SANRAL

BUILDING SOUTH AFRICA
THROUGH BETTER ROADS

# REQUEST FOR INFORMATION 'RFI'

# FOR THE PROVISION OF A CENTRALISED NATIONAL TOLLING SOLUTION

## SANRAL HO CTROM001/2026

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|---|---|
| **ISSUE DATE:** | **22 MAY 2026** |
| **BRIEFING SESSION DATE:** | **1 JUNE 2026 @10H00** |
| **CLOSING DATE:** | **26 JUNE 2026** |
| **CLOSING TIME:** | **12:00 PM** |

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# Document Glossary

| Abbreviation | Term |
|---|---|
| **AARTO** | Administrative Adjudication of Road Traffic Offences |
| **ANPR** | Automatic Number Plate Recognition |
| **APIs** | Application Programming Interfaces |
| **AVC** | Automatic Vehicle Classification |
| **BOS** | Back Office System |
| **B-BBEE** | Broad-Based Black Economic Empowerment |
| **CBO** | Central Back-Office |
| **CRM** | Customer Relationship Management |
| **CTROM** | Comprehensive Toll Road Operations and Maintenance |
| **DoT** | Department of Transport |
| **DSRC** | Dedicated Short-Range Communications |
| **E2EE** | End-to-End Encryption |
| **EMV** | Europay, MasterCard and Visa (card payment standard) |
| **ERP** | Enterprise Resource Planning |
| **ETC** | Electronic Toll Collection |
| **EFT** | Electronic Funds Transfer |
| **IMS** | Incident Management System |
| **IP** | Intellectual Property |
| **ISO/IEC 27001** | International Standard for Information Security Management Systems |
| **KPIs** | Key Performance Indicators |
| **M** | Mandatory requirement |
| **MFA** | Multi-Factor Authentication |
| **MDM** | Master Data Management |

| | |
|---|---|
| **NaTIS** | National Traffic Information System |
| **NOC** | Network Operations Centre |
| **PCI DSS** | Payment Card Industry Data Security Standard |
| **PASA** | Payment Association of South Africa |
| **POPIA** | Protection of Personal Information Act |
| **QAP** | Quality Assurance Plan |
| **RBAC** | Role-Based Access Control |
| **RFI** | Request for Information |
| **RIMS** | Road Incident Management System |
| **RTO** | Recovery Time Objective |
| **RTMC** | Road Traffic Management Corporation |
| **SANRAL** | South African National Roads Agency SOC Limited |
| **SLA** | Service Level Agreement |
| **SMS** | Short Message Service |
| **SOC** | Security Operations Centre |
| **TCH** | Transaction Clearing House |
| **TCT** | Transaction Controller Terminal |
| **VPC** | Violation Processing Centre |
| **VLN** | Vehicle Licence Number |

## 1. ENQURIES

1.1 All communication and attempts to solicit information of any kind relative to this request should be channelled to:

1.2 Contact person (all technical questions should be in writing)

- Attention: Procurement:
- Reference: **SANRAL HO CTROM001/2026**
- Email address: ProcurementHO05@sanral.co.za

**1.3** Enquires in relation to this RFI will not be entertained after 16h00 on **Wednesday 17 June 2026.**

1.4 All the documentation submitted in response to this Request for Information must be in English.

1.5 The closing date, company / respondent name and the return address must also be endorsed on the envelope.

## 2. RESPONSE FORMAT

The detailed submission must be on pdf format. The respondent is encouraged to submit any additional documents that will assist SANRAL in its decision-making process. Please note:

- The RFI response and all supporting documents must in English.
- **Bidders are required to submit one (1) hard copy and one (1) USB containing an electronic copy of the bid submission.**
- Provide company registration details, organisational profile and any consortium / partner details.
- Provide pricing assumption, cost drivers and pricing structure
- Provide examples of large-scale tolling, transport, payment, revenue assurance or equivalent high-volume transactional solutions implemented or supported.
- Provide a narrative on how the proposed solution could address the functional, technical, integration, security and operational requirements in this RFI.
- Provide position on IP ownership, source code escrow, documentation, knowledge transfer, support model, exit transition and indicative cost drivers.
- Provide current tax compliance status
- Provide B-BBEE status information where available, including certificate or sworn affidavit if applicable
- Any supporting documents must be indexed and property referenced.

- SANRAL reserves the right to request for additional information if necessary.
- Any party responding to this RFI shall bear all of the costs which it incurs in connection with its response.
- The response must be accompanied by a signed company letter.

