, Microsoft Office, Application Systems, Web services, Internal and External APIs, Big Data, Messaging/Protocols and Analytics and BI Tool		
45.	Tool Usability	ETL tool shall have a plug and play ability for ease of deployment in the proposed environment. It should be workflow driven and allowing users to define multi-step data pipelines. A user can define dependencies, programmatically construct complex workflows, and monitor scheduled jobs in an expressive UI.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
46.		The system must include a list of library functions/components/tasks and connectors which SM users can leverage in future.		
47.	Data Handling	The ETL tool shall have the ability to handle structured and unstructured data simultaneously. Data must be synchronised across all layers/components in MauStats.		
48.	Data Transformation	The tool must perform data transformations, such as data conversion, lookup, expression, joining records, splitting data, filtering, ranking, sorting, grouping, looping, and combining data.		
49.	Performance	ETL tool to support bulk loading, caching, partitioning, high availability, etc to enhance performance. Bidders to provide clear performance throughput after data discovery stage.		
50.		In the event of a traffic spike, the ETL tool must scale out to support a higher degree of parallelism resulting in higher ingestion throughput.		
51.		The tool must perform content (topic) and date-based partitioning for query efficiency.		
52.	Data Profiling	The ETL shall have the ability to perform data profiling checks on multiple data sources. This process is used to audit and understand what is being captured in the system.		
53.	Data Quality/ Cleansing	The ETL Tool shall support data quality and cleansing features to enable spot checks as well as data scrubbing tasks in the data repositories, wherever applicable.		
54.	Metadata Management	The ETL Tool shall support metadata capturing and updating the metastore (which contains the metadata and schema settings). System must facilitate metadata sharing across MauStats layers.		
55.	Version Control Facility	The ETL Tool should support version controlling mechanism through which the organisation can maintain different versions of the source code, without overwriting the original code.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
56.		The ETL tool shall prevent multiple developers from working on the same extract so that at a time only one can make changes in the ETL workflow.		
57.	Data Manipulation	The ETL Tool shall have the capability of managing data inside and outside of a target data repository to allow the manipulation of existing records in the target database before inserting new record instances.		
58.	Data Logs	The ETL Tool shall provide log reports to SM users on who, how and when it was executed i.e. details include the duration, time start/end, who triggered it, was it successful or failed, what was the error message, etc.		
59.	Scheduler	ETL tool must be configured to run at scheduled times, re-run when failed, and limit the execution duration.		

B. Application Layer

This layer consists of a set of application systems and business logic tools that are fully integrated with data repository to allow Statistics Mauritius perform its day to day activities. These applications will be used by Statistics Mauritius employees.

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
Analytics and BI				
1.	User Experience	The system shall cater for a data catalogue for users to browse and access datasets based on access rights and role.		
2.		The system shall allow for user profiling and personalization based on user's past activities. Smart view option is recommended.		
3.		The system shall allow users to search content across a variety of criteria (e.g. sector, indicator, location) from search bar.		
4.		The system shall allow for query-based suggested/related/recommended text and understanding of synonyms. Multiple options based on the query can be presented to the user if there is no single query interpretation.		
5.		The system shall allow the user to query data directly using Natural Language.		
6.		The system shall provide approximate string matching while the user types in the query keywords.		
7.		The system shall provide customizable dashboards, charts, data visualisation tools.		
8.		The system shall allow for collaboration between users, e.g. share results and reports across the organisation.		
9.		The system shall cater for downloadable/shareable datasets at a customizable resolution, range, time interval, etc. in standard formats e.g., xml, json, csv, etc.		
10.		The system shall allow for export of visualizations in formats as customized by		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
		the user e.g. .jpeg, .png, .pdf, etc.		
11.		The system shall allow the user to group, split, join, union, merge and save data into a database.		
12.		The system shall be able to track changes to data through data audit trail and with the facility to export the logs in a user friendly format e.g. Excel.		
13.		The system shall allow users to be able to run queries without advanced skills like SQL and can build and manipulate their own dashboards and reports.		
14.		The system must support both web and mobile analytics. MauStats Mobile will leverage on these functionalities to provide instant access to information via smart phones.		
15.	Data Analytics	The system shall provide Inbuilt analytics (e.g. correlations, multivariable plotting) with drag and drop customization functionality/the ability to choose suitable graphs intelligently.		
16.		The system shall provide predictive analytics capabilities - e.g. embedded machine learning to generate forecasts based on historical datasets and trends.		
17.		The system must allow users to sort and filter data sets as per requirements.		
18.	Data Visualisation	The system shall provide inbuilt visualization of data from datasets (e.g. bar chart, pie chart, bubble chart, donut chart, area chart, cartogram, infographics, 3D visualizations, radar chart, geo-mapping) with customizable data ranges and properties.		
19.		The system shall allow for animated visualizations on variable factors, including dynamic visualization with drill-down and drill-up features at all applicable granularity.		
20.		The system supports interactive maps and perform spatial analysis on available data sets.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
21.	Reports	The system shall be able to generate reports in the desired format, with users having the possibility to add their own content.		
22.		The system shall allow for report drilling (e.g. navigate to a different layer of data by clicking a data element).		
23.		The system shall be able to publish reports and presentations automatically generated by visualisations. Data storytelling is a plus.		
24.		The system shall be able to publish content to third party applications e.g. within web pages of the MauStats portal and website through embedded APIs. Website contents should dynamically update once generate and approved on the Analytics tool. Refer to Appendix 1.3 for detailed process flow.		
25.		The system shall be able to generate customizable reports by cross-linking datasets across DataMart or data warehouse.		
26.		The system must allow Management Reporting, that is allow SM management to benchmark performance against set performance metrics. SM to have management dashboards to assess operations efficiency against targets, example of such indicators include turnaround time for implementing a change request or addressing a user query among others. Approx. 25 KPIs will be provided at the requirement analysis phase.		
27.		The system must allow users to define schedulers to run specific reports.		
28.	Metadata Information	The system shall provide metadata information (source, year, etc.) for datasets.		
29.	Built-in Integration	The system shall be able to push and/or pull data from the Data Lake, Data warehouse and Data Mart(s).		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
30.		The system shall cater for connectors and integrate seamlessly with various data sources including open source databases, third party databases, webservices, external systems/portals, third party analytics such as ABI, Google Analytics, OpenStreet Maps among others among others. System must integrate/pull data from existing statistical tools such as STATA, ERETES for National Accounts, CS PRO, Survey solution among others.		
Workflow Engine				
31.	Workflow and business rule	The system must include a statistical workflow management and business rule configuration to facilitate process execution, information flow and enforce series of events such as approvals. It facilitates the design, creation and orchestration of statistical processes. Process defined in Appendix 1.3 must be driven by this workflow engine in compliance to GSBPM.		
32.		The proposed system shall cater for a workflow engine to allow for approval of contents prior to publications on the MauStats portal or website. Approval workflows must be configurable by end users.		
33.		The proposed system shall be able to link the workflow engine instantly with APIs for content publication on the MauStats portal and website.		
34.		The workflow engine should have an easy-to-use interface (e.g. wizard-based with drag and drop features or template driven) such that end-users are capable of designing their own workflows.		
35.		The workflow engine shall be able to generate notifications to end-users in the workflow.		
36.		The workflow engine shall notify end-users by email should a task assigned to them has		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
		not been completed within the allotted time frame.		
37.		The workflow engine shall allow end-users to comment on tasks, ask questions, mention their co-workers, attach files, documents and images, etc.		
Web Framework				
38.	Development	Bidders to propose a web framework to assist in the development and publication of web applications and web sites. Web services and additional resources can also be built on the web framework.		
Statistician's Workbench				
39.	User interface	Bidders to propose a workbench to allow staff to access the data layer for the management of data and metadata.		

B.1 Interfacing Requirement

S No.	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
1.	The proposed system shall integrate Application Programming Interfaces (APIs) from but not limited to the InfoHighway to push and pull data securely into the MauStats platform.		
2.	The selected bidder shall be required to develop secure APIs/web services (e.g. REST/SOAP) as per Statistics Mauritius requirements to allow for data exchange between Statistics Mauritius and external parties. The APIs/web services to be developed will be mutually agreed between Statistics Mauritius and the selected solution implementer.		
3.	The selected bidder shall be required to develop APIs/web services for direct publication of contents to the MauStats portal and website. These APIs/web services shall be accessible only within the MauStats ecosystem.		
4.	APIs with external publication agencies such as IMF, Open Data Portal, UN SDG portal among others must also be developed for seamless data exchange.		
5.	All APIs/web services being developed should be robust with appropriate exception handling and logging mechanisms in place.		
6.	All APIs/web services being developed should be supported with technical manuals.		
7.	The proposed system shall be able to generate notifications such as new releases or publications, registration, subscription renewals, reminders for submission of data and formal notices in case due dates have lapsed by interfacing with email/SMS gateways.		
8.	Provision shall be made to integrate with a payment gateway (to be specified by Statistics Mauritius) for seamless processing of payments should Statistics Mauritius opts to provide data as a paid service. [OPTIONAL]		
9.	The proposed solution shall enable interfacing with the National Authentication Framework of the Government of Mauritius as a means for users to authenticate themselves on MauStats Portal.		

S No.	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
10.	The proposed system shall enable the organisation to configure future interfaces with external tools though guides such as user-friendly procedures, user manuals among others.		

C. Presentation Layer – One Stop Data Hub

The One Stop Data Hub comprises of three (3) main components (front end application) that stakeholders will use to interact with Statistics Mauritius. This includes:

