AZAD GOVERNMENT OF THE STATE OF JAMMU & KASHMIR OFFICE OF THE COMMISSIONER INLAND RVENUE (NORTH) MUZAFFARABAD (A.K)

TENDAR NOTICE

The Department of Inland Revenue, AJ&K intends to acquire services for the following items as per AJ&K Public Procurement Rules, 2017 Single Stage-Single Envelop Procedure from Sales Tax and Income Tax Registered Persons also appearing on Active Taxpayer List with following Terms and Conditions.

S.NO.	Items
1	Centralized Motor Vehicle Registration & Tax Management System. i- Development of CMVR & TMS ii- Legacy data MVRS iii- Software support and Maintenance/Complete Vehicle Transactional Cost iv- Data Center & Hosting (also for website) v- Software Licensing
2	vi- Smart Card (per item) AJ&K Central Board of Revenue/AJK Inland Revenue Department Website. i- Development of Website ii- Maintenance of Website iii- Email Server

Terms and Conditions

- 1- Tenders should be accompanied with GST, NTN Certificates and ATL evidence.
- 2- Bid document can be obtained from the Administrative Officer, Office of the Commissioner Inland Revenue (North) Muzaffarabad.
- 3- Call deposit Pay Order equal to **Rs. 1,150,000**/- in favour of Administrative Officer, Office of the Commissioner Inland Revenue (North), Muzaffarabad shall be enclosed. Failure to do so shall subject to disqualified.
- 4- The sealed tenders should reach the undersigned by <u>Thursday</u>, <u>29th February</u>, <u>2024</u> at 11:00 hours and shall be opened on same day at 11:30 hours in presence of bidders or their authorized representatives.
- 5- The successful bidders shall be required to develop and provide the requisite Services within agreed time of placing the order.
- 6- The contractor will provide warranty (service & maintenance) as mentioned in the bid document.
- 7- The contractor will ensure the International Standards in Software development.
- 8- The supplied items will be specifically checked and the supplier will be required to demonstrate (if required) the functionality of the System/Items before the Purchase Committee/Technical Committee.
- 9- The billed amount will be paid to the contractor subject to a satisfactory report of the Committee.
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- 14- Advertisement is also available on the AJK PPRA website (https://ajkppra.gov.pk).
- 15- Evaluation Report/Award of Contract shall also be displayed at AJKPPRA website.

(Muhammad Ashraf)

Secretary Purchase Committee/Admin Officer Office of the Commissioner Inland Revenue (North), Muzaffarabad.

Ph: 05822-920627

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BID DOCUMENT

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Sr. No.	Items	Specifications
	Centralized Motor Vehicle Registration & Tax Management System	Objective: There is approx. 180,000 vehicles registered with Excise & Taxation Department, AJK. Vehicle record along with owner's history is being maintained in the existing MVRS System. It's now needed to improve the MVRS system in a way that it further increases the overall revenue and provide state of the art facilities to the vehicle owners and general public. The enhanced CMVR&TMS system is required to adopt new tools and technologies to provide various digital services including 24 hour electronic payments mechanism. The end-to-end implementation of an efficient and secure online motor vehicle registration system, including: • Centralized Website Design & Development: Create an intuitive, user-friendly website for motor vehicle registration. Implement robust backend systems for data processing and management. • Hosting Services: Provide reliable and secure hosting services to ensure uninterrupted availability. • Mobile Application for CMVR&TMS: Create mobile application for users to access the system on the go. Choose appropriate frameworks like React Native or Flutter for cross-platform development. • Smart Registration Card (NFC/Chip-based) Issuance:



"Annex-B"



Design and manufacture NFC/Smart Chip cards for registered vehicles with embedded identification features.

Integration with Government Systems:

Integrate the new system with existing government databases for seamless data exchange.

Security Measures:

Implement stringent security protocols to protect sensitive information and ensure user data integrity.

