

Pre-Feasibility Study for Developing a Cost Recovery Mechanism for Border Posts in East Africa

Report on Concept Strengthening & Pre-Feasibility Validation

August 2026

Draft Version 5

Submitted by
Crisil Limited, India

Disclaimer

This report is prepared by Crisil Ltd (Crisil) at the request of TMA (client). This report may include or refer to information and materials provided by the client and/or obtained by Crisil from sources that Crisil considers reliable (together, "materials"). In preparing this report, Crisil does not independently validate any such materials and assumes those materials are accurate. Crisil does not guarantee the accuracy, adequacy or completeness of any material contained in or referred to in the report. While Crisil takes reasonable care in preparing the report, Crisil shall not be responsible for any error(s) or omission(s) in or for the results obtained from the use of or the decisions made based on the report. The user takes full responsibility for the use of, and the decisions made based on the report. While portions of materials are included in the report, Crisil makes reasonable attempts to attribute credits to the source of the materials; however, even if a particular source of a material is not so attributed, Crisil stakes no claim to any such material in the form as provided to or made accessible to Crisil. No third party whose material is included or referenced in this report under credit to it, assumes any liability towards the user with respect to such material. Neither Crisil nor its directors, employees and representatives accept any liability with regard to any access, use of or reliance on, the report and that Crisil expressly disclaims all such liability. The Report is (i) not intended to and does not constitute an investment, legal, accounting or tax advice or any solicitation, whatsoever (ii) not an audit, rating or due diligence nor a recommendation of any sort whether to hold, invest in or divest from any securities, instruments or facilities of any kind or otherwise enter into any deal or transaction with the entity to which the Report pertains (iii) not a substitute for the skill, judgment and experience of the client for making any decisions. Any third-party brands, names or trademarks contained in the report belong to the relevant third parties. The report contains Crisil's view as at the date of the report based on available material. Crisil does not assume an obligation to update the report where updated materials are available or to notify anyone that an updated report is available. Crisil operates independently of and does not have access to information obtained by Crisil Limited's Ratings Division / Crisil Limited's Research Division (Crisil), which may, in their regular operations, obtain information of a confidential nature. The views expressed in this Report are those of Crisil Limited and not of Crisil's Ratings Division / Research Division. No part of this Report may be published/reproduced in any form without Crisil's prior written approval. This report may not be reproduced or redistributed or communicated directly or indirectly in any form or published or copied as whole or in part as authorised by Crisil. By accessing and/or using any part of the report, the user accepts the foregoing disclaimers and exclusion of liability which operates to the benefit.

Purpose of the report

This report has been prepared in line with the contract milestone - "**Report on Concept Strengthening & Pre-Feasibility Validation**". The report builds upon the completed pre-feasibility study by consolidating key stakeholder engagements undertaken subsequently, assessing alignment of the proposed solution with relevant regional, institutional and financing priorities, and reviewing recent corridor developments that may influence the project assumptions and implementation framework. It further identifies areas for strengthening the pre-feasibility output and provides considerations for progressing the proposed Cost Recovery Mechanism (CRM) towards the detailed feasibility stage.

Limitations of the report

- Crisil has relied on a combination of primary and secondary sources in preparing this report. Primary inputs include stakeholder engagements with relevant regional, national and development institutions, including the East African Community (EAC), Kenya Revenue Authority (KRA), Uganda Revenue Authority (URA), Japan International Cooperation Agency (JICA), and British International Investment (BII). Secondary inputs include information and documents made available by relevant authorities and institutions, together with publicly available information. Crisil has not independently verified all such information and has assumed it to be accurate and complete for the purpose of this assessment.
- More detailed stakeholder consultations and institutional alignment will be undertaken during the feasibility stage, including further engagement with relevant government agencies, road authorities, development partners, potential financiers/investors and other project stakeholders. Accordingly, the implementation structure, financing arrangements, risk allocation and other recommendations presented at this stage may be further refined based on the outcomes of these consultations and detailed feasibility assessments.

