

## Terms of Reference (TOR)

### For Consultancy Service for BRTA system integration design, supply, installation, testing, operationalize and training

#### 1.1 About BRSP

The **Bangladesh Road Safety Project (BRSP)** is a flagship initiative of the Government of Bangladesh, supported by the World Bank, aimed at reducing the high burden of road traffic fatalities and injuries. The project responds to the country's urgent need for safer roads, improved enforcement, and stronger post-crash care, in line with national development strategies and global commitments such as the UN Decade of Action for Road Safety.

BRSP adopts a **multi-sectoral Safe System approach**, bringing together the Roads and Highways Department (RHD), Bangladesh Road Transport Authority (BRTA), Bangladesh Police, and Directorate General of Health Services (DGHS). Each agency contributes to a coordinated program that addresses infrastructure safety, vehicle and driver regulation, traffic enforcement, and emergency medical response.

The project includes targeted **multi-sectoral pilots** on high-risk highways and urban areas to demonstrate scalable solutions. Key interventions cover road engineering upgrades, improved driver licensing and vehicle fitness systems, enhanced crash data collection, community awareness, and strengthened trauma care. Alongside these, BRSP is supporting the preparation of a roadmap for the establishment of a **National Road Safety Authority (NRSA)** to provide long-term institutional leadership.

With a financing envelope of USD 208 million, BRSP is designed not only to reduce fatalities but also to build lasting capacity within national institutions, ensuring that Bangladesh can sustainably deliver safer mobility for all road users.

#### 1.2 Project Description

As the national regulatory body, BRTA plays a pivotal role in road safety through vehicle registration and fitness certification, driver licensing, enforcement of transport laws, and oversight of vehicle standards. Over the years, BRTA has developed multiple standalone databases to support these functions. However, these databases are fragmented, lack interoperability, and provide limited scope for integrated analytics and data-driven decision-making.

This fragmentation creates significant challenges:

- Inconsistent and incomplete records across vehicle registration, licensing, fitness, and enforcement systems;
- Limited ability to cross-verify information between datasets (e.g., linking license holders with traffic violations or fitness records);
- Weak integration with other agencies such as Police (crash data, enforcement), DGHS (injury surveillance), and RHD (road inventory and safety audits);
- Barriers to real-time data access for policymakers, enforcement officers, and service users.

Recognizing these gaps, the BRSP includes a dedicated initiative to consolidate BRTA's existing datasets into a single, integrated database platform. This will enable streamlined services to citizens, more reliable road safety analytics, and enhanced coordination with partner agencies. The integrated database will also serve as a cornerstone for implementing



the Road Transport Act 2018 and future digital reforms in licensing, vehicle standards, and enforcement.

Through this consultancy, BRTA seeks expert support to design, develop, and operationalize an integrated database system, including data migration, system architecture, interoperability frameworks, and capacity-building of BRTA staff to ensure sustainability.

### 1.3 Objectives of the Assignment

The objective of this consultancy is to support the Bangladesh Road Transport Authority (BRTA) in transforming its fragmented, standalone information systems into a fully integrated, centralized, and future-ready database platform. The consultancy will consolidate BRTA's key datasets—covering vehicle registration, number plates and RFID, driver licensing, vehicle fitness, and motor vehicle taxes and fees—into a unified system that ensures data accuracy, operational efficiency, and seamless interoperability across government stakeholders.

The assignment will include a **comprehensive review of existing (“As-Is”) systems**, identification of systemic gaps, and development of a robust **“To-Be” architecture** with a clear implementation roadmap, timelines, institutional arrangements and implementation support.

The integrated system will be designed to:

- Provide secure, reliable, and real-time access to BRTA's data for authorized ministries, enforcement agencies, and other stakeholders.
- Enable linkage with the national crash database, supporting evidence-based policymaking and road safety management.
- Facilitate interoperability with other initiatives, notably the Integrated Traffic Management and Incident Detection System (ITMIDS) under BRSP.
- Establish a resilient disaster recovery and business continuity solution, with real-time replication between BRTA Headquarters and the Bangladesh Computer Council (BCC).
- Incorporate scalable infrastructure to accommodate projected data growth and demographic expansion.
- Strengthen multi-agency coordination through standardized data governance protocols and secure integration methods.