Objectives & Components of an IT- enabled & Security based CMVR&TMS

The overarching objectives of a project which undertakes a comprehensive business process re-engineering of the vehicle registration system - as is the approach and direction encapsulated in the REQ - are:

- 1. To enable efficient revenue tracking and collection, including effective penalizing of road tax, motor tax and license defaults.
- 2. To equip the Policing and Checking Agencies with on-the-spot ease in verification of vehicle and owner credentials.
- 3. To accommodate design features and data capture which enable creation of the independent domains and sub-databases for dependent user groups and functions, including the Police, Transport Authority, Customs & Taxation, , Vehicle Penalty Ticketing, National & State Highway Planning Authorities, Environmental Protection Agencies, etc.
- 4. Software enhancement for Issuance of Smart Card: Modify current MVRS software and add the ability to print smart cards for a. Issuance of smart card at the time of new registration b. Issuance of smart card for Post Registration Transactions i.e Transfer of Ownership, Alterations, etc c. Issuance of Smart Card for existing vehicles with paper based registration books d. Issuance of Duplicate smart cards in case of lost/ theft
- 5. Electronic payment of vehicle related challans: Modify current MVRS software and integrate it with any approved digital payment gateway (Digital payment gateway approved by State Bank of Pakistan) a. Electronic payment of Annual Token Tax b. Electronic payment of New Registration and Post Registration Transactions in the transaction of payment of payment of New Registration and Post Registration Transactions in the transaction of payment of payment of payment of New Registration and Post Registration Transactions in the payment of payment of payment of New Registration and Post Registration Transactions in the payment of payment of payment of payment of New Registration and Post Registration Transactions in the payment of pa
- 6. Biometric Verification of Vehicle Owner and Transferee: Modify Current MVRS software and integrate it with NADRA's Biometric verification services for a. Biometric verification of vehicle owner at the time of registration b. Biometric verification of vehicle



relièle etc.



owner at the time of transfer of ownership c. Biometric verification of vehicle owner at the time of other post registration transactions.

- 7 Integration with SMS based information / notification service for general public a SMS notification for tax/ fee payment b. SMS notification for post registration transaction c. Custom SMS notifications
- 8. Bespoke reports: Reports required by finance and administration department
- 9. APIs for Mobile Apps and Web Access of CMVR&TMS Data.

Limitations & Problems of Existing System

The Motor vehicle registration system (MVRS) was devised nearly two decade ago and have continued over the years, with minor modifications but no major re-engineering was done to make it part of a modern and effective road and traffic management system.

The existing system is therefore limited, not only in the extent to which it plays a proactive role for the management and revenue collection functions of the Registration authority and related departments, but to a much greater extent limited as a system which enables anti-crime, anti-terrorist, security enhancement, traffic management and taxation enforcement policies of the Government.

Without introducing a state of the art system, which commences with the centralization of the existing vehicle data, without which increasingly vehicle population will become unmanageable and non-trackable, whether from the viewpoint of revenue collection, security enhancement, or facilitating any of the other dependent and critical functions of sub-user groups relying on it.

Current Motor vehicle registration system follows distributed architecture which requires individual deployment at each district. The tools and technology used are not up to the mark resulting in a less efficient system. Moreover any new deployment of system would require additional hardware and software cost. Also with the distributed data consistent and real time information is not available for management to analyze revenue collection, registered vehicles population and other statistics for decision making.

Existing System Architecture





Following diagram represents the architecture of existing system.

Scope of Work and Implementation Activities

Database Schema Revision

Current MVRS schema is designed to support distributed application architecture.

A detailed schema revision will be performed to cope with change requirement from distributed to centralized application.

SQL/ Oracle Application Server Setup

An online application server will be required to set up for centralized application deployment which will serve as middle tier component between database server and client machines.

• Forms and Reports Up gradation

Upgrading/ existing application is required for increased level of application performance, reliability and availability. Centralized application will give great benefit of enabling the application to run over the web and incorporate new features.

Modifications

Required modifications will be applied to forms and reports code to upgrade distributed application to centralized application.

· User Creation and Roles/Rights mechanism revision

User creation and roles/rights management will be centrally administrated for all districts; this will result in increased security



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of application in terms of users and their access rights management.

Taxation

A fully functional motor tax, motor registration along with leviable tax in AJK calculation and tracking is required in taxation module which enables Govt. to take advantage of real time tax information for better decision making.

Online Vehicle Verification

A web based application is required to get real time information from centralized DB server and provide user with an instant view of all vehicle related information. Application should provide

- Online real time ownership verification for general public
- · Online real-time updated Ownership History for Govt. Agencies
- · Internal Quality Assurance

Software quality assurance will be performed to ensure that software conforms to certain requirements and standards resulting in higher reliability and customer satisfaction.