Table of Contents

Acronyms	6
1 Recap of the prefeasibility study outcomes.....	9
2 Executive Summary	12
3 Corridor Trusted Supply Chain Assurance Programme (CTSAP)	15
3.1 Evolution of the Programme	15
3.2 Recommended Framework: Corridor Trusted Supply Chain Assurance Programme (CTSAP).....	16
3.3 Risk-Based Inspection Framework	23
3.4 Commodity-Based Facilitation.....	24
3.5 International Good Practices Informing the CTSAP.....	26
3.6 Synergies with Existing TradeMark Africa Programmes.....	31
4 Strengthening the proposed Financing Structure through Co-Equity Participation.....	33
4.1 Development of the Project Investment Proposition	33
4.2 Engagement with JICA – Synergy with existing border investments.....	41
4.3 Engagement with BII	42
4.4 Implications for the Financing Strategy Going Forward	42
5 Strengthening the Regional Governance and Implementation Framework	44
6 Corridor Infrastructure development and alignment.....	47
6.1 Development of the Standard Gauge Railway along the Northern Corridor	47
6.2 Continued Role and Rehabilitation of the Metre Gauge Railway.....	48
6.3 Strengthening of Kisumu–Lake Victoria Multimodal Connectivity	49
6.4 Road Network developments	50
6.5 Implications of recent corridor development on Traffic Projections of OSBP upgrade program.....	53
6.6 Conclusion.....	56
7 Implementation Roadmap and Sequencing of Proposed Interventions	57
8 Way Forward	64
9 Annexures.....	65
9.1 Traffic Projections	65
9.2 Traffic Forecast Calculations	67
9.3 Financial Assessment.....	71
9.4 Minutes of the Meeting.....	86
9.5 Foundational References for CTSAP	107

List of Tables

Table 1: Accredited corridor participants and illustrative certification requirements	18
Table 2: Multi-agency certification responsibilities	18
Table 3: Risk-based processing bands generated by the AI Risk Engine	20
Table 4: Indicative Trusted Corridor Score Factors and Weights	20
Table 5: Trusted Corridor Score bands, facilitation tiers and inspection targets	20
Table 6: Tier based inspection rate gradient	23
Table 7: Inspection strategies based on commodity risk	24
Table 8: Phased implementation roadmap for CTSAP	25
Table 9: Financial Outputs - Case 1	34
Table 10: Financial Outputs - Case 2	35
Table 11: Total Trucks crossing (Busia, Malaba & Lwakhakha combined) – 5-year intervals	66
Table 12: Phase-wise Traffic Growth Assumptions	67
Table 13: Total Trucks Crossing Kenya - Uganda Borders (Busia, Malaba & Lwakhakha combined)	67
Table 14: Modal shift effects are implicitly incorporated through declining growth rates	69
Table 15: Capital Cost	71
Table 16: Project Timeline	73
Table 17: Funding Envelope	73
Table 18: Project financing structure	74
Table 19: Debt Repayment Structure	74
Table 20: Proposed User Fees	76
Table 21: Revenue Projections	76
Table 22: Financial Outputs - Case 1	79
Table 23: Financial Outputs - Case 2	79
Table 24: Repayment Timeline	80
Table 25: Debt and Equity Repayment	80
Table 26: Current average and peak border crossing times	81
Table 27: Projected crossing times by truck category following infrastructure intervention	82

Table 28: Estimated annual cost of delay at Busia and Malaba	84
Table 29: NPV summary of costs and benefits over 20-year project life	85

List of Figures

Figure 1: Trusted Corridor Operating Model.....	17
Figure 2: Proposed Multi-Tier Governance Framework.....	45
Figure 3: Road Developments around Lwakhakha border post.....	50
Figure 4: Implementation Roadmap	57
Figure 5: Lwakhakha OSBP Concept Diagram.....	60
Figure 6: Augmentation of Malaba OSBP.....	62
Figure 7: Three Phase Implementation Sequencing of Solutions.....	63
Figure 8: Per-Day Traffic Projections (2025 - 2047)	65
Figure 9: Operating Cost	78

Acronyms

S No.	Acronym	Full form
1	AEO	Authorized Economic Operator
2	AFD	Agence Française de Développement
3	ANPR	Automatic Number Plate Recognition
4	API	Application Programming Interface
5	ASYCUDA	Automated System for Customs Data
6	ATIDI	The African Trade & Investment Development Insurance
7	AUDA	African Union Development Agency
8	BII	British International Investment
9	CAGR	Compound Annual Growth Rate
10	CAPEX	Capital Expenditure
11	CDP	Cassa Depositi e Prestiti
12	COMESA	Common Market for East and Southern Africa
13	CPF	County Pension Fund
14	CRM	Cost Recovery Mechanism
15	CTR	Corridor Trust Registry
16	CTSAP	Corridor Trusted Supply Chain Assurance Programme
17	DFI	Development Finance Institution
18	DRC	Democratic Republic of Congo
19	DSCR	Debt Service Coverage Ratio
20	EAC	East African Community
21	EAT	East African Time
22	EIB	European Investment Bank
23	EPC	Engineering, Procurement, and Construction
24	EPY	Express Processing Yard
25	ERR	Economic Rate of Return
26	ETA	Electronic Travel Authorization
27	EUD	European Union Delegation
28	EUR	Euros
29	GDP	Gross Domestic Product
30	GPS	Global Positioning System
31	GSI	Grade-Separated Interchange
32	HSCS	Health, safety, climate, and social impact
33	ICD	Inland Container Depot
34	ICF	Italian Climate Fund
35	ICT	Information and Communication Technology