### 1.4 Scope of Work

The consultancy will support BRTA in transforming its fragmented, standalone databases into a fully integrated, centralized, and future-ready information system. The Consultant is expected to provide comprehensive technical, institutional, and capacity-building support to ensure that the system is sustainable, interoperable with other government agencies, and aligned with BRSP objectives. The assignment will cover the entire lifecycle of system development, from diagnosis and design through procurement, implementation, rollout, and sustainability.

The services are structured into 2 distinct phases with a total of six components, each with specific tasks and deliverables.



## PHASE I: System diagnosis, design and procurement support (14 months)

### Component 1: Diagnosis and System Design

#### 1.4.1 Task 1: Review of Existing Systems and Data

The consultancy will begin with a detailed review of BRTA's existing standalone systems and databases, including vehicle registration, driver licensing, motor vehicle taxes and fees, vehicle fitness, and number plate/RFID systems.

The review<sup>1</sup> will cover multiple dimensions: the completeness, accuracy, and consistency of existing data; workflows and data entry practices; IT infrastructure and software in use; and the institutional and governance arrangements for managing these systems. A risk analysis will be carried out to identify redundancies, inefficiencies, and vulnerabilities, whether technical, institutional, or operational. The Consultant will also map the existing ("As-Is") architecture, including hardware, software, networks, security protocols, and data flows.

Deliverable: **Analysis Report** for each system, with strengths and weaknesses, identified gaps in required data (for example, missing environmental parameters or incomplete licensing attributes), and setting the stage for system integration and migration.

#### 1.4.2 Task 2: System Design and Architecture

Building on the review, the Consultant will identify the most appropriate approach for consolidating BRTA's databases into an integrated platform. This will involve an options analysis, comparing procurement of a central "hub" solution linking existing subsystems with the development of a fully integrated database system. The analysis will also consider Commercial Off-the-Shelf (COTS) products versus customized software development.

A "To-Be" architecture will then be designed, specifying system modules, data models, interoperability standards, and APIs. The architecture must be modular, scalable, and aligned with international best practices, while remaining feasible for long-term operation by BRTA. Crucially, the design must ensure interoperability with external systems<sup>2</sup> such as the National Crash Database, the Integrated Traffic Management and Incident Detection System (ITMIDS), and the data systems of the Police, DGHS, RHD, NBR, and the Insurance Authority. Hosting options, including use of the Bangladesh National Data Centre, will be assessed.

Deliverable: **System Identification and Architecture Report**, setting out the recommended approach, technologies, and roadmap for implementation.

#### 1.4.3 Task 3: Stakeholder Mapping and Data Governance

The Consultant will identify all ministries, agencies, utilities, and external stakeholders with legitimate needs for access to BRTA's data. This includes defining their roles, responsibilities, and data access rights, while also setting out security conditions for authorized access. Institutional coordination mechanisms will be proposed to ensure smooth collaboration and decision-making across agencies.

<sup>1</sup> Refer to Appendix A for data elements to review

<sup>2</sup> Refer to Appendix B for relevant stakeholder systems and interoperability requirements



As part of this task, the Consultant will draft Memoranda of Understanding (MoUs) to formalize these arrangements, ensuring that data governance protocols are clear, transparent, and enforceable.

Deliverable: **Agencies and Utilities Report**, including a comprehensive stakeholder map, access protocols, governance arrangements, and draft MoU templates.

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## Component 2: Capacity and Resource Requirements

### 1.4.4 Task 4: Personnel, Hardware, and Software Needs

Following the system design phase, the Consultant will assess BRTA's institutional capacity to implement and manage the new integrated system. This will include reviewing existing staffing structures, technical competencies, and IT infrastructure. The Consultant will identify gaps in personnel, hardware, and software, and recommend additional resources necessary for both system implementation and sustainable long-term operation.