1. Statistics Mauritius Website;
2. MauStats Portal; and
3. Mobile MauStats.

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
Revamp of SM Website				
1.	User Registration	Website shall provide users with option to register on MauStats Portal for personalised features like 'Do your own analysis'.		
2.		Users shall be redirected to MauStats Portal for registration.		
3.	Search	Website search engine shall allow users to query information across a variety of criteria such as sector, indicator among others.		
4.		Website search engine shall provide multiple options based on the query and the user shall be informed if there is no single query interpretation.		
5.		Website search engine shall employ natural language understanding of search query to provide the following, but not limited to: (i) Suggested alternatives for each query subcomponent. (ii) Relevant representations of results (e.g. time series graphs, comparative graphs/tables) based on query of data user.		
6.	Information Requests	Every page of the website shall have an option for user Feedback as, for example, a floating icon on the page.		
7.		This floating icon shall be accessible while browsing various pages of the entire website.		
8.		Users shall be provided with an eRegistration Form to send information request capturing basic user details such as, email address among others.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
9.		The eRegistration form shall also allow users to select their user group category e.g. Data Providers, Data Users among others.		
10.		Upon submission, Website shall provide users with a reference and/or contact person in order to track request status.		
11.		For registered users sending queries, website shall be able to recognise the user based on email address (if captured) and suggest the latter to login MauStats portal for personalised information.		
12.		Statistics Mauritius shall be automatically notified of new request(s).		
13.		System shall assign task(s) to relevant department(s) according to request/query type.		
14.	Publications	Website shall have a dedicated section on the website to publish dynamic data visualisation, reports, digests and documents among others.		
15.		Documents and information published shall be indexed to facilitate searching on information.		
16.		Updates and notices regarding various matters such as extension given to a specific survey or announcing the start of a Census along with a URL link, wherever applicable shall also be posted on the website.		
17.	Data Visualisations	Website shall be interfaced with Analytics and BI tool(s) to retrieve and display embedded contents such as graphical charts, tables among others.		
18.		Micro contents shall be posted directly on the website, including data such as indicators, charts and/or other visualisations.		
19.		Website shall also provide interactive dashboards for data visualisation among others.		
20.	Download Output	Users shall be able to download information in different formats, such as Excel, CSV or microdata as required.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
21.	About Us	Website shall have a section dedicated to the work being done by Statistics Mauritius and a general background on the organisation, data policies and standards, among others.		
22.	Virtual Assistant (Chatbot) OPTIONAL	The website shall also have a virtual guide to assist users to navigate around, search for information, take up queries and redirect users to specific contents.		
23.	Website Administration	The Website Administration module shall allow SM to manage the website and perform content management functions, such as create, read, update and delete; and also enable the workflow-driven upload of publications on the website.		
MauStats Portal				
MauStats Portal is the front end of the proposed system for Statistics Mauritius. Registered users such as data providers will access this portal to submit data either using e-Forms or upload of data file as per predefined template. Data users can perform self-service data analysis.				
24.	Registration	MauStats Portal shall allow individuals and institutions to self-register using an eRegistration Form.		
		Key user information that will be captured includes, but not limited to: Individuals: NID, First Name, Last Name, Contact details, Username, Password. Institutions: Entity name, Business Registration Number or equivalent. Registration Type: Data Users, Data Providers, Both Category: Individual, Research Community among others. Subscription Type: Basic, Premium, Diamond, Platinum		
25.		MauStats Portal shall provide subscription option to receiving announcement and notifications, when e.g. new datasets have been published among others. SM may opt for paid subscription in the future.		
26.		MauStats Portal shall validate unique identifiers, i.e. NID for individuals and BRN or equivalent for entities/institutions.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
27.		MauStats portal shall support single sign on features - integration with NAF.		
28.		For every first login or login after more than specific period (e.g. 90 days); MauStats Portal shall generate/send an email with One Time Password (OTP) for authentication.		
29.		MauStats Portal shall allow Statistics Mauritius to process membership for subscriptions.		
30.		MauStats Portal shall provide success / error message to data users/providers.		
31.		Registration request will be reviewed and approved by SM staffs.		
32.		Once approved, user is notified of his access on MauStats Portal.		
33.	Administration Module	MauStats Portal shall allow data users and data providers to reset/recover passwords or username.		
34.		MauStats Portal shall allow users to self-update profile information such as basic contact details, subscription option, user category etc.		
35.		MauStats Portal shall cater for One Time Password (OTP) functionality to authenticate users for every change in profile information.		
36.		SM shall be notified in case of any change from Data providers or others as defined during requirements gathering.		
37.	Data Collection	MauStats Portal shall provide data providers with eForms to submit information to Statistics Mauritius.		
38.		eForms must be configurable by SM as this information is dynamic. SM must be able to deploy new eforms/ update existing ones with new questions/requirements.		
39.		MauStats Portal shall provide data providers with predefined templates/formats and download feature.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
40.		Templates must be editable by SM users and uploaded on MauStats portal where data providers can download, fill and upload.		
41.		MauStats Portal shall provide Data providers with option to upload data in predefined formats onto the portal, including supporting documents if required.		
42.		MauStats Portal shall be able to scan all files uploaded on the Portal for malware or other viruses.		
43.		MauStats Portal shall be able to notify data providers upon successful submission of information and/or action required.		
44.		MauStats Portal shall also provide automated notifications to data providers when the due date is reached, among others.		
45.		Submitted data shall be integrated in the Data Lake, ready for processing.		
46.	Data Visualisation and analytics	MauStats Portal shall provide data catalogue for data users and data providers to browse and access all available datasets. Data catalogue can be by sector, or year among others. SM decides which data sets to be published on MauStats Portal. This is an ongoing activity, system must be user friendly and flexible to allow SM users to execute this task.		
47.		MauStats Portal shall cater for a connector/plugin with BI functionality to allow users to perform their own analysis, e.g. create personalised graph based on predefined criteria, or cross link data sets among others.		
48.		MauStats Portal shall provide inbuilt analytics allowing users to, e.g. perform correlations with available data sets, What If scenarios by selecting user defined business rules, variables and formulas and predictive analysis.		

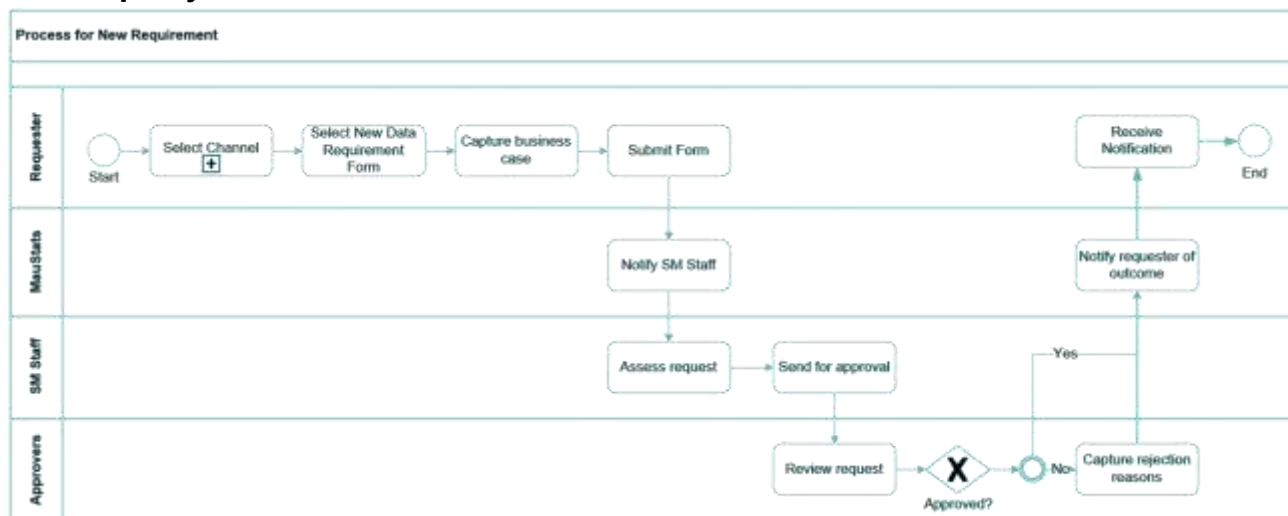
S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
49.		MauStats Portal shall provide users option to receive alerts/notifications when new data sets are published and/or reports/graphs are updated.		
		Link to access detailed visualisation on MauStats Portal shall be made available.		
50.		All visualisations shall be exportable in formats as customised by user (e.g., .jpeg, .png, .pdf, ppt, etc.).		
51.		The Portal shall provide data in a machine-readable format using the Statistical Data and Metadata Standard (SDMX) for sharing.		
52.	Request/Queries Handling	Users can submit request for new data sets or specific statistical analysis or queries. Notification is sent to SM staffs for action and resolution via the portal.		
53.	eCensus (Optional)	In the event eCensus is adopted by SM in the future, Citizens shall authenticate themselves using MauPass.		
		MauStats Portal shall then allow users to record confirmation and flag discrepancies where required in their personal data.		
54.	Payment Module (Optional)	Payment module shall generate invoice as per defined frequency.		
55.		Payment module shall be integrated with payment gateway for seamless processing of payment.		
56.		Payment module shall generate receipt upon successful payment from subscribers.		
57.		In case of non-renewal of subscription, MauStats Portal shall be disabled.		
58.	Portal Development	The portal should use responsive technology to enable rendering on mobile technology.		
Mobile MauStats				
Mobile MauStats is an extension to the MauStats portal having the same features (scaled down) to match the layout of mobile device.				
59.	General	For Data Providers and users, MauStats Mobile shall provide access to all functionalities and information accessible on website and Portal		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
60.		For SM users - MauStats Mobile shall allow SM users to conduct surveys and census.		
61.	Data Collection	MauStats Mobile shall use device features, such as the camera, GPS, among others for data capture.		
62.		Data collected on MauStats Mobile shall be synchronised with MauStats Data Lake.		
63.	Alerts and Notifications	System to push mobile, alerts and notifications on mobile devices.		
General				
64.	Channels Scalability, traceability and Performance	MauStats Channels (Website, Portal and Mobile) should be able to handle 1,000 concurrent users and should be scalable to 2,500 concurrent users.		
65.		MauStats Channels should be able to give a response to any search query involving ten or less indicators (including their analysis and visualization) in 3 seconds or less.		
66.		MauStats Channels shall be able to maintain log of activity, i.e. audit trails and transaction logs.		
67.	Form validation	MauStats channels shall provide password strength checker option.		
68.		MauStats channels shall provide anti-spam control using, for example, reCAPTCHA feature.		
69.		MauStats channels shall validate authenticity of unique identifiers, through length check among others.		
70.	Request/Queries Handling	MauStats Channels shall provide the following contents, among others:		
71.		1. FAQs on how to navigate through the Portal and access Mobile MauStats.		
72.		2. Standard guidelines on e.g. How to perform your own analysis and other functionalities of the Website or Portal.		
73.		MauStats Channels shall allow data users and providers to submit request for information.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
74.		Note: Category of queries shall be made available to users. E.g.:		
		a) Request for Microdata		
75.		b) Complaints		
76.		c) New Statistical Requirement		
77.		MauStats Channels shall allow users to track request submitted and follow up with assigned department in SM.		
78.		MauStats Channels shall provide users with visual representation of the query status and notify users as soon as there's a change in status.		
79.		MauStats Channels shall allow users to submit online inquiry/requests and schedule appointments, among others.		
80.		MauStats portal shall automatically notify Statistics Mauritius of new requests and assigned task to relevant department accordingly.		