## 3. CLOSING DATE

The closing date and time for receipt of tenders is 26 June 2026 @12 pm (South African Time).

Location of tender box:

**Reception area**

36 Assegai Wood Road

Rooihuiskraal,

Centurion,

Gauteng

- Telephonic, telegraphic, telex, facsimile, e-mailed tenders will NOT be accepted.
- No late submission will be accepted after closing date and time.
- Respondents to ensure that their names and contacts details are reflected on the cover page of the bid document.
- Respondents may only be submitted on the tender documentation that is issued.

## 4. BRIEFINFG SESSION

- A briefing session will be conducted Virtually on the 1 June 2026, at 10H00 for a period of ± 2 hours. The briefing session will start punctually, and information will not be repeated for the benefit of Respondents arriving late

- The briefing session will be held on MS Teams: Join on your computer, mobile app or room device.
  **Join:** https://teams.microsoft.com/meet/364620261343880?p=mUwyhuVLAiv4Hg8cAA

  **Meeting ID: 364 620 261 343 880**

  **Passcode: X4oq7x3M**

## 5. COSTS TO RESPOND TO THE RFI

All Respondents wishing to submit an RFI response must be in possession of this document, the RFI. SANRAL will not be responsible for or pay any expense or losses which may be incurred by any Respondent in the preparation and submission of the RFI and the costs of the RFI at all stages of the RFI process. Costs, if any, will be for each Respondent's own account.

## 6. DISCLAIMER

This is not a solicitation for quotations, bids, or proposals, and no contract will be awarded as a result of this Request for Information (RFI). The purpose of this RFI is solely to identify potential technology partners for SANRAL.

SANRAL may, at its sole discretion, engage with Respondents for further information or clarification. SANRAL is under no obligation to enter into any agreements with Respondents, nor is it obligated to incorporate the content of any responses into a future Request for Proposal (RFP) or to purchase goods or services from any Respondent.

## 7. CONFIDENTIALITY

This RFI is the intellectual property of the SANRAL. The SANRAL reserves the right to recall the RFI in its entirety or in part. All persons (including all Respondents) obtaining or receiving this RFI and any other information in connection with this RFI may not redistribute it for their own use or purposes other than what was intended by the SANRAL. Information submitted in response to this RFI will be considered and treated by the SANRAL as confidential and will not be used in any other way but for the purpose of the RFI.

# 1. INTRODUCTION

## 1.1 Contextual Background

The South African National Roads Agency SOC Limited (SANRAL) was established by the SANRAL Act (Act No. 7 of 1998) to manage the country's national road network. Under the oversight of the Department of Transport (DoT), SANRAL's core objective is to ensure an efficient transport system that contributes to national competitiveness.

To achieve this, SANRAL is responsible for the full lifecycle of road infrastructure, from planning and financing to operation and maintenance. As part of its funding strategy, SANRAL employs tolling to secure the resources necessary for these activities while minimising reliance on the national fiscus.

SANRAL currently operates within a **complex tolling environment** consisting of:

- Comprehensive Toll Road Operations and Maintenance (CTROM) contracts
- Privately operated concessionaires
- Multiple roadside technologies and back-office systems
- A national Transaction Clearing House (TCH)
- Enforcement and value-added service platforms

## 1.2 Purpose of the Requestion for Information

- The purpose of this Request for Information (RFI) is to obtain market intelligence, industry insights, and indicative information relating to technologies, operational models, and solution approaches applicable to a potential National Centralised Tolling Solution for SANRAL.
- To engage with industry participants and obtain indicative information that may assist SANRAL in understanding current market capabilities, emerging technologies, implementation considerations, and operational trends within the tolling and intelligent transport sector.
- To gather information regarding the technical capabilities, relevant experience, and indicative service offerings of technology providers operating within the South African and international tolling environment.
- To obtain indicative commercial and cost information, including potential licensing models, hosting approaches, support structures, operational

considerations, and total cost drivers, for internal planning and budgetary estimation purposes only.

- To identify potential risks, dependencies, interoperability considerations, governance implications, and implementation factors associated with large-scale centralised tolling environments.