The Consultant will also undertake a training and skills assessment, identifying where BRTA staff require upskilling in areas such as data management, cybersecurity, and system administration.

Deliverable: **Capacity-Building and Resource Report**, providing a clear framework for bridging identified gaps through additional recruitment, hardware/software procurement, and training.

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## Component 3: Data and System Readiness

### 1.4.5 Task 5: Data Migration, Cleansing, and Consolidation

The Consultant will design a migration plan to transfer data from BRTA's legacy systems into the new integrated database. This plan will address data cleansing, de-duplication, and validation, ensuring that records are accurate and consistent across all subsystems. The Consultant will apply Master Data Management (MDM) principles to establish a single, authoritative source of truth for BRTA data.

Deliverable: **Data Migration and Consolidation Report**, including methodologies, tools, and validated datasets ready for integration.

### 1.4.6 Task 6: Security, Privacy, and Access Control

Given the sensitivity of BRTA's data, the Consultant will develop a comprehensive cybersecurity framework. This will include encryption protocols, authentication standards, threat detection and mitigation measures, and role-based access control (RBAC). Secure APIs will be designed to facilitate inter-agency data exchange, in compliance with national regulations and international standards.

Deliverable: **Security and Privacy Framework Report**, documenting all policies, standards, and protocols to safeguard BRTA's data assets.



#### 1.4.7 Task 7: Disaster Recovery and Business Continuity

The Consultant will prepare a robust disaster recovery (DR) and business continuity (BCP) plan, ensuring minimal service disruption in case of system failures or disasters. The DR solution will include real-time replication between BRTA headquarters and the Bangladesh Computer Council (BCC). The BCP will cover failover procedures, backup strategies, and scheduled testing to validate system resilience.

Deliverable: **DR and BCP Strategy Report**, including implementation details, backup policies, and recovery protocols.

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### Component 4: Procurement Support

#### 1.4.8 Task 8: Technical Assistance for Procurement

Once the system design and readiness groundwork have been completed, the Consultant will provide technical assistance to BRTA in procuring the integrated system. This will involve drafting Software Requirement Specifications (SRS), Terms of Reference (ToR), Request for Proposal (RFP) documents, and evaluation criteria. All procurement documentation will comply with both Government of Bangladesh procurement rules and World Bank guidelines.

The Consultant will also support BRTA during vendor evaluation and selection, ensuring a transparent and competitive process.

Deliverable: **Procurement Support Report**, including specifications, procurement documents, and vendor selection recommendations.

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### PHASE II: Implementation and rollout support (10 months)

#### Component 5: Implementation and Rollout

During the implementation stage, the Consultant shall play a critical role in supervision and quality assurance of the vendor engaged to develop and deploy the Integrated BRTA Database System. The Consultant will:

- Monitor the vendor's activities against the agreed contract, work plan, and milestones.
- Review and verify the vendor's deliverables for technical compliance, completeness, and alignment with the approved To-Be architecture, security, and interoperability standards.
- Provide timely feedback to BRTA on vendor performance, highlighting risks, issues, or deviations.
- Approve vendor deliverables for payment, ensuring that disbursements are linked to satisfactory completion of contract obligations.
- Certify progress for the purpose of contract administration and maintain oversight on schedule, budget, and quality.

This supervisory function is essential to ensure that the integrated system is delivered fit for purpose, secure, and sustainable, and that BRTA receives value for money in the implementation contract.



#### **1.4.9 Task 9: Implementation Roadmap and Change Management**

The Consultant will develop a phased implementation roadmap, outlining milestones, timelines, resource needs, and cost estimates. A change management framework will be prepared to guide organizational transition and ensure smooth adoption of the new system. The Consultant will also recommend institutional arrangements, such as strengthening BRTA's IT Cell, to provide long-term ownership and management.