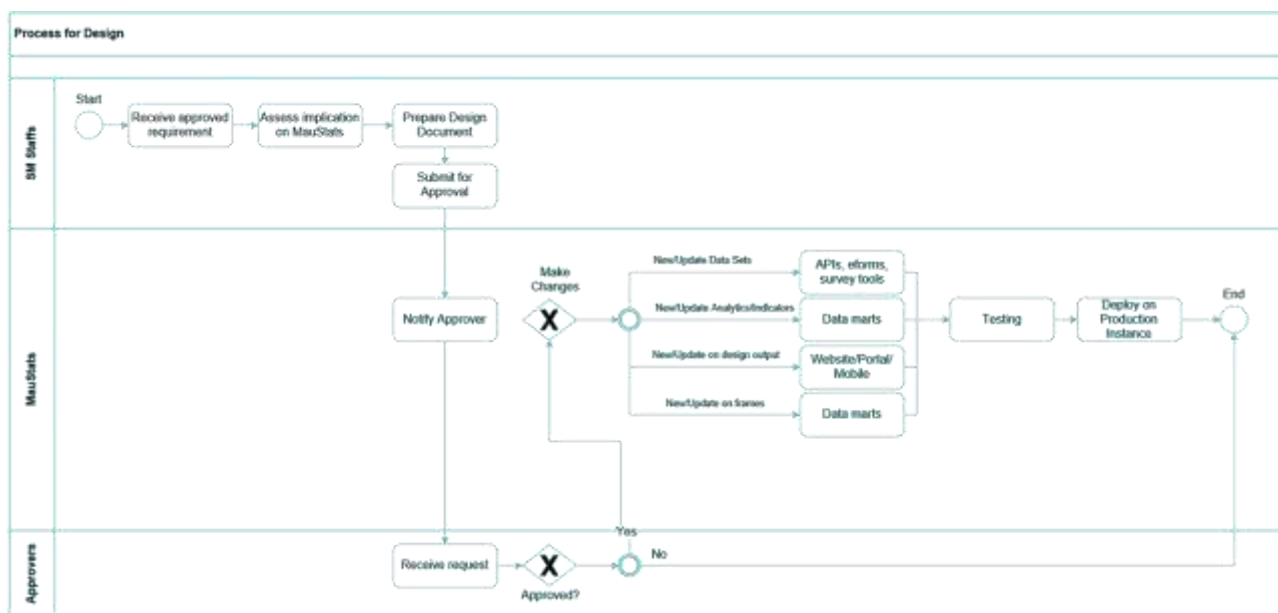
1.3 HIGH LEVEL BUSINESS REQUIREMENTS AND WORKFLOWS FOR MAUSTATS

A. Specify Needs



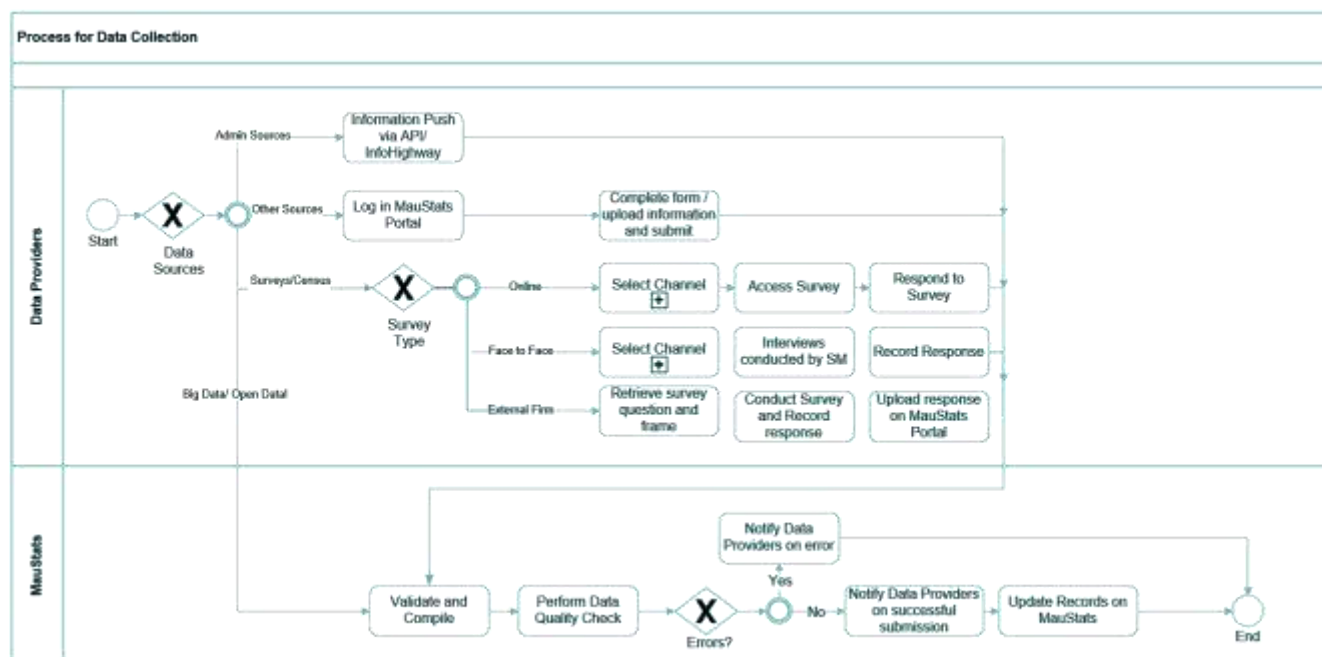
S. No	Process Description
1.	Requester logs in MauStats Portal and selects new requirement form.
2.	Requester fills in new requirement (business case) including information needed, when it is needed and for what purpose, output required and attach supporting document (if any). Once filled, requester submits the form.
3.	MauStats sends a notification to Statistics Mauritius staff via email.
4.	Statistics Mauritius Staffs access MauStats and assess the business case in terms of: <ul style="list-style-type: none"> • Data availability; • Restriction on data usage; • Feasibility for new data capture in MauStats; and • Existing agreements with data providers.
5.	Statistics Mauritius staffs capture recommendation and submit form for approval.
6.	Head of Department (HoD) receives notification for approval/ rejection of the business case.
7.	Requester is notified on the outcome via email.
8.	Note: Above process is applicable for both internal and external request. Internal requests may include new frames for census/surveys.

B.Design and build



S. No	Process Description
1.	Statistics Mauritius Staff receive approved request – from previous process, that is Specify needs.
2.	Statistics Mauritius Staffs assess implications on: <ul style="list-style-type: none"> ● Process – whether requirement change business logic and identify which workflows/notifications are impacted; ● Technology – Any changes on the data, application or presentation layer in MauStats. ● Regulations/ Policies/ Agreement with external Stakeholders.
3.	For technology related changes, once assessment is complete, a design document is prepared and submitted for approval.
4.	Once approved, Statistics Mauritius staffs proceed with making the changes on MauStats as follows: <ul style="list-style-type: none"> ● For new/update on data sets – Changes are made at APIs levels, new APIs must be established or modify existing APIs for data exchange. This also include changes on survey questionnaire or e-Forms. ● For new/update analytics/indicators, variables or business logic – Changes are made on data marts or views as required. ● New/update on design outputs or report layout – Changes are done on the front-end applications such as website, MauStats Portal or Mobile MauStats. ● New/update of frames, sampling for surveys and census layout – Changes are done on data marts or views and required. Development is done on the test environment.
5.	Once development is complete, business users/ external stakeholders are requested to test the changes as detailed in the design document.
6.	If successful, objects/components are deployed on the production environment.
7.	This completes the design process in MauStats for incorporating new requirement from internal users and external stakeholders.

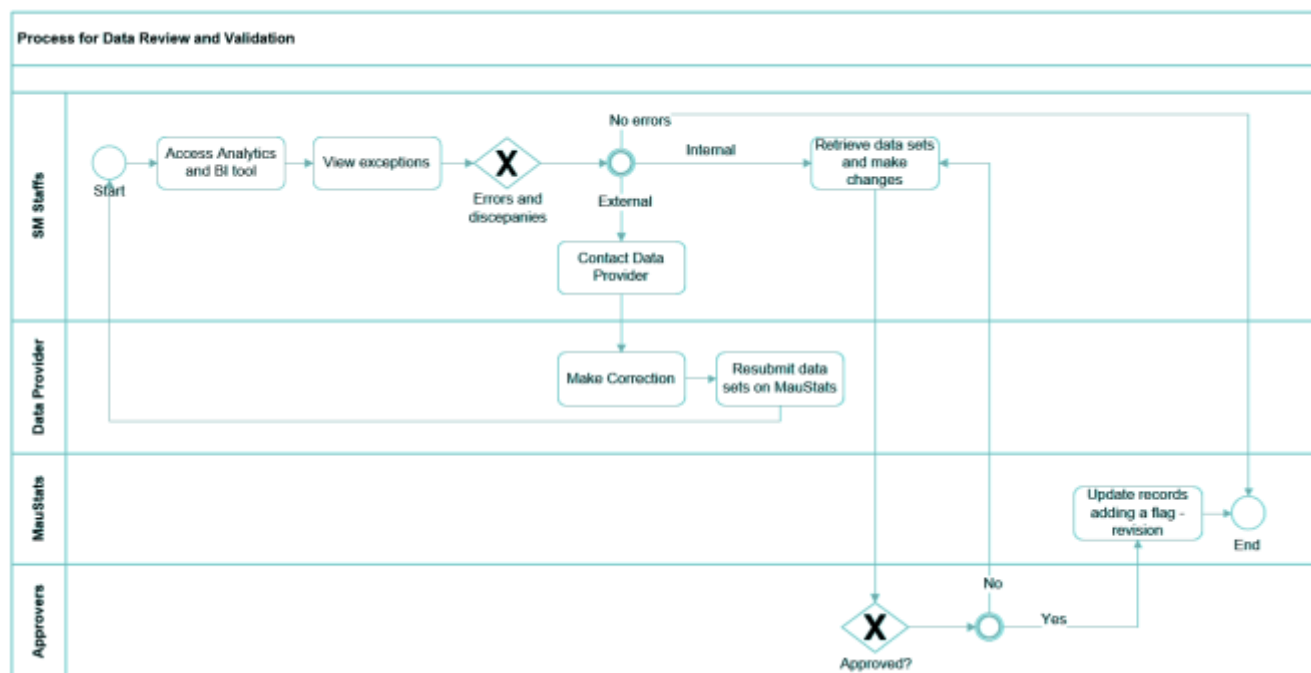
C. Data Collection



S. No	Process Description
1.	Administrative sources: <ul style="list-style-type: none"> MauStats will be integrated with Data Providers systems either directly using API or via InfoHighway. On a predefined schedule, information is pushed to MauStats. No manual intervention required, except on clarifications/outliers. Authorised Person (AP) from Data Providers manually triggers API to push new data sets to MauStats.
2.	Other Sources: MauStats Portal is the front end application for stakeholders to share data with Statistics Mauritius. There are two options <ol style="list-style-type: none"> Submit data by filling e-Forms which is readily accessible on MauStats. Download relevant template from MauStats portal and upload file after filling in the template. This channel is used mostly by establishments or any other stakeholders who do not have direct APIs or connected to InfoHighway. MauStats automatically validates data during the upload or while submission of e-Forms. Errors are flagged on a real time basis to the data provider.
3.	Surveys and Census: Case 1: Online Survey/Census <ul style="list-style-type: none"> Survey/Census respondent are notified by email (survey link and closing date). Respondents fills in survey/census and submits the form. Data validation is done on a real time basis. Case 2: Face to Face interviews <ul style="list-style-type: none"> Statistics Mauritius staffs access survey/census link via tablet or mobile devices. Statistics Mauritius staffs record and submit survey response. Information captured is synchronised with MauStats for further analysis and reporting. Case 3: Outsourced to External Survey Firm (e.g. CATI)

