

NATIONAL ROAD SAFETY AUTHORITY - GHANA

TERMS OF REFERENCE

DEVELOPMENT OF NRSA'S MONITORING & EVALUATION DASHBOARD

1.0 BACKGROUND

The National Road Safety Authority (NRSA) aims to strengthen its Monitoring and Evaluation (M&E) framework by developing a user-friendly digital dashboard that supports real-time data collection, analysis, and reporting. The dashboard will enhance decision-making, improve accountability, and enable stakeholders to track the performance of programs effectively.

2.0 OBJECTIVE OF THE CONSULTANCY SERVICE

The primary objective is to design, develop, and deploy a digital M&E dashboard that:

- a. Aggregates and visualizes data in real-time.
- b. Supports multi-level reporting (e.g., project, regional, and national levels; stakeholders of road safety-related action plans).
- c. Allows for integration with existing data systems and tools.
- d. Offers customizable features for different user roles and access levels.
- e. Improves the accuracy and timeliness of reporting.
- f. Enhances decision-making through accessible and actionable insights.

3.0 SCOPE OF CONSULTANCY SERVICE

The detailed scope of services shall entail but not be limited to the following:

The Consultant will perform the following tasks:

- **Needs Assessment:**
 - Conduct stakeholder consultations to gather requirements.
 - Review existing M&E frameworks, tools, and workflows.
- **Dashboard Design and Development:**
 - Propose a design prototype for approval.
 - Develop the dashboard with interactive and user-friendly features such as data entry forms, analytics, and reporting tools.
 - Ensure compatibility across devices (desktop, tablet, mobile).

- **Data Integration and Analytics:**
 - Integrate the dashboard with existing databases and systems (e.g. Transport Ghana, TrafficTech GH, etc.).
 - Implement data analytics capabilities (e.g., trends, comparisons).
 - Make provisions for future integrations with other systems and databases.
- **Testing and Feedback:**
 - Conduct usability testing with key stakeholders.
 - Address feedback and refine functionalities.
- **Capacity Building and Documentation:**
 - Train staff and stakeholders on dashboard usage as Resource Persons.
 - Provide a comprehensive user manual and technical documentation.
- **Support:**
 - Offer ongoing technical support and maintenance services post-deployment for some time to be stipulated in the contract upon negotiation.
- **Testing and Quality Assurance:**
 - Conduct thorough testing of the system to identify and fix bugs or issues.
 - Perform User Acceptance Testing (UAT) with selected stakeholders' users to ensure the dashboard meets the specified requirements.
- **Deployment:**
 - Deploy the system to the chosen hosting environment (NRSA's Head Office).

4.0 DUTIES OF THE CONSULTANT

The Consultant shall perform the services and carry out their obligation hereunder:

A. Needs Assessment and Requirements Gathering

- Conduct detailed consultations with stakeholders to understand the M&E framework and dashboard requirements.
- Assess the existing data collection, storage, and reporting systems to identify gaps and integration opportunities.
- Compile a comprehensive needs assessment report, including functional and non-functional requirements.

B. Dashboard Design and Planning

- Design a user-friendly and intuitive dashboard interface tailored to stakeholder needs.
- Develop wireframes or prototypes for approval before development.
- Plan the technical architecture, ensuring scalability, flexibility, and data security.

C. Development of the M&E Dashboard

- Code and build the dashboard using appropriate programming languages and frameworks.
- Integrate the dashboard with existing databases, APIs, and data management systems.
- Implement advanced data visualization features, including charts, graphs, and KPIs.
- Develop user roles and permissions to ensure secure access to data.

D. Data Integration and Analytics

- Ensure real-time data synchronization across various data sources.
- Build analytics capabilities to generate actionable insights, such as trends, progress tracking, and impact assessments.
- Incorporate customizable reporting templates for different audiences (e.g., managers, donors, field teams).