Deliverable: **Implementation Roadmap and Change Management Report.**

#### **1.4.10 Task 10: Capacity Building and Training**

A training needs assessment will be carried out for BRTA staff and relevant stakeholders. The Consultant will design and deliver training programs covering system operations, cybersecurity, analytics, administration, and governance. Training materials, user manuals, and SOPs will be developed to ensure lasting knowledge retention.

Deliverables: **Training Curriculum and Materials and Training Completion and Evaluation Report.**

#### **1.4.11 Task 11: Pilot Testing and Rollout Support**

The Consultant will support the pilot deployment of the integrated system, closely monitoring performance, identifying technical and operational issues, and implementing corrective measures. Specifically, the Consultant will provide or facilitate the on-ground support needed for beta and usability/user testing and security audit of the system during rollout to ensure effective transition.

Deliverables: **Pilot Test Report, Rollout Support Report, and Data Consolidation Report** documenting validated data in the new system.

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### **Component 6: Sustainability and Strategic Advisory**

#### **1.4.12 Task 12: Monitoring, Evaluation, and Knowledge Transfer**

The Consultant will establish a monitoring framework with key performance indicators (KPIs) to assess the performance of the integrated system. Results-reporting mechanisms will provide timely insights for decision-making. Knowledge transfer will be an essential part of this component, with the Consultant producing detailed documentation, conducting mentoring sessions, and ensuring BRTA staff are fully capable of managing the system independently.

Deliverables: **Monitoring and Evaluation Report and Knowledge Transfer Report.**

#### **1.4.13 Task 13: Strategic Advisory – Future Roadmap**

To support informed decision-making for future upgrades and possible scaling to a National Road Safety and Transport Data Platform, the Consultant shall also develop a structured evaluation framework for assessing both emerging technologies and institutional options. The framework shall include, at minimum:

- (i) technology-related criteria such as interoperability with existing BRTA/GoB systems, use of open standards, scalability, cybersecurity and data-protection compliance, total cost of ownership, cloud readiness, and ability to support future innovation (e.g., IoT, mobile applications, analytics and AI-based tools); and



- (ii) institutional criteria including clarity of governance and ownership models, operational capacity requirements, financial sustainability, suitability of service delivery models (in-house, outsourced, PPP or hybrid), alignment with national digital strategies and regulatory frameworks, and an assessment of organisational readiness and associated risks.

The Consultant shall integrate these criteria into the Future Roadmap recommendations to guide GoB on technology selection and institutional arrangements for long-term sustainability.

Deliverable: **Future Roadmap Advisory Report**, setting out long-term strategies for expansion and institutional strengthening.

### 1.5 Deliverables & Payment Schedule

Nr.	Component	Task	Key Deliverables	Indicative Timeline (end of)	Payment schedule
1.	<b>Inception Report</b>	–	<b>Inception Report</b> (detailed methodology, refined work plan, staffing, deliverable schedule, risk assessment)	Month 1	10%
2.	<b>Component 1: Diagnosis &amp; System Design</b>	Task 1: Review of Existing Systems and Data	Data Review & Gap Analysis Report	Month 2	15% <sup>3</sup>
3.		Task 2: System Design and Architecture	System Identification & Architecture Report (options analysis, To-Be design, standards)	Month 3	
4.		Task 3: Stakeholder Mapping & Data Governance	Agencies & Utilities Report (stakeholder map, governance protocols, draft MoUs)	Month 3	
5.	<b>Component 2: Capacity &amp; Resource Requirements</b>	Task 4: Personnel, Hardware, and Software Needs	Capacity-Building & Resource Report	Month 4	10%
6.	<b>Component 3: Data &amp; System Readiness</b>	Task 5: Data Migration &	Data Migration & Cleansing Strategy Report	Month 5	15% <sup>4</sup>