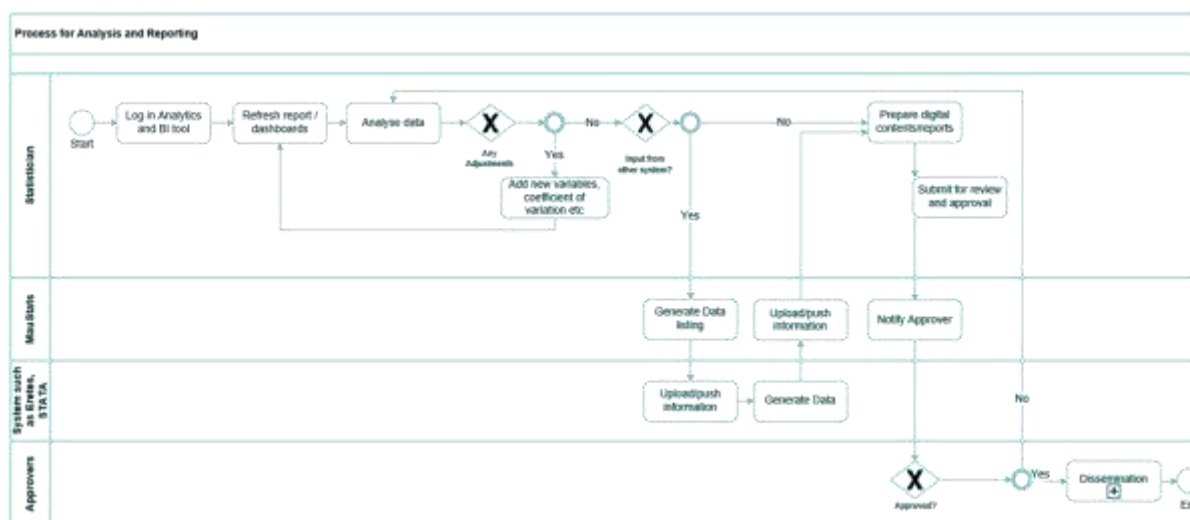
S. No	Process Description
	<ul style="list-style-type: none"> Statistics Mauritius shares questionnaire and frame to external survey firm via MauStats portal. Survey Firm receives an email notification and access survey questions and frame. Survey Firm conducts survey and submits results as per predefined template on MauStats portal. Same process as step 2 above.
4.	In all cases, data collected is validated in MauStats for data quality check in terms of completeness based on embedded business rules.
5.	In case of errors , data provider is informed on a real time basis and data cannot be submitted until correction are made. Data providers must make necessary changes and restart the process.
6.	Once data is validated, it is saved in MauStats, ready to be consumed, analysed and disseminated.
7.	<p>Note:</p> <ul style="list-style-type: none"> In specific cases, e-Forms and surveys must include past information to pre-populate responses on questionnaire. This will save data capture time where Statistics Mauritius can confirm responses or overwrite previous response. Another example is for Consumer Price Index Survey (CPI), results from last survey can be displayed to allow Statistics Mauritius staff determine prices change and variance. Prior to conducting surveys, questionnaire and frames must be checked. In case new data set is required, or there is a change in survey/census, a design request must be submitted internally to address those changes. Refer to Specify Needs and Design process. Progress of data acquisition will be accessible in real time on dashboard or reports.

D. Data Processing



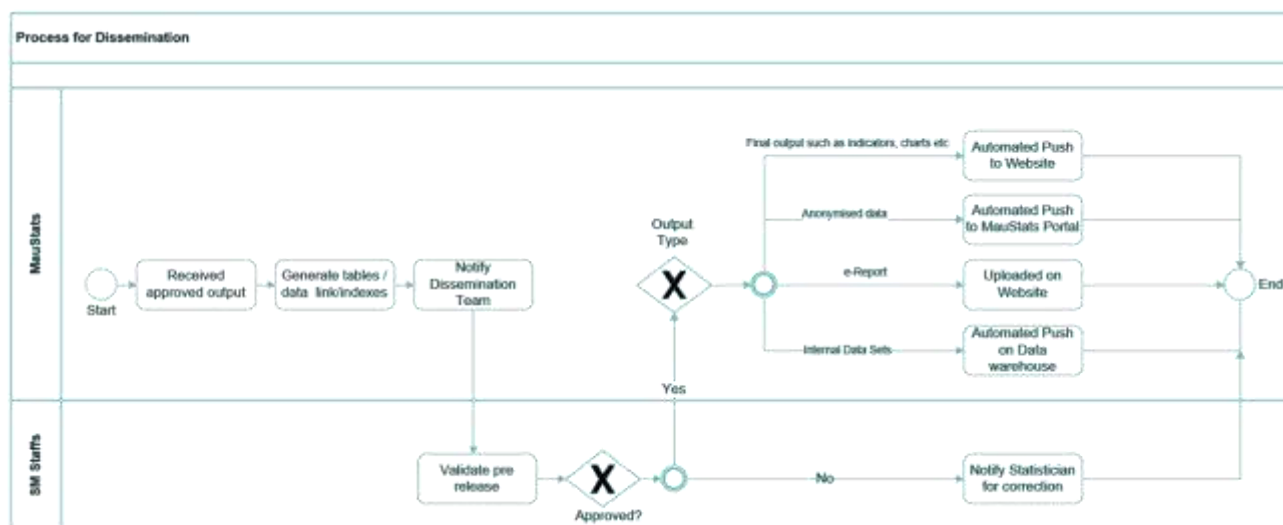
S. No	Process Description
1.	Statistics Mauritius staff access Analytics and BI tool and view exception report/dashboard.
2.	In case of errors, Statistics Mauritius staff assess error/discrepancies whether it pertains to an external or internal error.
3.	External error such as outliers: Statistics Mauritius staffs contact data provider and request for clarification. In some cases, data providers need to resubmit data sets.
4.	Internal discrepancies: Statistics Mauritius staffs update erroneous data sets. Any amendment on the data requires and approval from Statistician or HoDs.
5.	Once approved, MauStats update the records by flagging it as a revision.
6.	This completes the process for data review, validation and making amendments.
	Note: User roles and permission to be clearly defined

E. Data Analysis



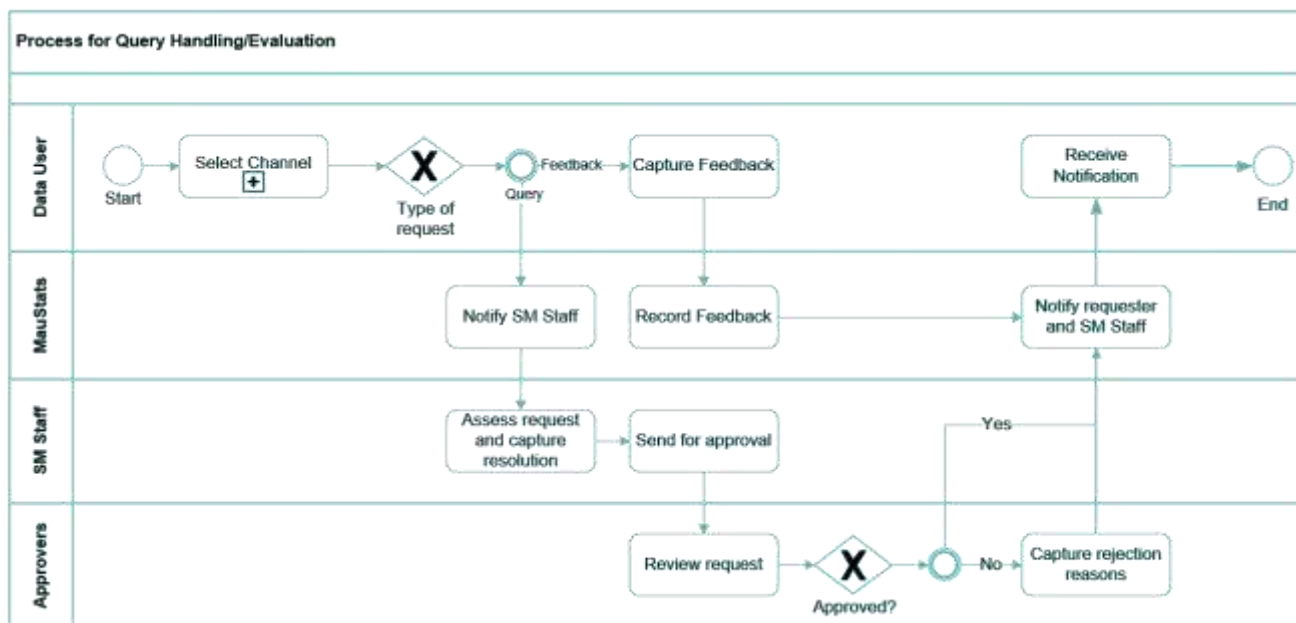
S. No	Process Description
1.	Statistician access Analytics and BI tool to view data sets.
2.	Statistician analyse data and assess whether any adjustment is required for example on trend, benchmarks, cycle, irregular components, accessibility measures, etc. and recording of quality characteristics such as coefficients of variation.
3.	In case adjustments or estimations is required, Statistician make changes on Analytics and BI tool to reflect correct and accurate information.
4.	In case information from other system such as STATA or Eretes is needed, Statistician uploads information and generate data output e.g. Supply and Use tables and re-upload same in MauStats.
5.	Statistician interpret data and prepare output content (including commentary, technical notes, etc.) for dissemination. Contents can be in the form of report or digital contents that is published on the website. Output typically includes indicators (price index, value added, etc), charts, maps, tables, and corresponding explanatory texts and quality statements among others.
6.	Once output are finalised, Statistician sends output for approval on MauStats.
7.	In case of changes, output file is sent back to the Statistician to make changes and resubmit contents.
8.	Once approved, content is ready for dissemination. Refer to section 6.4.5 for Dissemination process.
9.	Note: <ul style="list-style-type: none"> Multiple approval levels can be defined in the system. Director SM can digitally sign specific content and share with other parties such as Ministry of Finance and Economic Development. System will automatically send an email to concerned parties. Interfacing of systems such as Eretes and MauStats will be assessed at implementation stage.

F. Dissemination



S.No	Dissemination contents	Channel
1.	Information sets such as indicators, charts, graphs , interpretations, assumptions and microdata sets, metadata among others.	Website – Interactive Dashboards
2.	Anonymised data sets for users to do their own analysis.	MauStats Portal, Mobile MauStats
3.	e-Report such as Economic and Social indicators (ESI), Digest, Bulletin.	Website – Pdf format
4.	Internal dissemination – Data analysed and components created such as indicators among others, are stored in MauStats Data Warehouse and is accessible to other units.	MauStats – Data Warehouse

G. Query handling and Evaluation



S. No	Process Description
1.	Data users submit queries or feedback on any channels. Based on query categories, MauStats channels request to the respective division for resolution.
2.	Upon receipt of the query, Statistics Mauritius staffs analyse query and respond accordingly. Response is approved by HoD.
3.	If no action taken by Statistics Mauritius staffs within defined timeframe, request is escalated to HoD for action.
4.	For Feedbacks, Data users can submit feedback on any channels. Feedbacks are recorded on MauStats and concerned unit are notified for action. Example user satisfaction, data quality, among others.
5.	This completes the query handling and evaluation process.

APPENDIX 2: GENERAL REQUIREMENTS FOR MAUSTATS

The table below illustrates the general requirement for MauStats.