Documentation

Technical and end-user documentation will be updated and/ or developed for the better understanding, usage and administering the application.

Deployment

Centralized MVRS solution will be deployed on recommended operating system with proposed tools and technologies.

User Acceptance;

To validate the systems functionality user acceptance will be performed. Users are required to verify their business process and functionality rules. The purpose is to make sure that system as a whole is functioning correctly and meets the business and technical requirements.







Data Migration

Data migration is key element when adapting to new system. Legacy data present in current distributed MVRS system will be moved to centralized database to make it available for future use. An Automated data migration strategy is preferred to freeing up human resources from tedious data entry tasks.

User Training

Our overall approach will aim to provide different user categories full appreciation and working knowledge of the functions and features of the software modules specifically relevant to a specific user category. Training will be based towards usage of interactive techniques rather than large volumes of written training material.

Training Material

Training deliverables will mainly consist of concise handouts in the form of hard copy manuals providing details of all application modules, followed by customized sections for the specific needs of each user category.

CMVR&TMS Registration Processes:

MVRTMS system is divided into major modules which are further divided in several sub modules/ functionalities.

- 1. New Registration
 - a. New Registration
 - i. New Registration Imported Vehicle for Purchaser
 - ii. New Registration Imported Vehicle for Transferee
 - iii. New Registration Imported Commercial Vehicle for Purchaser
 - iv. New Registration Imported Commercial Vehicle for Transferee
 - v. New Registration Local Vehicle for Purchaser
 - vi. New Registration Local Vehicle for Transferee
 - vii. New Registration Local Commercial Vehicle for Transferee
 - viii. New Registration Local Commercial Vehicle for Purchaser
 - b. New Registration & Transfer of Ownership
- 2. Post Registration Transactions



- a. ALTERATION
- b. ALTERATION AND DUPLICATE REGISTRATION CERTIFICATE
- c. CANCEL REGISTRATION
- d. DATA ENTRY
- e. DUPICATE ISSUANCE OF TRANSFER DEED
- f. DUPLICATE NUMBER PLATE
- g. DUPLICATE REGISTRATION CERTIFICATE
- h. HIRE PURCHASE AGREEMENT
- i. HIRE PURCHASE AGREEMENT TERMINATION
- i. Issuance of Transfer Deed
- k. ISSUANCE OF TRANSFER DEED FOR NRT
- I. MULTIPLE TRANSFER OF OWNERSHIP AGAINST SINGLE TRANSACTION
- m. NOC FOR RE-REGISTRATION OF VEHICLE IN OTHER DISTRICT OF PAKISTAN / AJK
- n. NOC FOR TAX PAYMENT IN OTHER DISTRICT
- o. OWNERSHIP CERTIFICATE
- p. RE-REGISTRATION
- g. RE-REGISTRATION AND TRANSFER OF OWNERSHIP
- r. TAX COLLECTION FOR NON-TIEUP
- s. TOKEN TAX
- t. TRANSFER AND DUPLICATE REGISTRATION CERTIFICATE/ SMART CARD
- u. TRANSFER OF OWNERSHIP
- v. TRANSFER OF OWNERSHIP AND ALTERATION OF VEHICLE
- w. TRANSFER UPDATE
- x. TRANSFER, ALTERATION AND DUPLICATE REGISTRATION CERTIFICATE/SMART CARD
- 3. Administration Module
 - a. User Management
- b. Registration Number Set Up complete
- c. Reporting Level Wise
- 4. Annual Token Tax Collection
- a. Annual Token Tax Collection
- 5. Misc Functions
- a. ASSESMENT RE-PRINT
- b. ASSESSMENT CANCELLATION
- C. CANCEL REGISTRATION CERTIFICATE