<sup>3</sup> after submission & approval of Tasks 1- 3

<sup>4</sup> after submission & approval of Tasks 5 to 7



Nr.	Component	Task	Key Deliverables	Indicative Timeline (end of)	Payment schedule
		Cleansing Strategy			
7.		Task 6: Security & Privacy	Security & Privacy Framework Report	Month 5	
8.		Task 7: DR & BCP	Disaster Recovery & Business Continuity Strategy Report	Month 5	
9.	<b>Component 4: Procurement Support</b>	Task 8: Technical Assistance for Procurement	Procurement Support Report (Software Requirement Specifications, procurement documents, evaluation criteria, vendor evaluation report & recommendation)	Months 6-11 Payment after contract award of the goods package	10%
10.	<b>Component 5: Implementation &amp; Rollout (Vendor Oversight)</b>	Task 9: Implementation Roadmap & Change Management	Implementation Roadmap & Change Management Report	Months 12 - 15	5%
11.		Task 10: Capacity Building & Training	Training Curriculum & Materials;	Months 21	5%
12.			Training Completion & Evaluation Report (validated by Consultant)	Month 22	5%
13.		Task 11: Pilot Testing & Rollout Support	Pilot Test Validation Report (M19);	Month 21	-
14.			Rollout Monitoring Report (M21);	Month 22	-
15.			Data Consolidation Verification Report (M22)	Month 22	10%
16.	<b>Component 6: Sustainability &amp;</b>	Task 12: Monitoring, Evaluation &	Draft Final Report with all tasks above (Part A) and Sustainability &	Month 23	5%



Nr.	Component	Task	Key Deliverables	Indicative Timeline (end of)	Payment schedule
	Strategic Advisory	Knowledge Transfer	Roadmap Report (Part B: Monitoring, Evaluation & Knowledge Transfer; Part C: Strategic Advisory – Future Roadmap)		
		Task 13: Strategic Advisory – Future Roadmap			
		Task 14: Final report	Final report incorporating comments from BRTA	Month 24	10%

### 1.6 Institutional & Implementation Arrangements

- **Client / Implementing Agency:** PIU of BRSP is the implementing agency, while APD unit will be the responsible agency for technical management of the project and approval of consultant's outputs and deliverables.
- **Data Ownership:** Rests with the Government of Bangladesh; The Consultant will comply with all data-sharing agreements and hand over all source code, documentation, and databases to the Client prior to completion of the project.
- **Reporting:** The Consultant will report to the PIU Project Director (or designee) for all contractual matters and APD of BRTA for all technical matters related to the implementation of the project. All deliverables must be submitted to the office of Project Director (BRSP), with copy to APD, BRTA.

### 1.7 Key Professionals, Non-Key Professionals & Estimated Person-Months

Details of the expected minimum number of key personnel in the Consultant's team and their respective likely "person-month" inputs are provided immediately hereunder.

It is estimated that an overall quantum of **9 person-months of international key professionals and 104 person-months of national key professional staff inputs** shall be provided by the personnel to be mobilized by the selected Consultant, which shall be phased in accordance with a Work Program finalized with the Client during the Inception stage of these services. It should be noted that these are only indicative and minimum to be provided, and Consultants shall have their own estimate commensurate with the tasks and overall responsive work and deliverable plan.



#	Positions	Input (person-months)
<b>Key Experts (International)</b>		
1.	Team Leader [Systems Integration Specialist]	9
<b>Key Experts (National)</b>		
1.	Dy. Team Leader [Systems Management Specialist]	24
2.	Systems Integration Specialist	12
3.	Software/ IT Specialist	20
4.	Web Developer/ UI Specialist	16
5.	Database Administrator & Cyber Security Specialist	12
6.	Data Analyst	14
7.	M&E/ Knowledge Transfer Specialist	6

The personnel indicated in the above table are minimum and mandatory. The consultant is free to propose additional resources to address the project requirements.