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
1.	General	Bidders to propose a Modern Statistics Platform to automate end to end data lifecycle on MauStats, from data collection, processing, analysis and dissemination on MauStats Portal.		
		The system must be built to maintain a single repository of national statistics data in Mauritius.		
2.	Availability	MauStats being a web based platform should have a high availability for continuity of services, platforms, products and end user experience. Users must be able to interact with the system at any time.		
3.	Transparency	Data owned by SM should be transparent across business units (basis on access rights) and to other stakeholders. Published data sets will be available on the portal in formats such as metadata, microdata, excel and pdf. Also, the integrated data layer will act as a single source of truth.		
4.	Interoperability	Interoperability is the ability of different information technology systems and software applications to communicate, exchange data, and use the information that has been exchanged. It also supports reusable, loosely coupled modular and self-provision components promoting dynamic integration. It adheres to a service oriented architecture (SOA) to promote service based, loose coupling, interoperable, sharable and reusable architecture and seamless exchange of information across systems.		
5.	Scalability	The architecture should be scalable to cater for new data sources such as big data and AI, increasing transactions, new or update in data requirements, indicators or output		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
		designs with minimal coding. MauStats is a modular and tiered/layered based architectural solution, aligned to business processes, that conforms to established open standards with well-defined roles and responsibilities. MauStats must cater for future integration with external IT systems such as NAF and emerging technologies. It should be scalable to increase performance if number of user increases. Ability to increase power of hardware as well as distributing and running platform components in distributed environments,		
6.	Open Standards	Architecture design adheres to open standards based technology, products, tools, designs, applications, and methods. Open standards promote platform independence, vendor neutrality and ability to use across multiple implementations that will enable sustainable information exchange, interoperability, flexibility, data preservation and greater freedom from technology and vendor lock-in.		
7.	Usability	MauStats has been designed keeping the user experience at the centre, simple UX to provide a rich user experience, compliant to the local software usability such as language, accessibility, fonts etc and reusability so that major changes are made on backend and minimal on the front end UX.		
8.	Data Security	Data Security is embedded in MauStats architecture from data, business logic, presentation layer. Data is to be protected from unauthorized access, use and disclosure. Open sharing of information must be balanced with the need to restrict the availability of classified, proprietary, and sensitive information. Information security must be managed as per international standards such as ISO 27001 standard,		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
		ISO/IEC 27002 code of practice among others for effective and timely management of security risks and implement mitigation controls.		
9.	Flexibility	MauStats should be flexible to cater to any future requirements of SM. Integration with other applications systems will not be an issue due to its interoperability capabilities. SM users must be able to update/create new eforms/templates for data collection on MauStats portal.		
10.	Open connectivity	The system must support open connectivity, that is connectors to various data sources, but not limited to Microsoft Excel, RDBMS such as Oracle, Microsoft SQL, MySQL, Postgre among other data sources.		
11.	Batch/Real time	System must support both batch and real time data ingestion and processing. Batch processing for processing large volumes and non-time critical data. System must also be able to stream real-time data processing for ingesting the unbounded stream of data and providing guaranteed delivery for downstream processing.		
12.	Data Handling	The System must support large amount of data from all stakeholders and support online access of the application and real-time, read only query-response ways of information exchange by the SM in order to extract relevant data sets. The system must be able to handle large volume of data requests with high response time and zero failure rate.		
13.	Data Handling	Bidders to propose data compression techniques to optimise on storage and gain in performance.		
		Bidders to propose their approach for data partitioning to reduce the amount of data that is scanned/loaded within queries.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
		It is recommended that all services, scheduler, batch jobs operate in a serverless environment.		
14.	Development Standards	The system must be designed and built to comply with common DevSecOps, DataOps best practices such as infrastructure as code, observability, audit and security. These play a critical role in the solution and should be applied on every single layer in order to enable the necessary level of compliance, security and operational excellence.		
15.	Ux Interface	The system must provide a user friendly interface to manage stewardship of data along with access control and management of data usage.		
16.	Data Governance	The system shall abide to a set of governance policies and rules to define how information should be structured, stored, transformed, moved, etc.		
		The system shall need to have a Data Governance and Management functionality to efficiently track and monitor the Data Lake so that incoming data is well understood, stored and governing policies are automatically applied.		
17.	Data Quality	Ability to analyse the anomalies in the data and gather patterns that show the deficiencies in the system, should be generated.		
		Codify and give unique IDs to all the datasets that will be maintained across all transactions.		
		Implementation of the data quality rules and transformation of data with the granularity as needed by SM.		
18.	Metadata	Bidders to specify the international metadata standard such XML metadata standards, GSBPM, SDMX and GSIM.		

S No.	Functionality	Requirement Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
		The system shall be configured as the international metadata standards across all layers that is Data, Application and Presentation Layers. Effective metadata management makes sure that the movement of data is logged systematically and makes it easier for the database administrator to analyse exceptions or errors. It creates the opportunity for SM to leverage the SDMX protocol which pertains to a common language for data metadata exchange.		
19.	Management information system/ Reporting/ Exception handling	<p>Bidders to develop approx. 25 management and exception reporting/dashboards using proposed Analytics and BI tool. SM will be able to report on its key performance indicators and also identify exceptions such as outliers on data sets automatically. Examples are, but not limited to:</p> <ul style="list-style-type: none"> a) Upload statistics of each company b) Error rate and error types c) Quality of data, fill rates and outliers d) Time to process e) TAT and MIS reports <p>Detailed KPIs will be shared at the time of implementation.</p>		

Bidders need to also complete the table below in the event an Open Source solution is proposed.

S.No.	General Requirements	Requirements Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
1	Access to software source code	SM shall have full rights to the software source code, including customisations.		
2	Reusing customised software source Code	SM shall have the right to reuse the customisation code of the Modern Statistics Platform for any other Public Institutions if required.		

S.No.	General Requirements	Requirements Description	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
		SM shall have full rights on the add on modules, plug-ins or customisation code.		
3	Source Code Development	Collaborative Application Development Platforms shall be used to provide the SM with an effective and reliable platform for open source development.		
		The Collaborative Application Development Platform shall have proper control mechanisms, version management and policies on verification/ validation of the codes with respect to required functionality, security, performance, design, coding practices and other necessary attributes.		
4	Sharing the Software source code.	The application source code and the object code with installation script, installation document, database schema and any other documents shall be shared in the Collaborative Application Development Platform after due quality.		
5	Compliance to Guidelines	The system shall be developed using the Open Source Software guidelines of the Government of Mauritius (GoM).		
6	Contributing to the source code.	Contributors should help others in improving the code or during its re-use, however this is not compulsory.		

APPENDIX 3: TECHNICAL SPECIFICATION SHEET FOR MAUSTATS

1. IT Security Notes

- A. Provide a secure solution that will allow protection of data against unauthorised access. The solution proposed should also maintain the encryption, confidentiality, availability and integrity of data within the system and across all of the different layers.
- B. **Independent IT Security Audit:** The Purchaser will appoint an independent auditor for the conduct of an IT Security Audit exercise prior to the solution implemented going live. The successful bidder will be required to provide all relevant information that would be required for the conduct IT Security Audit exercise. The successful bidder will be required to implement the recommendations of the IT Security Audit exercise prior to the solution going live at no additional cost
- C. Provide an IT Risk Assessment document for the solution proposed. An initial draft of the document should be submitted for review to the user representatives prior to the testing stage of the project.

The IT Risk Assessment document should include amongst others the following:

- 1. A description of the solution and its architecture, detailing any links to existing IT Systems.
- 2. System still accessible in a COVID 19 crisis type of situation where system is still fully functional and allow authorised remote access.
- 3. A structured escalation process workflow (call tree) that lists persons, roles and/or organisations to be contacted as a part of a notification/activation procedure to detect and assess damage, and to activate recovery procedures. Roles and responsibilities of all the various stakeholders involved in the call tree should be clearly defined.
- 4. Listing of all critical components of the solution implemented (e.g. server, application software, network equipment, telecommunications line, database etc. which may cause the non-availability of the solution.
- 5. List the relevant threats for each of the critical components identified above and their potential impact.
- 6. For each of the identified threats, the following should be elaborated:
 - i. The allowable outage time taking into consideration any existing agreements (e.g. Warranty and/or Maintenance Contracts).
 - ii. Recovery procedures that need to be followed if the threat identified occurs and any remedial measures.

Note: Elements 4, 5 and 6 of the IT Risk Assessment document can be presented in a table as per the model below.

#	Critical Components	Threats	Potential Impact	Recovery Procedures	
				Allowable Outage Time	Procedures
1.	Application Server [Sample listings of critical component to be customised based on type of solution to be implemented]	Cyclone	Water flooded the server room causing a server failure	[x] hours as per existing agreement	<ul style="list-style-type: none"> ▪ Supplier to troubleshoot and identify which server part(s) have been damaged ▪ Initiate actions to replace damaged part(s) ▪ Replacement server to be installed and configured ▪ Restoration of data on replacement server
		Hardware Failure	Server is down and users of the system are unable to connect to the system	[y] hours as per existing agreement	<ul style="list-style-type: none"> ▪ Supplier to bring new server ▪ Restoration exercise need to be carried out ▪ Testing of new server ▪ Bring application up for users to start working
		Power Failure			
		... [add as necessary]			
2.	...				
3.	... [add as necessary]				

D. The proposed solution shall comply to the following infrastructure security requirements.

Data and information security must be adhered across MauStats in terms of, but not limited to:

- Access Control
- Authentication (Multi-factor)
- Integrity Controls
- Application Security Controls
- Auditing
- Encryption and masking
- Backups and Recovery
- Archival
- Data Layer Security (Data Lake, Data Warehouse, ETL, Data Marts)

The Bidders shall make sure that the proposed system abides to GoC's security policies and any other systems' security policy with which it will be interfacing.

S.N.	Requirements	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
1	Operating System Hardening		
1.1	Install all the latest patches and updates for the OS.		
1.2	Install only required services and applications as per user requirements.		
1.3	Close all unnecessary network ports.		
1.4	Remove all guest and unnecessary account for login to the OS.		
1.5	Enable logs to record all logins/logout from the OS.		
2	Web Server Hardening		
2.1	Install all latest patches and updates for the specific version of Web server that will be used.		
2.2	Ensure that all the IT security settings of the Web server has been properly installed and configured.		
2.3	Remove all guest accounts and unnecessary account on the Web server.		
2.4	Enable logs to record all access to the Web server.		
2.5	Facility to archive Web server access logs.		
2.6	All default passwords should be changed upon installation and null passwords should not be used for any account.		
2.7	Disable unused services.		
2.8	Unbind or remove unnecessary protocols.		
2.9	For errors encountered, the user should be presented with an appropriate error message that does not disclose technical details like software version details.		
2.10	Web server to be hosted in DMZ.		