## 1.3 The Problem: A Fragmented Landscape

Historically, tolling operations have been executed through a decentralised, contractor-driven model. This has created challenges that SANRAL seeks to validate and address through this RFI:

- Fragmented Technology: Multiple, non-standard systems across the country's toll plazas create high maintenance overheads, integration complexity and limited interoperability.
- Inconsistent Customer Experience: Road users face different payment methods, account structures and dispute mechanisms across plazas, creating confusion and limiting digital adoption.
- Weak Consolidated Oversight: SANRAL has limited national visibility of traffic, revenue, incidents and operational performance across the tolling environment.
- Revenue Assurance Risks: Fragmentation weakens audit trails, reconciliation, fraud detection and financial control.
- Limited Readiness for Future Mobility: Current systems are not uniformly capable of supporting ANPR-only tolling, account-based mobility services or advanced analytics.

## 1.4 The Strategic Objective

To address these challenges, SANRAL is embarking on a comprehensive Digital Transformation Journey. The core objective of this RFI is to obtain market information on options for transitioning from the fragmented model to a strategic platform model where:

- **SANRAL provides, governs and retains control of the national tolling platform as a strategic asset.**
- **The Operator, appointed under separate contracts, delivers efficient, customer-centric and reliable day-to-day tolling operations using this platform.**

This RFI seeks information from potential Strategic Technology Partners on their ability to supply, configure, integrate and support such a unified platform, while ensuring SANRAL retains custody and control of financial transactions, operational data, system documentation and intellectual property where applicable.

## 2. SCOPE OF WORK: A UNIFIED TOLLING ECOSYSTEM

Respondents are requested to provide information on their capability and recommended approach to design, install / configure / develop, implement, operate, maintain and support a nationally integrated tolling ecosystem. The contemplated solution would centralise functions currently performed by multiple disparate systems, providing a single source of truth under SANRAL governance.

**Respondents should indicate whether, and how, their solution can support the following operational ecosystem components:**

- Roadside lane management system
- Vehicle detection and classification technologies
- Electronic toll collection mechanisms
- Payment processing platforms
- Back-office toll transaction processing
- Integration with the national Transaction Clearing House (TCH)
- Enforcement and violation management
- Revenue assurance and reconciliation
- Reporting and analytics capabilities
- Integration with SANRAL enterprise platforms

**Respondents should describe how the platform could operate as a shared national service for multiple toll concessionaires while remaining under SANRAL governance, policy control and oversight.**

### 2.1. Target Operating Model

The National Tolling Ecosystem is a centralised, standards-driven platform engineered for operational efficiency, regulatory compliance, revenue protection and future mobility readiness.

**Key Pillars of the Ecosystem:**

- Unified Platform and Governance: a single source of truth for oversight, control, reporting and auditability.
- Standardised Operations and Compliance: uniform processes, data standards and controls ensuring network-wide reliability.
- Central Financial Settlement and Clearing: streamlined, transparent and auditable revenue management.
- Value-Added Mobility Services: a foundation for innovation, digital customer channels and future transport solutions.

The Centralised Toll Management System transcends the concept of a single application, but rather a comprehensive national operational ecosystem that integrates the following core elements:

### 2.1.1. Ecosystem Perspective


**Figure 1: Centralised Toll Management Ecosystem**

### 2.1.2. Centralised Operating Model

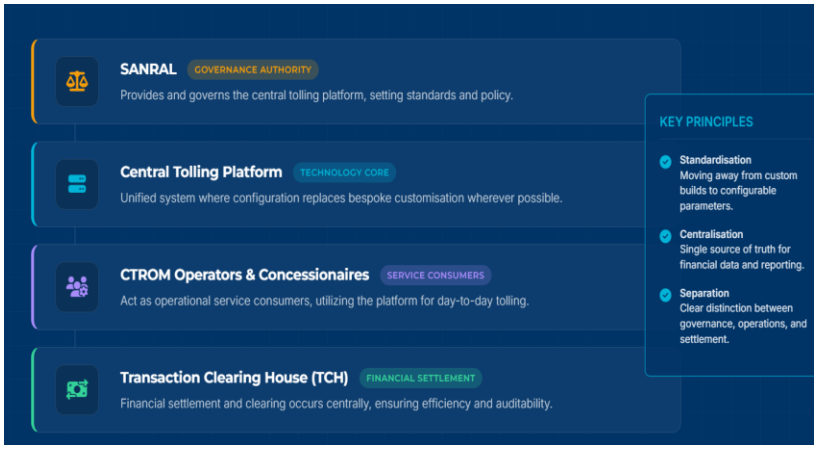



**Figure 2: Centralised Operating Model**

### 2.1.3. Ecosystem Roles


**Figure 3: Toll Management Ecosystem Role Players**

### 2.1.4. Strategic Outcomes


**Figure 4: Strategic Intended Outcomes**

The Centralised Tolling Platform **integrates with the Toll Clearing House (TCH)**, which acts as a central settlement agency responsible for managing user accounts and reconciling payments across the national toll network.