#### 1.8 Qualification of Key & Non-Key Professionals

Nr.	Designation	Qualification	Experience
1.	<b>Team Leader [Systems Integration Specialist]</b>	Bachelor of Engineering in Computer Science, Information Systems, Software Engineering, or related field	<ul style="list-style-type: none"> <li>• 15+ years in ICT systems design and integration</li> <li>• 10+ years leading large-scale government ICT/database projects in emerging economies</li> <li>• Prior Team Leader experience on World Bank/ADB-funded assignments</li> <li>• Expertise in database architecture, system interoperability, QA</li> <li>• Strong leadership, liaison, and reporting skills</li> </ul>
2.	<b>Dy. Team Leader [Systems Management Specialist]</b>	Bachelor of Engineering in Computer Science/ IT/ Electronics	<ul style="list-style-type: none"> <li>• 10+ years in ICT project implementation and systems management</li> <li>• Experience in public sector ICT operations and stakeholder coordination</li> </ul>



Nr.	Designation	Qualification	Experience
			<ul style="list-style-type: none"> <li>• Skilled in progress reporting and vendor contract supervision</li> </ul>
3.	<b>Systems Integration Specialist (with Institutional &amp; Training Functions)</b>	Bachelor of Engineering in IT/Computer Science/Electronics/Systems Engineering	<ul style="list-style-type: none"> <li>• 8+ years in systems integration and interoperability</li> <li>• Experience in institutional development, stakeholder engagement, and change management</li> <li>• Demonstrated experience in training design and delivery</li> <li>• Familiarity with user acceptance testing and rollout oversight</li> </ul>
4.	<b>Software / IT Specialist</b>	Bachelor of Engineering in Computer Science/IT/ Electronics or equivalent field	<ul style="list-style-type: none"> <li>• 8+ years in software development, customization;</li> <li>• Experience in evaluating vendor deliverables and acceptance testing</li> <li>• Skilled in error detection, issue tracking, and validation</li> </ul>
5.	<b>Web Developer / UI Specialist</b>	Bachelors in IT, Web Development, or related field	<ul style="list-style-type: none"> <li>• 5+ years in web portal and UI/UX design</li> <li>• Familiarity with accessibility standards and user-centered design</li> <li>• Experience in reviewing and validating user interfaces for public sector portals</li> </ul>
6.	<b>Database Administrator &amp; Cybersecurity Specialist</b>	Bachelors in Computer Science, IT Security, or related field;  Certificate or post graduate training in cyber security will be an added advantage	<ul style="list-style-type: none"> <li>• 10+ years in DB administration and cybersecurity</li> <li>• Certified (CISSP, CISM, ISO 27001, or equivalent)</li> <li>• Expertise in RBAC, encryption, data protection</li> <li>• Experience in DR &amp; BCP implementation and testing</li> </ul>
7.	<b>Data Analyst (Migration &amp; Validation)</b>	Bachelors in IT, Data Science, or related discipline	<ul style="list-style-type: none"> <li>• 8+ years in data cleansing, migration, and validation</li> <li>• Experience in Master Data Management and analytics</li> </ul>




Nr.	Designation	Qualification	Experience
			<ul style="list-style-type: none"> <li>Exposure to government registries or large-scale data migrations preferred</li> </ul>
8.	<b>M&amp;E / Knowledge Transfer Specialist</b>	Masters in Economics, Statistics, IT, or related discipline	<ul style="list-style-type: none"> <li>8+ years in M&amp;E framework development</li> <li>Experience in ICT/transport-related M&amp;E assignments</li> <li>Strong background in capacity building and knowledge transfer</li> <li>Experience preparing sustainability and handover plans</li> </ul>

### 1.9 Duration of the Assignment

The assignment duration will be 24 months from contract effectiveness, with options for extension for national scale-up subject to performance and funding availability.

### 1.10 Intellectual Property & Confidentiality

All software, source code, documentation, training materials, and data generated under this contract will be the sole property of the Government of Bangladesh. The Consultant shall maintain confidentiality of all patient-level and sensitive data, following approved governance and ethics protocols.



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## Appendix A: Data Elements for Review

As part of **Task 1: Review of Existing Systems and Data**, the Consultant will assess the completeness, accuracy, and usability of the following data elements currently managed by BRTA across its key databases. The review shall also consider consistency of attributes across systems, redundancies, and any additional fields required for integration and interoperability.