S.N.	Requirements	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
3	Data Repository Hardening		
3.1	Install all the latest patches for all data repositories.		
3.2	Install only required services as per user requirements.		
3.3	Remove all unnecessary accounts for login the data repositories.		
3.4	All default passwords should be changed upon installation and null passwords should not be used for any account.		
3.5	Enable logs to record all logins/logout from all data repositories.		
3.6	All access to data repositories should be secured and encrypted.		
4	User Accounts & Password Management		
4.1	The MauStats system should not allow a user to have more than one active session.		
4.2	User ID shall be of a minimum of 7 alphanumeric characters.		
4.3	User accounts that have been inactive for more than 60 days shall be disabled.		
4.4	Default user accounts (e.g. test or guest accounts) must be disabled.		
4.5	Shared user accounts shall not be issued to multiple users when it is technically feasible to provide individual account.		
4.6	Upon login, the user shall be presented with date and time of last login and logout, along with contact information if they wish to report a discrepancy with their records.		
4.7	Three successive authentication failures must result in a user's account being locked. They must not be able to login until account is unlocked and the password reset with an auto generated one-time password. An account unlocking mechanism must be devised and reviewed by the user prior to implementation.		
4.8	Password shall be of a minimum of 8 alphanumeric characters and shall not contain the user name or user ID. Password shall be able to accept the following special characters - ! @ # \$ % ?. Initial password provided to a user shall be an auto generated one-time password.		
4.9	Passwords must be encrypted prior to storage and saved in an encrypted format.		
4.10	Passwords should be configured to expire after a predefined number of days with prior notifications to the user. The predefined number of days should be a parameter available only to the system administrator. A password resetting mechanism will be reviewed by the user representatives and other stakeholders prior to implementation.		
4.11	Users shall be provided with the capability to change their		

S.N.	Requirements	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
	password on the login interface (after authentication).		
4,12	After authenticating with an initial or a one-time password, the user shall be automatically forced to change the password.		
4,13	User access to the system shall be locked after an agreed idle time and user shall be required to re-authenticate to access the system.		
4,14	All user access to the system should be encrypted via TLS.		
4,15	The TLS certificate should be provided by the bidder and should not be a self-signed certificate.		
4,16	CAPTCHA feature must be implemented for all user registration to prevent automated scripts from creating fake users.		
5	Audit Trail and Logs		
5.1	An audit trail module should be available and accessible to authorised users only.		
5.2	Auditing of all user logins to the system.		
5.3	Auditing of all unsuccessful login attempts.		
5.4	Auditing of all user action/operations within the system so as to capture and preserve all information associated with the creation, update and deletion of data within the system.		
5.5	Auditing of all changes done on a user profile and access rights.		
5.6	Authorised users should be able to search audit trail information via a user friendly search facility and by filtering fields defined by MMS. Authorised users should be able to print the resulting view.		
5.7	Audit trail data must be stored in a secured manner and must not be editable by any user.		
5.8	Archiving of audit trails data and logs to be available in the system.		
6	Error Handling		
6.1	For all errors encountered in the system, the user shall be directed to an appropriate error message/page that does not disclose sensitive information like database records information or software version details.		
6.2	An appropriate error handling scheme shall be devised.		
6.3	Appropriate logs shall be generated for all system errors that allow identification and source of the error.		
6.4	All system failures shall be handled in a secure way.		
7	Access Control		
7.1	Bidders to elaborate on user access controls across MauStats, in terms of tools, interface, management of access rights and		

S.N.	Requirements	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
	permissions.		
7.2	All access to the application shall be defined on a role based model.		
7.2	All access roles defined shall be implemented via a centralized access control matrix module.		
8	Web Application Controls		
8.1	All user inputs shall be validated at the client side level with appropriate error messages.		
8.2	All user inputs should be validated at server side level with appropriate error messages so as to prevent Web attacks (e.g buffer overflow).		
8.3	All user inputs shall be validated and processed which shall include filtering of meta characters so as to detect and block potential SQL Injection and Cross-Site Scripting (XSS) attacks.		
8.4	Implementation of measures deemed applicable from the OWASP Guide to Building Secure Web Applications & Web Services.		
8.5	Users should connect to the application using HTTPS protocol. The HTTPS communication protocol will be applied in the deployment architecture to make it more secure. The HTTPS mode should use latest encryption of TLS 2.0 or more. The encryption within HTTPS is intended to provide benefits like confidentiality, integrity and identity.		
9	Networking Equipment		
9.1	Authentication mechanism shall restrict access only to authorized personnel.		
9.2	A complex Simple Network Management Protocol (SNMP) community string for each network device shall be implemented.		
9.3	Implement a pre-set maximum invalid logon attempt.		
9.4	Availability of automatic close-down feature of communication after lapse of idle time.		
9.5	Shutdown the Telnet service or restrict telnet to only secured terminal and allow SSH. SSH shall be used to manage the Network Devices (Switch/Router).		
9.6	For L3 switch, bind all ports to respective devices and disabled unused ports.		
9.7	Features to minimise a banner on every network device.		
9.8	"Password Encryption Service" features shall be available in all the routers and other relevant network devices.		
9.9	Install all the latest patches and update for the network		

S.N.	Requirements	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
	equipment OS.		
9.10	Critical network equipment shall be able to operate in a fail over mode.		
9.11	The system shall support VLAN configurations, and authorisation of users and devices over VLAN.		
9.12	The system shall operate with a minimum bit rate of 1000ms delay between GOC and SM.		
9.13	The system must have the ability to work over both shared bandwidth and dedicated network architectures.		
9.14	The system shall support both dynamic and static IP network addressing schemes.		
10	Security Infrastructure		
10.1	Provide mechanism to prevent malware threats in the Modern Statistics Platform e.g. prior to file upload.		
10.2	Set up of VLANs where required for segregating the networks.		
10.3	Ability to support RADIUS protocol.		
10.4	Supports Unicast Reverse-Path Forwarding Verification.		
11	Data Encryption and Security		
11.1	Data held by SM is highly confidential and contains personal information such as NID, date of birth, salary information. Bidders to propose data encryption mechanism in place, setup up data classifiers, to make sure that privacy of confidential information is adequately protected in terms of unauthorised access, alteration, destruction, disclosure or dissemination of records.		
11.2	Bidders to also propose data transmission and encryption mechanism to protect data and information assets.		
11.3	The key vault or LDAP/ active directory incorporation into the overall architecture for access, and the list (types) of keys that it would contain, and features to be used to be elaborated upon.		
11.4	The database should be capable of segregating data as per ownership, with the intention of maintaining security.		
11.5	Data in the database is stored in an encrypted format, even inaccessible to the admin of the system. Use strong encryption algorithms (e.g., AES) to protect data. Implement encryption algorithms widely accepted by the cryptographic community.		
11.6	Protect against loss or destruction and arrangements have been made for disaster recovery at a location different from the existing place in a different seismic zone.		
11.7	Bidders to include data masking options in order to publish microdata on the portals.		

S.N.	Requirements	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
11.8	Supports digital signatures.		
12	Data Archiving		
12.1	Bidders to elaborate on data archiving features.		
12.2	The system shall restrict historical or archived data to only viewing. Editing of historical or archived data should be disabled		
13	IT Security Policy		
13.1	Elaboration of an IT Security Policy for the system.		
13.2	The IT Security Policy shall include procedures/guidelines in line with the policies which will be reviewed with user representatives.		
14	IT Contingency Plan		
14.1	Elaboration and testing of an IT Contingency Plan (which shall include a backup/restore strategy) for the system.		
15	Measures against Open Web Application Security Project (OWASP) Critical Web Application Security Vulnerabilities		
15.1	Implementation of measures deemed applicable from the OWASP Guide to building Secure Web Applications and Web Services.		
16	ISO 27001 & 22301 Controls		
16.1	Implementation of applicable ISO 27001 and 22301 Controls.		
16.2	Documentation demonstrating the implemented ISO 27001 and 22301 Controls.		
17	Existing IT Security Policies		
17.1	The system shall abide by an existing IT Security Policy wherever applicable.		
18	SSL Secure Socket Layer Certificate		
18.1	Users shall be issued with a Certificate to access the Web Portal.		
19	Firewall		
19.1	Ability to provide a security hardened distribution which provides critical hardware firewall operations like port blocking, IP blacklisting and antivirus protection. The firewall should be easy to understand and use.		
20	Remote Access		
20.1	Ability to provide secure solution from remote places with an access to office/data-centre resources. The solution should work on major platforms with localised control and GUI for easy use.		
21	Backup		
21.1	Appropriate backup and disaster recovery mechanism (local / remote locations) must be enabled. Similarly, creations of logfiles at the application level should be enabled at remote servers.		
22	Load Balancing		

S.N.	Requirements	(C=Comply/ PC=Partially Comply/ NC=Not Comply)	Explanatory Note/ Remarks
22.1	The system shall support load balancing and redundancy for databases for high availability. The system shall utilise RAID 10 storage technology or equivalent.		
23	System Interfacing Requirement		
23.1	The system shall use a Service Delivery Gateway (SDG) to interface with any existing or future systems either within SM or across Government of Mauritius. No external system shall directly interface with MauStats backend. The system must also be flexible to use existing Government system such as Infohighway.		
23.2	The SDG shall expose a well-defined, well documented, and flexible API that conforms to ISO/IEC standards.		
23.3	The SDG shall exchange information using non-proprietary / open standard message exchanging formats for consumption amongst different programming languages. These formats shall include: <ul style="list-style-type: none"> · Extensible Mark-up Languages (XML); · JavaScript Object Notation (JSON) Others as defined in the RFP.		

APPENDIX 4: EXISTING DATA SOURCES

Multiple data sources are currently being used within SM for preparation of indicators/publications such as ESI, Digest and historical series, among others.

Key data sources have been categorised as follows:

- Administrative Sources, such as Mauritius Revenue Authority (MRA), among others.
- Surveys and Census.

A. Administrative Sources

SN	Stakeholders	Information received	Channels	Frequency	Document type	Units
1.	Mauritius Revenue Authority (MRA)	<ul style="list-style-type: none"> • VAT registration and transaction data • Company income tax transaction data 	CD (collected by SM)	Yearly	Excel	<ul style="list-style-type: none"> • CBR • National Accounts
2.	Corporate Business Registration Department (CBRD)	<ul style="list-style-type: none"> • Business registration data 	Companies and Businesses Registration Integrated System (CBRIS)	Monthly	PDF	CBR
3.	Civil Status Division	<ul style="list-style-type: none"> • Vitals (Births, Deaths and Marriages) 	Email	Monthly	LST	Demography
4.	Judiciary Department	<ul style="list-style-type: none"> • Divorces 	Email	Yearly	Excel	Demography
5.	Ministry of Health and Wellness	<ul style="list-style-type: none"> • Codification for cause of death 	Pen drive (dispatched to SM)	Monthly	IMPS	Demography