- d. CANCEL TRANSFER DEED
- e. CANCEL TRANSFER DEED FOR NRT
- f. CHANGE REGISTRATION CERTIFICATE STATUS
- g. HALF FED DATA ENTRY
- h. NOC CANCELLATION
- i. NOC FEEDBACK
- j. NONUSE VEHICLE DATAENTRY
- k. OWNER CORRECTION
- I. OWNER RECORD UPDATE
- m. RE-INSTATE OF CANCELLED TRANSFER
- n. STOLEN VEHICLE ENTRY AGAINST CHASSIS NO
- o. SUSPEND VEHICLE REGISTRATION
- p. TAX EXEMPTION
- g. TAX UPDATE
- r. TRANSACTIONAL REVERSAL IN CASE F APPLICATION REJECTION
- s. UNFED DATA ENTRY
- t. VEHICLE CLASS CONVERSION
- u. VEHICLE CORRECTION
- v. WAIVE PENALTY
- 6. Other
 - i. De-Registration
- ii. Replaced registration book for Damaged registration book
- iii. Duplicate registration book for lost/stolen registration book
- iv. Amendments in registration book in case of Change in Vehicle's Attributes
- v. Transfer of ownership
- vi. Amendments in registration book in case of Change in Owner's Attributes
- vii. Duplicate Third Number Plate
- viii. Duplicate Number Plate
- ix. Vehicle History Report
- x. Re-Registration
- xi. NOC for Re-Registration of Vehicle in other district of Pakistan / AJK
- xii. Re-Registration of Transferred Vehicle
- xiii. Registration of Auctioned Vehicle for Purchaser Registration of Auctioned Vehicle for Transferee
- 7. MISC (if any required)





REQUIRED TECHNICAL/SYSTEM UPGRADES

The Vision for the CMVR&TMS and its importance is underlined by the fact that it would be replacing an existing system, which has outlived its utility because of the distributed architecture and old technologies. Centralized system is proposed with a view that it will serve the registration and taxation needs of Excise & Taxation Department with modern and up to date technology resulting in more reliable, efficient and cost effective system.

The technical proposal responds to specific and detailed functionalities and features of the CMVR&TMS, including its technical architecture, when viewed as a complete module, possessing all required functionalities.

Modules

Modules	Existing System	Proposed System	Remarks
Receive Application i. Receive Applications ii. Current Status iii. Assign Applications iv. Print Challan Voucher v. Rejected Applications vi. Print Challan Receipt	Applications for different registration processes are received with the required documents and forwarded for further processing. This functionality is available in the form of distributed database and application deployed at each district.	The currently working processes for Application receiving module will be provided with the centralized Database and application server architecture for all districts authorized users.	Changes required in database architecture and forms will be updated to be accessible through thin client.
Registration i. Data Entry, ii. Data Entry Verification, iii. External Verification, iv. Printing Authorization, v. Printing, vi. Printing Verification, iii. Delivery	Received Applications are further processed for manual and external verification, registration No. allotment and printing. Functionality is available with local database for each district.	In centralized application environment, this functionality will be available for any district by authorized users. All the Registration Fees i.e. Motor Tax and other leviable taxes, will be deposited online in the concerned Banks at the initial	Changes required in database architecture and forms will be updated to be accessible through thin client.





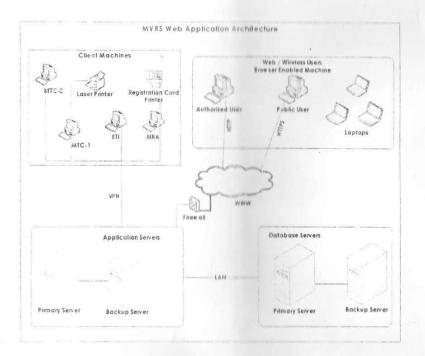
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Administration i. View User ii. Create New User iii. Delete Existing User iv. Modify Existing User	In this module the Administrator manages the users, groups and different types of setups related to application processing.	stage of Registration process. In Centralized application, central administrator user will be who can manage the administration related processes such as user Administration and user Groups for relevant districts.	Changes required in roles rights management functionality and forms will be updated to be accessible through thin client.
Reports i. Suspended Vehicles ii, Stolen Vehicles Reports iii. Vehicle Age Analysis etc	Reports are working in the current application as per business requirements of the relevant district.	In centralized environment, reports will be converted to accommodate authorized users and district's business processes on a central model.	Changes required in database architecture, reports and forms will be updated to be accessible through thin client.
i. Print Challan Voucher ii. Print Challan Receipt iii. Tax Rules iv. Print Tax Voucher v. Print Tax Receipt for other District	Motor Tax is needed to be made functional in taxation module feature is currently not available.	Online Motor tax collection feature will be functional in the centralized application. through all Banks & other online Payment methods.	Changes required in roles rights management functionality and forms will be updated to be accessible through thin client.
Suspended Vehicles	The process of suspending (stolen, seized vehicles) and reinstating of vehicle is available as distributed application feature.	In centralized environment feature will be available for all district authorized users. At the time of registration, It will indicate the fake vehicles reported by different Motor Registration	Changes required in roles rights management functionality and forms will be updated to be accessible through thin client.