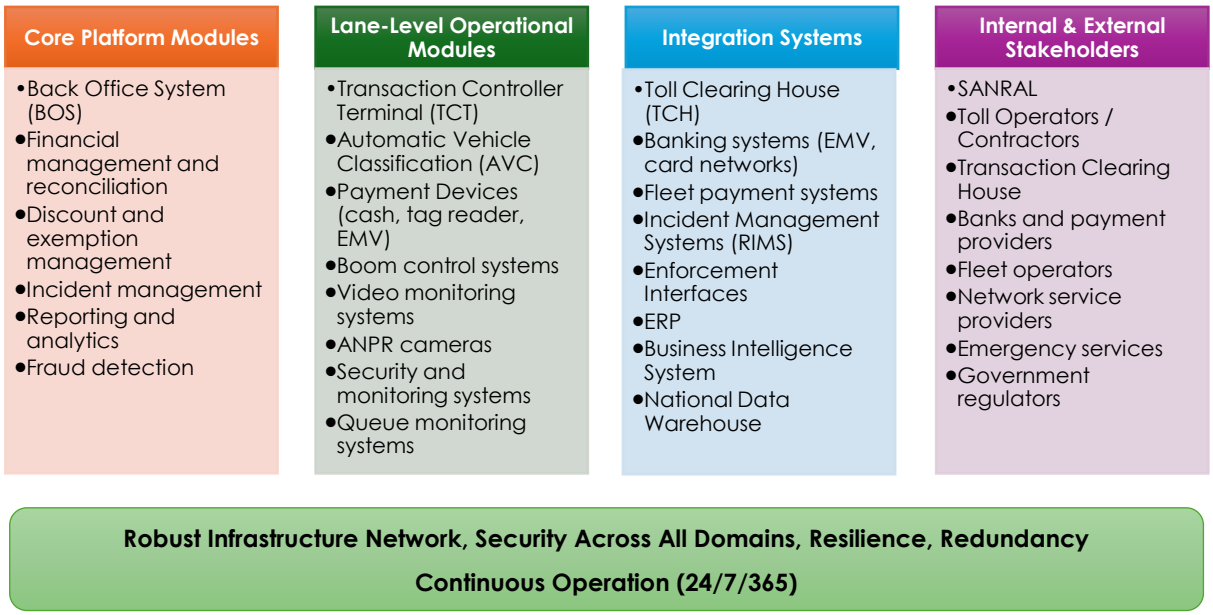
The ecosystem also **integrates with banks, fleet payment systems, network providers, and incident management systems** to ensure continuous operations and regulatory compliance. Operational oversight is provided by **SANRAL and other regulatory structures**, which define tariff structures, compliance requirements, and financial accountability mechanisms governing toll operations.

The system is designed for **continuous operation (24/7/365)** with strong emphasis on **security, redundancy, fraud detection, and auditability**, supported by monitoring systems, sensors, and automated reporting capabilities. The system is built on a risk-based model, where the financial and operational controls at a specific toll plaza are tailored to its traffic volume and fraud risk.

**A core principle is that the financial risk of lost revenue due to system failure or fraud** is borne entirely by the contracted plaza operator, who must pay SANRAL the nominal tariff for every vehicle that passes. This necessitates a highly robust, secure, and verifiable system with multiple layers of redundancy and independent monitoring to ensure fairness, accuracy, and compliance with all financial regulations (VAT, PCI, etc.).

### 2.2. Conceptual Framework

The conceptual framework below covers the critical elements of the Toll Management Ecosystem.


Core Platform Modules
•Back Office System (BOS)
•Financial management and reconciliation
•Discount and exemption management
•Incident management
•Reporting and analytics
•Fraud detection
Lane-Level Operational Modules
•Transaction Controller Terminal (TCT)
•Automatic Vehicle Classification (AVC)
•Payment Devices (cash, tag reader, EMV)
•Boom control systems
•Video monitoring systems
•ANPR cameras
•Security and monitoring systems
•Queue monitoring systems
Integration Systems
•Toll Clearing House (TCH)
•Banking systems (EMV, card networks)
•Fleet payment systems
•Incident Management Systems (RIMS)
•Enforcement Interfaces
•ERP
•Business Intelligence System
•National Data Warehouse
Internal & External Stakeholders
•SANRAL
•Toll Operators / Contractors
•Transaction Clearing House
•Banks and payment providers
•Fleet operators
•Network service providers
•Emergency services
•Government regulators
Robust Infrastructure Network, Security Across All Domains, Resilience, Redundancy
Continuous Operation (24/7/365)