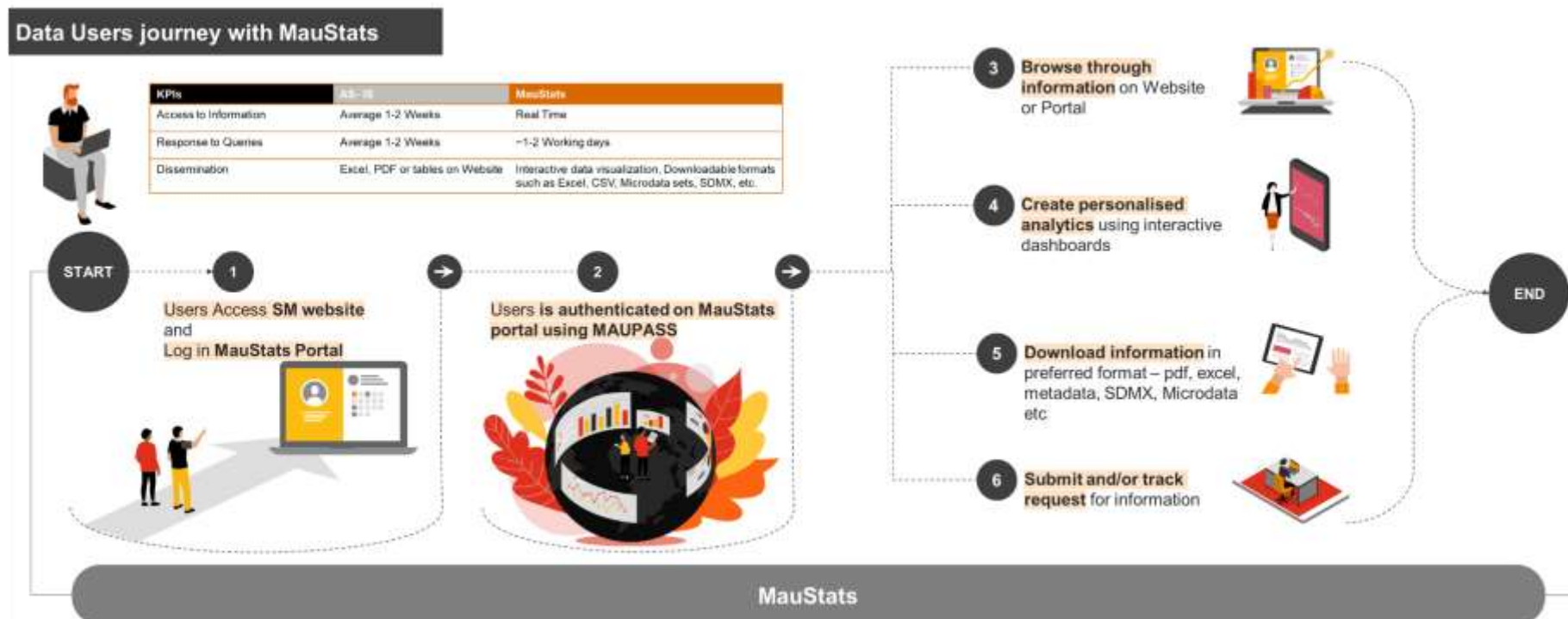
B. Surveys and Census

SN	Surveys/ Census	Frequency	Target participants	Channels	Unit using data collected
Census					
1.	Housing and Population Census	Every 10 years	Households	Tablet-based for field data collection (Computer-Assisted Personal Interviewing – CAPI)	Multiple units across SM, such as Demography, etc.
2.	Census of Economic Activity (Large Establishment)	Every 5 years	Large enterprises (More than 10 employees)	Online questionnaire	Multiple units across SM, such as National Accounts and Prices, CBR, etc.
3.	Census of Economic Activity (Small Establishment)		Small enterprises (Less than 10 employees)	Face to Face Interview using questionnaire	National Accounts
4.	Census of Agriculture	Every 10 years	Authorities such as Mauritius Sugar Syndicate, Mauritius Meat Authority, FAREI among others Household and non-household farms (databases of MAIFS, FAREI, Small Farmers Welfare Fund and Housing Census)	Face to Face Interview using questionnaire	Social and Labour Statistics – Agriculture Unit
5.	Census at School	Annual	All Schools	Excel questionnaire	This census is run by Ministry of Education
Surveys					
6.	Continuous Multi-Purpose Household Survey (CMPHS)	Monthly	Primary Sampling Unit	Computer Assisted Telephonic Interview - CATI	<ul style="list-style-type: none"> • CMPHS
7.	Survey of Employment and Earnings (SEE)	Yearly	Private and public establishments	Questionnaire sent by email	<ul style="list-style-type: none"> • SBR • Ministry of Labour • Public Finance Unit • National Account
8.	Survey of Employment,	Quarterly	Private and public establishments	Questionnaire sent by email	<ul style="list-style-type: none"> • SBR

SN	Surveys/ Census	Frequency	Target participants	Channels	Unit using data collected
	Earnings and Hours of Work (SEEHW)				<ul style="list-style-type: none"> Statistics Unit of Ministry of Industry National Accounts
9.	Prices – CPI	Monthly	Retail outlets	Price entry Book	<ul style="list-style-type: none"> Multiple units across SM, for calculation of indicators, e.g. National Accounts
10.	Prices – PPIA	Monthly / Weekly	Markets	Tablet – Survey solutions	
11.	Prices – PPIM	Monthly	Manufacturing Companies		
12.	Prices – COPI	Monthly	Retail outlets such as Quincaillerie	Price entry Book	
13.	Prices – EPI	Monthly	Selected export enterprises	Paper Questionnaire	<ul style="list-style-type: none"> Multiple units across SM, for calculation of indicators, e.g. National Accounts
14.	Prices – IPI	Monthly	Selected import enterprises	Paper Questionnaire	<ul style="list-style-type: none"> Multiple units across SM, for calculation of indicators, e.g. National Accounts
15.	Inbound Tourism	On hold due to COVID_19			
16.	Household Budget	5 Years	Households	Face to Face interview using paper questionnaire	Prices
17.	Living Condition	Adhoc	Households	CAP	Social Analysis

APPENDIX 5: USER JOURNEYS

The diagram below illustrates the key steps for data users to avail data outputs published by SM.



Note

Data Users have access to SM services/data sets via Revamped SM Website, MauStats Portal or Mobile MauStats.

The diagram below illustrates the key steps for SM staffs to perform analysis, reporting and preparation of publication for dissemination.

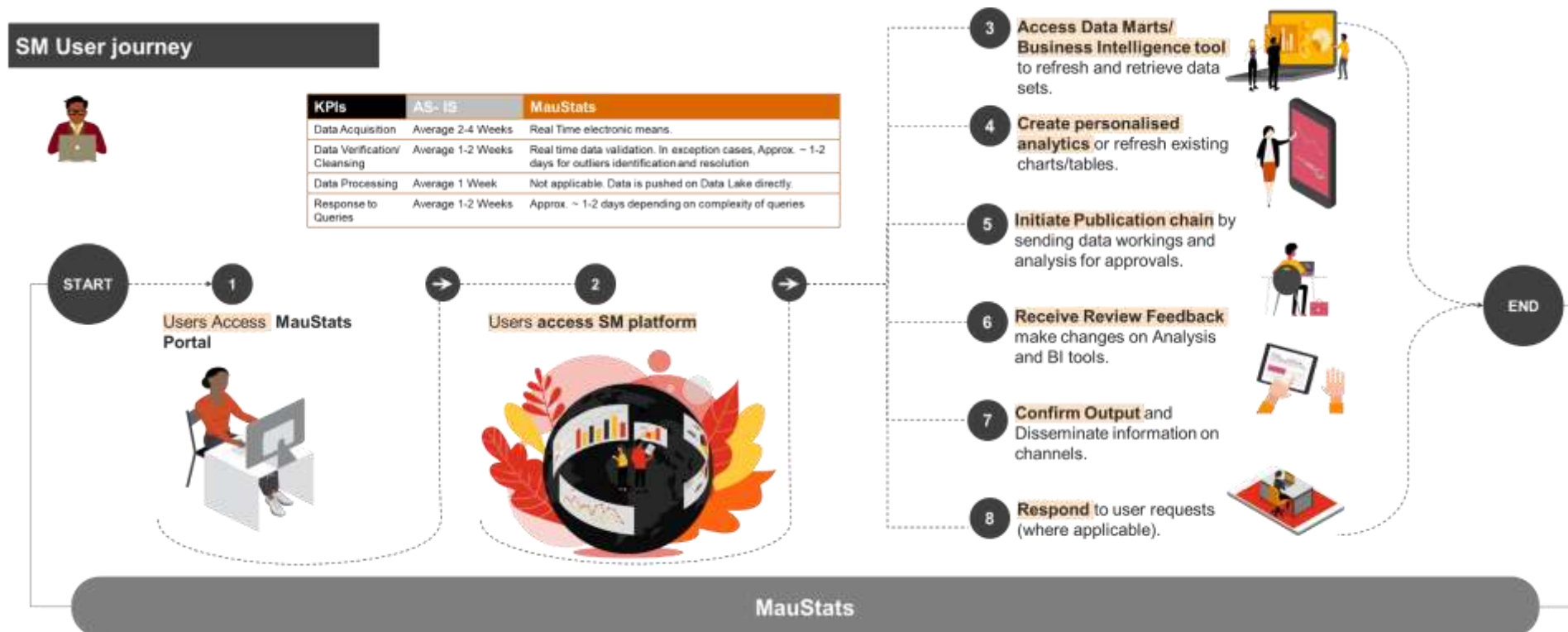


Figure 7: SM User Journey

Note

SM Staffs will have access to new tools such as MauStats Portal, Analytics and Business Intelligence Tools and existing one such as Survey Solution, CSPro, ERETES. Data from existing tools must be pushed into MauStats Data Lake for centralised data.

The diagram below illustrates the key steps for data providers to upload information on MauStats using a template agreed with SM.

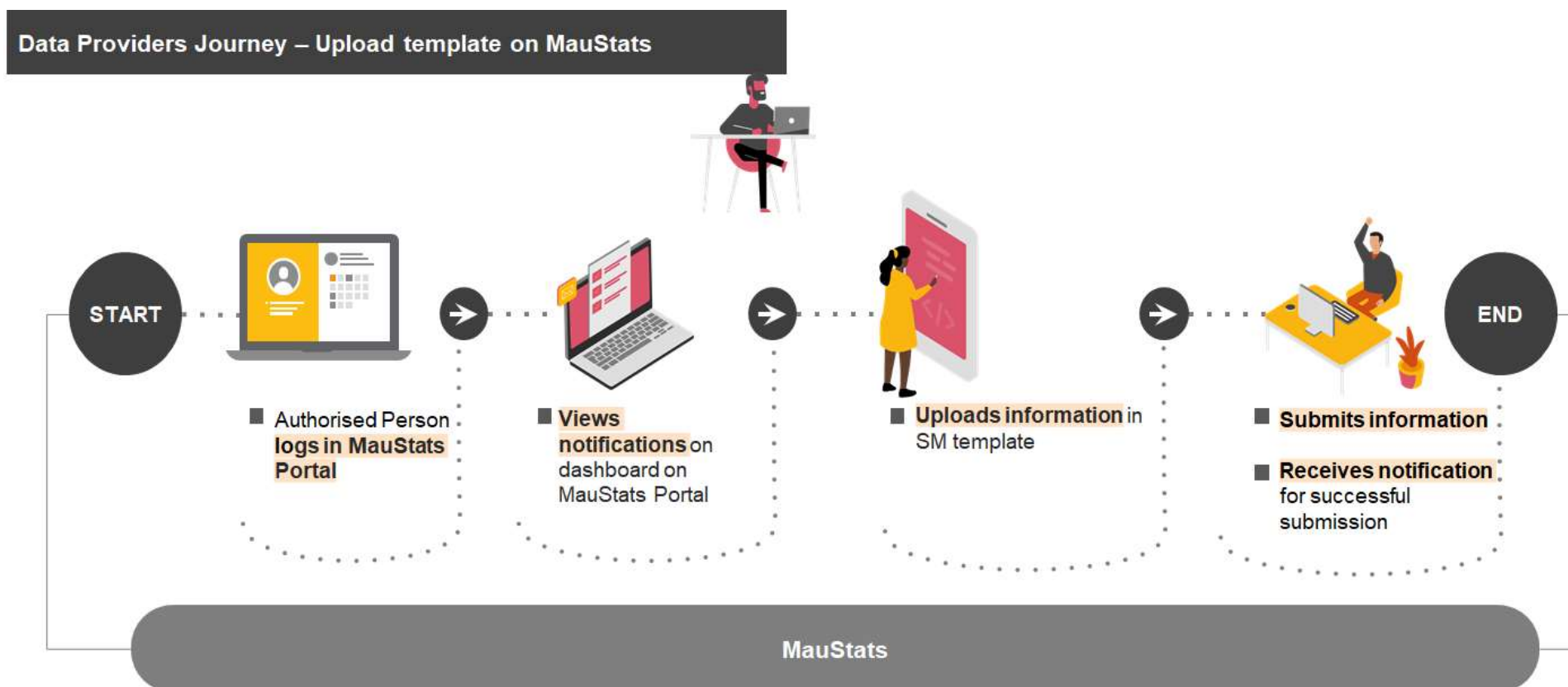


Figure 8: Data Providers Journeys (Template upload)

Note

This path is recommended for data providers who are not subscribed on InfoHighway or do not have an information system. Data Providers must identify an authorised person from their organisation who will have access to MauStats Portal and do the electronic submission.