S No.	Acronym	Full form
36	IFAD	International Fund for Agricultural Development
37	IFC	International Finance Corporation
38	IGAD	Intergovernmental Authority on Development
39	IMF	International Monetary Fund
40	IRR	Internal Rate of Return
41	IST	Indian Standard Time
42	JICA	Japan International Cooperation Agency
43	KEBS	Kenya Bureau of Standards
44	KPI	Key Performance Indicator
45	KRA	Kenya Revenue Authority
46	MGR	Meter Gauge Railway
47	NCTTA	Northern Corridor Transit and Transport Agreement
48	NCTTCA	Northern Corridor Transit and Transport Coordination Authority
49	NDA	Non-Disclosure Agreement
50	NDICI	Neighbourhood, Development, and International Cooperation Instrument
51	NEPAD	New Partnership for Africa's Development
52	NOL	No Objection Letter
53	NPV	Net present Value
54	OCR	Optical Character Recognition
55	ODA	Official Development Assistance
56	OECD	Organisation for Economic Co-operation and Development's Development
57	OPEX	Operating Expenditure
58	OSBP	One Stop Border Post
59	PPP	Public Private Partnership
60	PRG	Partial Risk Guarantees
61	PSP	Private sector Party
62	RECTS	Regional Electronic Cargo Tracking System
63	RFID	Radio-Frequency Identification
64	SADC	Southern African Development Community
65	SDG	Sustainable Development Goals
66	SGR	Standard Gauge Railway
67	SITA	Sustainable Inclusive Trade in Africa
68	SPS	Sanitary and Phytosanitary
69	SPV	Special Purpose Vehicle
70	TCA	Trade Catalyst Africa
71	TCS	Trusted Corridor Score

S No.	Acronym	Full form
72	TMA	TradeMark Africa
73	TTFP	Trusted Trader Facilitation Program
74	UNBS	Uganda National Bureau of Standards
75	URA	Uganda Revenue Authority
76	USD	United States Dollar
77	WTO	World Trade Organization
78	WTP	Willingness to Pay

1 Recap of the prefeasibility study outcomes

The **pre-feasibility study** focused on developing and accessing a cost-recovery-based approach for border infrastructure development, particularly for OSBPs along the Northern corridor. The central idea behind this approach was to move beyond reliance on grant funding and explore mechanisms where investments can be partially or fully recovered through user fees, while maintaining efficiency, affordability, and accessibility for trade operators. This involved evaluating whether border posts can generate sufficient and stable revenue streams, identify appropriate fee structures, and design financing frameworks that can attract participation from private investors and development finance institutions.

The study also recognized that the long-term solution could not rely on physical infrastructure expansion alone. Instead, it proposed an integrated approach combining **operational reforms, digital border management, risk-based processing, targeted infrastructure improvements and a sustainable cost-recovery mechanism**. The resulting framework was designed to improve the movement of freight across the corridor while ensuring that investment in border infrastructure is supported by a financially and operationally sustainable model.

Corridor-wide approach to border modernization

A central outcome of the pre-feasibility study was the development of a **corridor-wide solution covering Busia, Malaba and Lwakhakha**, recognizing that the three border posts should function as complementary components of the Kenya–Uganda freight network rather than as standalone infrastructure projects. The proposed approach therefore combines targeted infrastructure investment with traffic segregation and operational reforms to distribute freight more efficiently across the corridor.

At **Malaba**, the proposed solution makes use of the **approximately seven-acre land parcel available on the Uganda side** to create additional processing and holding capacity. The additional facilities are primarily intended to accommodate **homogeneous local truck traffic**, while also providing capacity to manage other local truck movements more efficiently. The objective is to relieve pressure on the existing Malaba facilities and improve the overall flow and processing of local traffic without requiring complete redevelopment of the existing border configuration.