## Toll Management System as an Operational Ecosystem

The table below provides a conceptual overview of the tolling ecosystem, detailing its core components, their functions, and key requirements.

| Context Element | Type | Primary Role in the Ecosystem | Key Information / Service Exchanges | Operational / Technical Notes |
|---|---|---|---|---|
| **CTROM Toll Management Platform (System of Interest)** | **Core System** | End-to-end toll transaction capture, validation, settlement coordination, monitoring, and reporting. | Orchestrates lane events, classification evidence, BOS processing, incident monitoring, and integration flows. | Must run **24/7/365**, support autonomous lane operation with fallback, and provide a **unified national view** of all operations. |
| **Lane Operations and Transaction Processing** | **Module (Plaza-Level)** | Executes the real-time lane transaction for all payment methods (cash, card, tag). Issues receipts/tax invoices. Supports manual mode when systems are offline. | Captures vehicle passage events; invokes payment mechanism; sends transaction data to the Central Back Office. | Transaction speed and integrity are critical. Must remain operational during communication outages and re-sync when back online. |
| **Automatic Vehicle Classification (AVC)** | **Module (Plaza-Level)** | Independently classifies vehicles using sensors to verify the classification entered by the toll collector and detect anomalies or potential abuse. | Receives sensor feeds (loops, light curtains) and outputs classification and anomaly flags to cross-check lane classification. | Must be accurate, redundant, and independent from the lane controller's primary classification logic. |
| **Video Subsystem** | **Module (Plaza-Level)** | Provides real-time queue monitoring and captures high-definition evidence (front, rear, scene images) for transaction verification, dispute resolution, and incident investigation. | Stores imagery; provides evidence for local validation and reporting. Images create significant storage/archival requirements. | Must integrate with incident detection and provide evidentiary-quality images that comply with SANS standards. |

| Context Element | Type | Primary Role in the Ecosystem | Key Information / Service Exchanges | Operational / Technical Notes |
|---|---|---|---|---|
| **ANPR (Automatic Number Plate Recognition)** | **Module (Plaza-Level)** | Captures vehicle licence plates for ETC transactions (where a tag is not read correctly) and for discrepancy control. | Plate data is attached to transactions and used for downstream validation, V-Tolling, and suspension/enforcement processes. | High accuracy is required. Missing or incorrect plates cause significant downstream correction efforts. |
| **Central Back-Office (CBO)** | **Module (Central)** | The core of the new platform. Performs all centralised processing: transaction management, financial reconciliation, customer account management, reporting, discount application, and audit functions. | Receives all lane transactions; applies business rules (tariffs, discounts, exemptions); produces reports; exchanges settlement data with TCH, VPC, and banks. | Replaces all existing plaza-level back-offices.<br>Must include "Operator Dashboards" for concessionaires to manage their own data and operations. |
| **Monitoring and Incident Management (IMS)** | **Module (Central)** | Logs all system incidents (power loss, tamper events, lane controller restarts), triggers alarms, and supports operational response. | Receives events from all sensors, lane devices, and systems; provides centralized dashboards and alerts for SANRAL and operators. | Emphasis on tamper-proofing (hardware and software) and continuous, real-time monitoring.<br>Must integrate with SANRAL's SOC/NOC. |
| **Audit, Reconciliation and Performance Management** | **Module (Central)** | Provides the tools for lane/hour/day financial and operational controls. Manages discrepancies and supports performance measurement against SLAs and KPIs. | Consumes CBO and IMS outputs to produce audit trails, performance measures, and reconciliation views for all stakeholders. | Must provide automated, configurable reports for SANRAL, DoT, and National Treasury. |
| **Configuration and Tariff/Discount Rules** | **Module / Inputs** | Implements all business rules in a configurable manner (rather than through code changes). This includes tariffs, vehicle class definitions, discount structures | Receives published tariff definitions (Government Gazette); applies rules within the CBO processing engine. | Configuration must be possible without vendor intervention. Changes must be fully auditable. |