The diagram below illustrates the key steps for data exchange with providers who do not have web services with MauStats or are not subscribed to InfoHighway to submit information to SM.

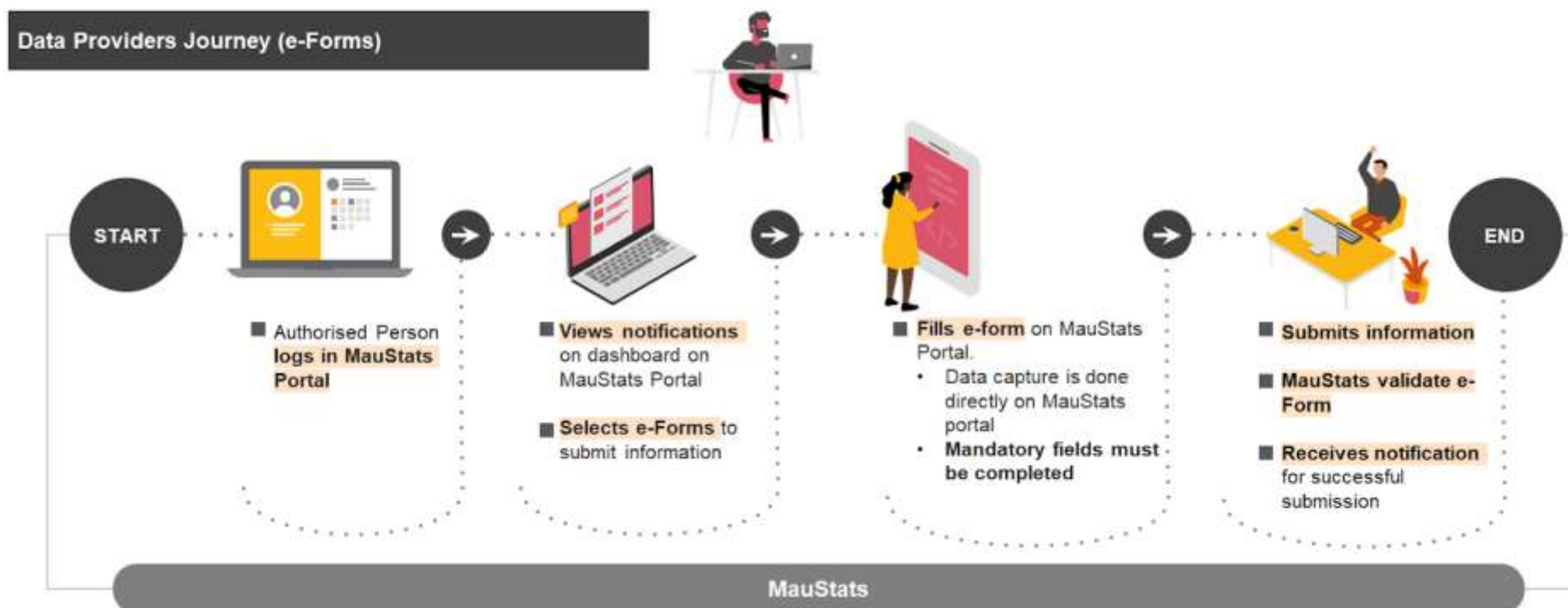


Figure 9: Data Providers Journeys (eForms)

The diagram below illustrates the key steps for data providers to submit information via survey link.

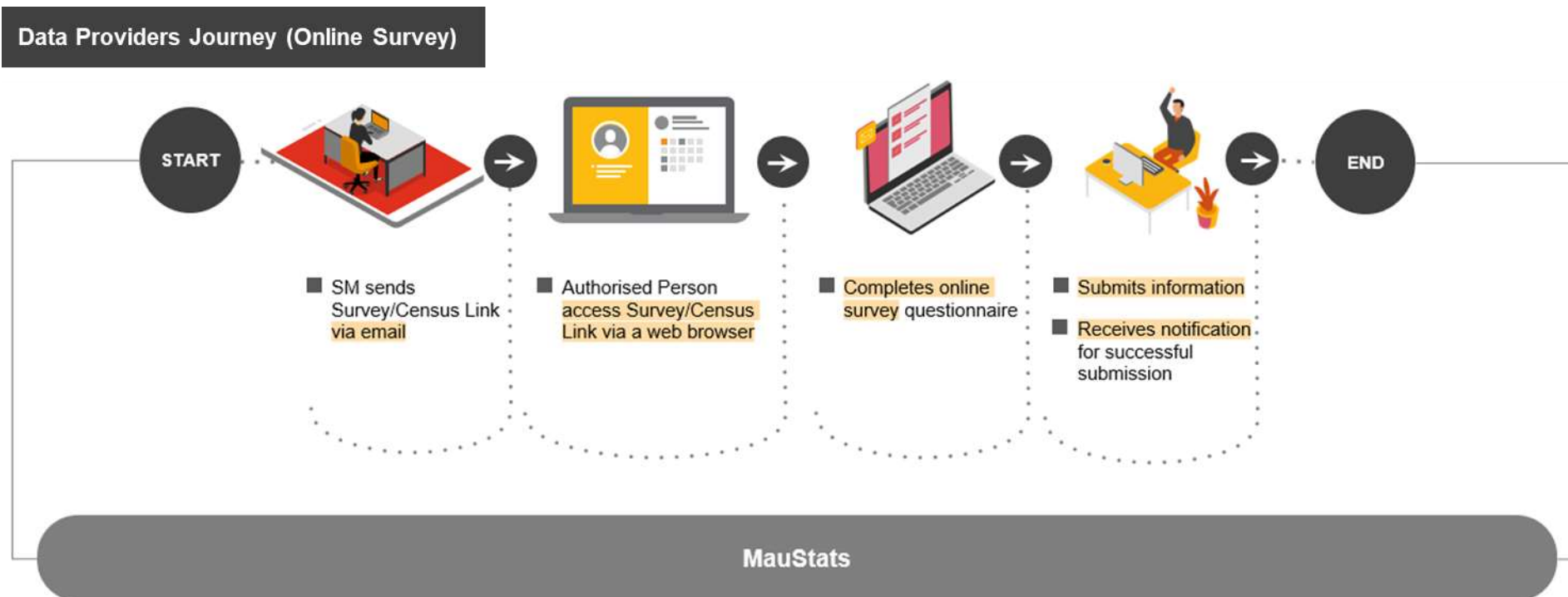


Figure 10: Date Providers Journey (Online Survey)

The diagram below illustrates the key steps for data exchange with providers or reporting agencies such as IMF.

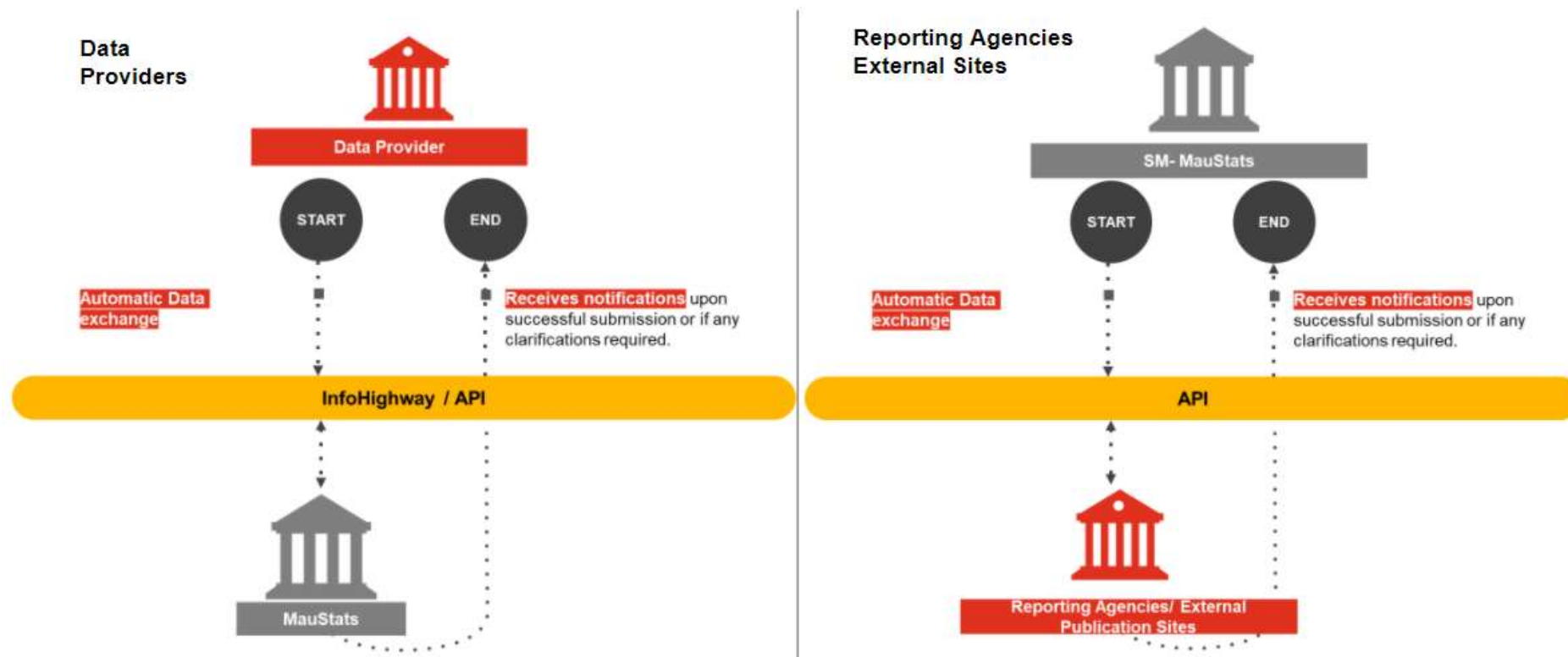


Figure 11: Data Exchange with Providers / Reporting Agencies

Notes

- This path is the recommended path to make sure that data is securely transmitted without compromise in data integrity.
- Does not require manual intervention, it is a system-to-system communication link for information exchange.
- Frequency and data sets for information exchange will be defined and agreed by both parties.

Formal Data Exchange Agreement needs to be established to formalise data exchange within secured parameter