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### a) Vehicle Registration Database

- Registration number and validation character
  - Date of manufacture and first registration (including in Bangladesh)
  - Make, model, variant, version, and body type
  - Tax class, suspension type, and revenue weight
  - Cylinder capacity and fuel type
  - Seating capacity and standing capacity (if applicable)
  - Wheel plan and vehicle category
  - Power details (kW), VIN, and engine number
  - Permissible mass, service mass, and power/weight ratio (for motorcycles)
  - Colour and towable mass (braked/unbraked)
  
  - **Environmental and technical details:**
    - CO<sub>2</sub> emissions
    - Sound levels
    - Exhaust emissions (CO, HC, NO<sub>2</sub>)
  
  - Registered keeper details
  
  - Document reference number and issue date
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### b) Number Plate & RFID Database

- Registration number
  - Vehicle make, model, and type
  - Vehicle Identification Number (VIN)
  - Registered keeper details
  - Date of issue
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### c) Driving License Database

- License ID/number
- Personal details (surname, title, middle names, date and place of birth)
- Validity dates and issuing authority
- Address of license holder



- License groups and categories
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**d) Vehicle Fitness Database**

- Vehicle registration details, VIN, class, make, model, type, and year of manufacture
  - Registration history
  - **Test history**, including:
    - Emissions
    - Brakes and suspension
    - Body/structure and driver visibility
    - Controls, exhaust and fuel system
    - Lights and signals
    - Number plates and VIN markings
    - Wheels, tyres, and steering
    - Seat belts and safety systems
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**e) Motor Vehicle Taxes and Fees Database**

- Records of fees paid (date and amount)
  - Outstanding fees
  - Outstanding fines
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## Appendix B: Relevant Stakeholder Systems and Interoperability Requirements

As part of the integrated system design, the Consultant shall ensure that BRTA's database is able to interface effectively with key stakeholder systems. Interoperability will be required both for **real-time data exchange** and for **periodic reporting and analytics** to support road safety management, transport regulation, and service delivery.

### a) National Crash Database (under BRSP)

- Repository for road crash data, including crash location, time, type, vehicles involved, and injury outcomes.
- Interoperability need: Link BRTA vehicle registration and driver license records to crash data for analysis of risk factors and policy planning.

### b) Integrated Traffic Management and Incident Detection System (ITMIDS)

- System under BRSP to monitor and manage traffic in real time.
- Interoperability need: Enable verification of vehicle and driver information during enforcement operations, with secure real-time queries to BRTA's integrated database.

### c) Bangladesh Police Systems

- Enforcement records (traffic violations, fines, penalties, accident reports).
- Interoperability need: Cross-verification of driver license status, vehicle registration details, unpaid fines, and repeat offender profiles.

### d) Directorate General of Health Services (DGHS) – Trauma Registry and EMS Systems

- Records of road traffic injuries, fatalities, and post-crash medical care.
- Interoperability need: Link vehicle and driver data with health outcomes to enable evidence-based road safety policy and research.

### e) National Board of Revenue (NBR)

- Records of motor vehicle taxes, customs duties, and import data.
- Interoperability need: Synchronize vehicle registration and tax records, enable verification of tax compliance, and track imported vehicles.

### f) Insurance Development and Regulatory Authority (IDRA) and Motor Insurance Providers

- Vehicle insurance records, claims data, and compliance status.
- Interoperability need: Verify insurance coverage linked to registered vehicles; facilitate claims management in case of accidents.

### g) Bangladesh Computer Council (BCC)

- National Data Centre and hosting infrastructure for government ICT systems.
- Interoperability need: Ensure secure hosting, disaster recovery, and business continuity arrangements for BRTA's integrated system.

### h) Future Systems and Services



The integrated database must be designed with modularity and scalability to connect with emerging platforms, including:

- Digital payment systems for fines, taxes, and fees.
- Mobile applications for licensing and registration services.
- Smart transport solutions, e-mobility platforms, and IoT-enabled vehicle monitoring.



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