| Context Element | Type | Primary Role in the Ecosystem | Key Information / Service Exchanges | Operational / Technical Notes |
|---|---|---|---|---|
| | | (frequent user, local user), and exemptions. | | |
| **TCH (Transaction Clearing House)** | **External System** | Central settlement agency and account management platform for all tag-based (e-tag) transactions across the national network. | CTROM CBO sends all tag transactions to TCH; receives authorisation status, settlement outcomes, and validation lists (e.g., lists of valid/stolen tags). | The TCH is a SANRAL asset and the **single source of truth for all national customer accounts**. The new platform must integrate seamlessly with its protocols. |
| **Banks / Card Networks (EMV)** | **External System** | Card transaction authorisation and settlement for all bank card payments made at the toll plaza. | Lane sends card transaction data; receives approvals/declines; settlement occurs via banking rails. | Must be fully **PCI DSS compliant** and support modern **EMV standards** (chip and PIN, contactless, tokenisation). |
| **VPC (Violation Processing Centre)** | **External System** | Processes unpaid transactions after a defined grace period. Escalates to legal processes (e.g., AARTO, civil claims) to recover debt. | CBO sends unpaid/violation cases to the VPC after 30 days; receives case status and enforcement outcomes. | The VPC is a SANRAL function. The platform must provide a seamless handover of case data and evidence to the VPC system. |
| **RTMC (NaTIS)** | **External System** | National database of vehicle and owner information. Used for verifying vehicle details, identifying owners of unregistered vehicles, and supporting enforcement actions. | CBO/VPC sends queries (VLN) to NaTIS; receives vehicle and registered owner details in real-time. | Interface must be fast, reliable, and handle high volumes to support automated customer identification and collections. |
| **Concessionaires & Toll Operators** | **Stakeholder / User** | Private or contracted entities responsible for the day-to-day operation of specific toll plazas. | Use dedicated Operator Portals within the CBO to monitor their operations, manage local discounts, view reports, and access lane-level data. | Access must be role-based and secured, allowing operators to see only their own data, while |

| Context Element | Type | Primary Role in the Ecosystem | Key Information / Service Exchanges | Operational / Technical Notes |
|---|---|---|---|---|
| | | | | SANRAL retains a consolidated view across all operators. |

**Table 1: Toll Management System as an Operational Ecosystem**

## 3. FUNCTIONAL REQUIREMENTS

Respondents are requested to indicate the extent to which their proposed solution can deliver the following indicative functional capabilities. Items marked as mandatory (M) reflect baseline capabilities that SANRAL may retain in a future procurement process. Respondents should indicate whether each capability is available, configurable, partner-dependent or requires development.

| Section | Requirement Area | Requirement / Capability | Mandatory (M) | Response (Available / Configurable / Partner Dependent / Requires Development) |
|---|---|---|---|---|
| 3.1 | Lane Operations and Transaction Processing | Support all CTROM lane types: Manual, Automatic Card, Dedicated ETC, Mixed ETC, and Extra Wide Lanes | M | |
| 3.1 | Lane Operations and Transaction Processing | Lane controllers support offline operation for minimum 72 hours with automated reconciliation after connectivity restoration | M | |
| 3.1 | Lane Operations and Transaction Processing | Support cash payments with cashier float management and cash-up functionality | M | |
| 3.1 | Lane Operations and Transaction Processing | Support Chip-and-PIN and contactless (EMV) bank cards | M | |

| Section | Requirement Area | Requirement / Capability | Mandatory (M) | Response (Available / Configurable / Partner Dependent / Requires Development) |
|---|---|---|---|---|
| 3.1 | Lane Operations and Transaction Processing | Support fleet cards (e.g., Shell) with direct processing | M | |
| 3.1 | Lane Operations and Transaction Processing | Support ETC tags (5.8 GHz DSRC) | M | |
| 3.1 | Lane Operations and Transaction Processing | Automatically generate unique transaction records for each vehicle passage | M | |
| 3.2 | Vehicle Classification and Identification | Integrate with multiple AVC systems for vehicle classification | M | |
| 3.2 | Vehicle Classification and Identification | Provide supervisor mechanism to resolve class discrepancies using HD images/video | M | |
| 3.2 | Vehicle Classification and Identification | Provide high-accuracy ANPR for South African and foreign license plates | M | |
| 3.2 | Vehicle Classification and Identification | Support V-Tolling using ANPR when tag read fails | M | |