E. Quality Assurance and Testing

- Conduct rigorous testing of the dashboard, including functional, usability, and performance testing.
- Identify and resolve bugs or issues promptly.
- Validate data accuracy and consistency across the platform.

F. Training and Capacity Building

- As a Resource Person, train key stakeholders, including M&E teams and decision-makers on the dashboard functionalities.
- Develop and provide user manuals, tutorials, and training materials for onboarding.

G. Deployment and Technical Support

- Deploy the dashboard on the chosen platform (e.g., cloud-based or on-premises).
- Provide post-deployment technical support and address any challenges encountered.
- Ensure regular updates and maintenance of the system.

H. Documentation

- Prepare and submit technical documentation, including system architecture, data integration processes, and troubleshooting guides.
- Document lessons learned and recommendations for future improvements.

I. Reporting

- Provide regular progress updates to the client, including milestones achieved and challenges encountered.
- Submit a final report summarizing the development process, achievements, and next steps.

J. Compliance with Standards and Best Practices

- Ensure the dashboard aligns with industry standards for M&E systems.
- Implement robust security measures to protect sensitive data.
- Adhere to data privacy regulations (e.g., relevant local laws, Ghana Data Commission Regulations).

5.0 DELIVERABLES

The Consultant/Service Provider is expected to deliver the following:

- a. **Inception Report** outlining the project methodology and timelines.
- b. **Prototype Design** of the M&E dashboard for feedback and approval.
- c. **Functional Dashboard** with all agreed-upon features.
- d. **Training Report** summarizing sessions conducted and materials provided.
- e. **Final Report** including technical documentation and lessons learned.
- f. Integration documentation and configuration.
- g. User training materials and sessions; and
- h. Post-deployment support plan.

6.0 ELIGIBILITY CRITERIA AND QUALIFICATIONS FOR CONSULTANT

The ideal Consultant/Service Provider should meet the following:

- a. The Consultant's CV detailing:
 - i. **Educational Background**
 - A Master's degree or higher in Data Science, Information Technology, Computer Science, Monitoring & Evaluation, or a related field.
 - ii. **Post-Academic Qualifications**
 - Possess a relevant postgraduate qualification with 3-5 years of experience in designing, developing, and implementing interactive and real-time dashboards.

iii. Past Similar Experience.

- The Consultant should have at least 2 experiences of developing such/similar systems (M&E Dashboards or Applications).

iv. Technical Skills & Knowledge

- Expertise in data analytics, monitoring & evaluation (M&E), and dashboard development/visualization tools.
- Expertise in statistical analysis.
- Familiarity with GIS mapping and geospatial data integration is an advantage.
- Proficiency in data visualization tools such as Power BI, Tableau, or other relevant platforms.
- Strong knowledge of database management, APIs, and data integration techniques.

v. Experience in Working with the Government of Ghana

- Experience in working with government institutions and donor agencies.
- Ability to conduct capacity-building trainings for Clients.

b. The Consultant's SSNIT Clearance Certificate

c. The Consultant's Tax Identification Number (TIN)

8.0 ASSIGNMENT DURATION:

The assignment is expected to be completed within **two months** from the start date, with key milestones as follows:

- Week 1: Inception report.
- Week 4: Prototype design approval.
- Week 6: First draft of the functional dashboard.
- Week 7: Testing and feedback incorporation.
- Week 8: Deployment and training of Data Entry Officers.

9.0 REPORTING

The Consultant/Service Provider will report to the NRSA and GSS; and provide updates bi-weekly or as requested. All deliverables must be approved before proceeding to subsequent phases.

10.0 CLIENT'S RESPONSIBILITY AND FACILITIES TO BE PROVIDED

The Client - National Road Safety Authority (NRSA) - shall provide the following services to the Consultant:

- Facilitate the Consultant's engagement with NRSA Directorates and regional offices, stakeholder institutions relevant for the consultancy service; and
- Appoint an officer(s) to support the Consultant and liaise between the Consultant and the NRSA.