Authorities of Pakistan.

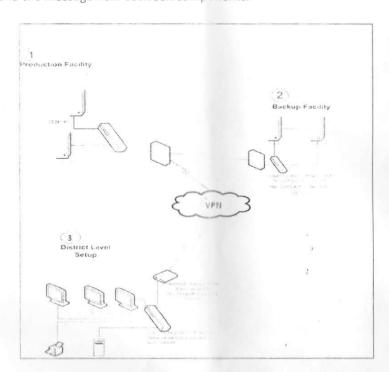
The System will keep the data of fake/reported vehicles in its database.

Web Application Deployment Architecture



Proposed System Architecture

The Architectural Specification defines the system architecture that will enable a system to perform the functions defined in the Functional Specification. This document defines the system components, database components and other components required to perform these functions. These components are only described at a high level to enable a technical contact from the customer or a system administrator to understand how the new system will fit into the current environment of the customer. It is left to the design document, created in the next phase, to define in detail each of these components. This document further defines the interaction of these components and the message flow between components.



Development Requirements

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Database Management System (DBMS): Use a robust database system (e.g., MySQL, Oracle) to store and manage vehicle information, user data, and transaction records.

Choose a backend framework (e.g., Django, Flask for Python; Ruby on Rails; Node.js with Express) for handling server-side logic.

Utilize modern frontend frameworks (e.g., .Net, React, Angular, Vue.js) for creating an interactive user interface.

Hosting: Consider cloud platforms like AWS, Azure, or Google Cloud for scalable and reliable hosting.

Application Programming Interface (API): Develop APIs to facilitate communication between different system components. RESTful APIs are commonly used for their simplicity.

Online Payment System: Integrate online motor vehicle system with centralized payment gateway that should allow end users to pay dues online from anywhere and settle the payment in departments accounts on a daily basis. The firm should also be responsible for designing and developing real-time dashboards both for management and payees on the portal as well as on mobile app.

Security Measures:

Implement HTTPS for secure data transmission.

Apply encryption techniques to protect sensitive data.

Incorporate user authentication and authorization mechanisms.

Mobile App Development:

Create mobile applications for users to access the system on the go.

Choose appropriate frameworks like React Native or Flutter for cross-platform development.

Quality Assurance (QA):

Implement automated testing tools to ensure the system's reliability and performance.

Responsive Design:

		"Annex-B"
		Ensure the system is accessible across various devices by implementing responsive design principles.
2	Smart Card	Printing of Smart Registration Card (NFC/Chip based) (as the case may be) including Card and Material TCS charges for dispatching to relevant zone/district
3	AJK IRD Website	Scope of Work Scope of work includes following services: a) Development of AJK CBR/AJK IRD Official Website (contents like FBR) b) Maintenance of AJK CBR/AJK IRD Official Website c) Hosting of AJK CBR/AJK IRD Official Website d) Renewal of Domain Registration e) Renewal of SSL Certificates f) Email Server The Website may be developed keeping in view the following. 1. Website Design: Develop a visually appealing and user-friendly design that aligns with the values and goals of IRD-AJK 2. Functionality: Implement features and functionalities that facilitate seamless navigation, accessibility, and interaction for diverse user groups. 3. Content Management System (CMS) Integrate an efficient CMS to enable easy content updates and management by our staff. 4. Mobile Responsiveness Ensure the website is optimized for various devices, including desktops, tablets, and smart phones. 5. Security Measures: Implement robust security protocols to safeguard sensitive information and ensure the integrity



- of the website
- 6. Search Engine Optimization (SEO): incorporate SEO best practices to enhance the website's visibility on search engines.
- 7. Hosting Services: Provide reliable and secure hosting services to ensure the website's continuous availability and optimal performance.

FINANCIAL QUOTATION



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