| Section | Requirement Area | Requirement / Capability | Mandatory (M) | Response (Available / Configurable / Partner Dependent / Requires Development) |
|---|---|---|---|---|
| 3.3 | Central Back-Office and Customer Management | Manage unified national customer account structure | M | |
| 3.3 | Central Back-Office and Customer Management | Support single customer view across transactions and debt | M | |
| 3.3 | Central Back-Office and Customer Management | Provide CRM module logging customer interactions | M | |
| 3.3 | Central Back-Office and Customer Management | Support automated multi-channel notifications (email, SMS, in-app) | M | |
| 3.3 | Central Back-Office and Customer Management | Provide secure self-service web portal and mobile application | M | |
| 3.4 | Billing, Invoicing, and Payments | Apply toll tariffs, discounts, and exemptions via configurable rules | M | |
| 3.4 | Billing, Invoicing, and Payments | Generate consolidated tax invoices across toll authorities | M | |
| 3.4 | Billing, Invoicing, and Payments | Produce invoices on behalf of third-party toll agencies | M | |

| Section | Requirement Area | Requirement / Capability | Mandatory (M) | Response (Available / Configurable / Partner Dependent / Requires Development) |
|---|---|---|---|---|
| 3.4 | Billing, Invoicing, and Payments | Support automated prepaid top-ups via credit card, debit order, or EFT | M | |
| 3.4 | Billing, Invoicing, and Payments | Integrate with banking systems with PCI DSS compliance | M | |
| 3.4 | Billing, Invoicing, and Payments | Provide automated reconciliation tools for payments and customer accounts | M | |
| 3.5 | Fraud Detection and Revenue Assurance | Include AI-driven fraud detection and revenue assurance capabilities | M | |
| 3.5 | Fraud Detection and Revenue Assurance | Process and validate all financial transactions through TCH | M | |
| 3.5 | Fraud Detection and Revenue Assurance | Maintain tamper-proof audit trails for transactions and user activities | M | |
| 3.5 | Fraud Detection and Revenue Assurance | Support creation and management of violation records and | M | |

| Section | Requirement Area | Requirement / Capability | Mandatory (M) | Response (Available / Configurable / Partner Dependent / Requires Development) |
|---|---|---|---|---|
| | | enforcement integration | | |
| 3.6 | Reporting and Analytics | Provide standard reports for traffic, revenue, reconciliation, disputes, and performance | M | |
| 3.6 | Reporting and Analytics | Provide real-time operational dashboards and KPIs | M | |
| 3.6 | Reporting and Analytics | Provide ad-hoc reporting for authorised users | M | |
| 4.1 | Architecture and Deployment | Deploy within SANRAL hosting environments with South African data residency | M | |
| 4.1 | Architecture and Deployment | Modular and scalable architecture supporting phased deployment | | |
| 4.1 | Architecture and Deployment | Cloud-ready solution capable of operating in SANRAL private cloud | M | |
| 4.1 | Architecture and Deployment | Secure standards-based APIs for all integrations | M | |

| Section | Requirement Area | Requirement / Capability | Mandatory (M) | Response (Available / Configurable / Partner Dependent / Requires Development) |
|---|---|---|---|---|
| 4.2 | Security and Compliance | POPIA compliance for customer data | M | |
| 4.2 | Security and Compliance | PCI DSS compliance with E2EE and tokenisation | M | |
| 4.2 | Security and Compliance | Implement RBAC and MFA for administrative access | M | |
| 4.2 | Security and Compliance | Compliance with ISO/IEC 27001 and SANRAL cybersecurity policies | M | |
| 4.2 | Security and Compliance | Compliance with PASA rules and standards | M | |
| 4.3 | Performance, Resilience, and Availability | Guarantee minimum 99.5% system uptime | M | |
| 4.3 | Performance, Resilience, and Availability | Guarantee minimum 99.9% transaction reconciliation accuracy | M | |
| 4.3 | Performance, Resilience, and Availability | Provide disaster recovery site with RTO ≤ 2 hours and RPO ≤ 15 minutes | M | |
| 4.3 | Performance, Resilience, and Availability | Full redundancy and automatic failover for critical components | M | |

| Section | Requirement Area | Requirement / Capability | Mandatory (M) | Response (Available / Configurable / Partner Dependent / Requires Development) |
|---|---|---|---|---|
| 4.3 | Performance, Resilience, and Availability | Handle projected transaction volumes without degradation | M | |
| 4.3 | Performance, Resilience, and Availability | Support future toll plaza and traffic expansion | M | |
| 4.4 | Interoperability and Integration | Integrate with existing TCH and comply with governance rules | M | |
| 4.4 | Interoperability and Integration | Provide secure real-time integration with RTMC (NaTIS) | M | |
| 4.4 | Interoperability and Integration | Provide secure interfaces with future VPC | M | |
| 4.4 | Interoperability and Integration | Integrate with SANRAL ERP and BI platforms | M | |

## 4. PROGRAMME IMPLEMENTATION APPROACH

Respondents should describe how they would deliver the solution across the full project lifecycle, ensuring quality, governance, and sustainability. The indicative implementation approach should follow a structured, phased model that begins with a deep understanding of SANRAL's enterprise architecture before any configuration or development begins.

Respondents should provide information on how they would implement the NCTS:

- Implementation methodology (Agile, SAFe, hybrid waterfall).
- Programme governance model (steerco, working groups, escalation).
- Project and programme management approach (PMBOK, PRINCE2).
- Transition and migration strategies (phased, big bang, parallel).
- Legacy system integration and coexistence.
- Organisational change management (stakeholder mapping, comms, training).
- Skills transfer and localisation (training, documentation, co-development).
- User training and adoption (role-based, manuals, e-learning).
- Testing and quality assurance (unit, integration, UAT, performance, security).
- Risk management methodologies (risk register, mitigation tracking).
- Indicative implementation timelines (Gantt chart or roadmap).
- Critical success factors (technical, operational, stakeholder).

## 5. COMMERCIAL MODELS

Respondents are requested to provide high-level commercial information including:

- Pricing models (fixed price, T&M, outcome-based).
- Software licensing approaches (perpetual, subscription, usage-based).
- Development cost considerations.
- Maintenance and support models (SLA tiers, response times).
- Hosting and infrastructure costs (cloud consumption, colocation).
- Managed services options.
- Cost recovery models.
- Revenue sharing models (if applicable).

- Subscription and consumption-based models.
- Total cost of ownership (TCO) over 5–10 years.

### 6. INNOVATION

Respondents are encouraged to propose innovative approaches and capabilities:

- AI and machine learning (pattern detection, forecasting, automation).
- Predictive analytics (traffic, revenue, maintenance).
- Smart mobility enablement (MaaS, dynamic tolling).
- Digital identity integration (biometric, federated ID).
- Emerging tolling technologies (GNSS, smartphone-based).
- Automation and intelligent operations (RPA, auto-remediation).
- Sustainability and green technology initiatives.
- Future-ready smart transport capabilities.
- Innovative commercial and partnership models.

## 7. ADDITIONAL INFORMATION (OPTIONAL BUT ENCOURAGED)

Respondents may provide any additional information considered beneficial to SANRAL, including:

- International benchmark case studies
- Industry insights and trends
- Innovation roadmaps
- Research and development initiatives
- References and client testimonials
- Awards and certifications
- Demonstrations or proof-of-concept capabilities

## 8. RFI RESPONSE GUIDANCE AND INFORMATION REQUESTED

RFI responses will not be evaluated for award and will not result in appointment. SANRAL will review responses for market insight, feasibility, capability, risk, delivery readiness and future procurement planning.

### Part A: Respondent Profile and Core Information

- Company Name
- Company Profile (overview, mission, years in operation)
- Legal status
- Relevant experience in large-scale tolling, payments, revenue assurance or equivalent transactional systems
    - For each project, provide:
        - Client name
        - Project value and duration
        - Technologies used
        - Brief description of scope and outcomes
- Partnerships and Certifications
    - Strategic partnerships and OEM relationships (hardware, cloud, payment gateways)
    - Compliance approach for PCI DSS, POPIA, ISO/IEC 27001 and SANRAL security standards
- Position on data ownership, IP ownership, source code escrow and full handover obligations
- Financial, technical and local support capacity to support a programme of this scale
- Views on hosting, data sovereignty, SANRAL governance and long-term sustainability

### Part B: Solution, Delivery and Support Information

- Solution architecture, integration approach and design quality
- Functional coverage across lane operations, CBO, customer management, payments and enforcement
- Methodology and Approach
    - Describe the methodology and approach for rendering service (e.g Agile, hybrid waterfall, DevOps)
- Technical robustness, cybersecurity, scalability, resilience and interoperability

- Implementation, pilot, migration, transition and national rollout approach
- Support, maintenance, service management and SLA capability
- Value-added innovation and future mobility readiness

## RFI Information Areas and Review Focus

SANRAL will review responses against the following information areas to understand the market, solution maturity, delivery options and risks..

| Information Area |
|---|
| 1. Functional Fit and Solution Capability |
| 2. Technical Solution and Architecture |
| 3. Implementation Approach |
| 4. Commercial Models |
| 5. Innovation |
| |

**Table 4: RFI Information Areas and Review Focus**