At **Lwakhakha**, the solution introduces a **dedicated express/zero-stop facility for transit trucks**. Eligible transit operators who value faster crossing and choose to pay the applicable express service fee would be routed through this facility, enabling a zero-stop border-crossing experience supported by the proposed digital and automated systems. **Use of the Lwakhakha express facility would be voluntary and would not require all transit trucks to use the crossing**. At the same time, Lwakhakha is not exclusively a transit border: the proposed configuration also provides capacity to handle **local truck traffic**, allowing the border to serve both traffic categories while progressively taking pressure off the more constrained Busia and Malaba crossings.

At **Busia**, the pre-feasibility study did not envisage major physical expansion of the existing configuration. Instead, Busia would continue to serve its existing traffic while the corridor-wide solution seeks to manage future demand through **better risk-based processing, operational improvements and redistribution of suitable traffic towards Malaba and Lwakhakha**.

Trusted Trader Facilitation Programme (TTFP)

Alongside the physical interventions, the pre-feasibility study introduced the **Trusted Trader Facilitation Programme (TTFP)** as a fundamental operational reform. The programme is intended to move border processing away from a largely inspection-driven model towards **risk-based facilitation**, under which compliant transport operators can receive faster and more predictable processing while inspection resources are concentrated on higher-risk movements.

TTFP therefore provides an important operational foundation for the wider infrastructure programme. The pre-feasibility study further recognized that infrastructure improvements would deliver their full value only when supported by corresponding changes in border operations. TTFP therefore integrates **smart scheduling, digital information exchange, risk-based inspection, automated identification and technology-enabled processing** to improve the utilisation of border facilities and reduce avoidable delays.

This integrated approach was intended to create a transition from conventional border processing towards a more **predictable, data-driven and customer-oriented operating model**, where infrastructure capacity, traffic management and risk assessment work together.

Cost recovery and financing framework

The study also established the basis for financing the proposed modernization through a **user-supported cost-recovery mechanism**. The underlying principle was that users receiving tangible benefits from faster processing, reduced waiting times and improved service reliability could contribute towards the investment and ongoing operation of enhanced facilities. The willingness-to-pay assessment provided initial support for this approach, particularly where the proposed services generate measurable time and logistics-cost savings for operators.

To support implementation, the study developed a **blended financing framework** combining development finance, debt, equity and other potential sources of catalytic capital. The financing structure was intended to reduce reliance on government budgets and conventional grant funding while maintaining affordability for corridor users. The economic assessment also established a strong initial case for the intervention, with the benefits of reduced border delays and improved freight efficiency forming the principal source of economic value.



Institutional and implementation foundation

Finally, the pre-feasibility study identified the institutional and legal arrangements that would need to underpin the proposed model. Given the binational nature of the OSBPs and the involvement of multiple border agencies, successful implementation would require coordinated action between Kenya and Uganda, alignment with the EAC framework, clear allocation of institutional responsibilities and an appropriate legal and contractual structure for the cost-recovery mechanism.

Taken together, the pre-feasibility study established a coherent solution rather than a standalone infrastructure proposal: the **Trusted Trader Facilitation Programme** provides the operational reform; **Lwakhakha Express Border Post** provides an alternative transit route; **targeted augmentation at Malaba** addresses critical capacity constraints; and the **digital, financing, cost-recovery and institutional frameworks** provide the mechanisms required to make these interventions sustainable. The subsequent work covered by this report therefore builds on this established foundation, focusing on validating, refining and preparing these solutions for progression into the feasibility and implementation stages.

2 Executive Summary

Background of this report

Following completion and stakeholder endorsement of the pre-feasibility study, the project entered a further stage of refinement focused on **crystallizing the proposed solution and strengthening the pathway towards detailed feasibility stage**. The work undertaken through this report was not intended to revisit the fundamental conclusions of the pre-feasibility study, but to examine the key areas that required greater definition before the project could progress into next stage.

As part of this process, the project team revisited the principal assumptions and outputs across the different project workstreams and cross-checked the supporting analyses to ensure that the **operational solution, financial proposition, economic benefits and implementation approach were internally aligned**. This exercise provided greater clarity on the assumptions underpinning the proposed Cost Recovery Mechanism and helped identify the areas that require further validation and structuring during the feasibility stage.

Strengthening the Operational Framework

The report further develops the **Trusted Trader Facilitation Programme (TTFP)** proposed during the pre-feasibility study. Further assessment and stakeholder discussions with KRA, URA etc. highlighted that a conventional trader-focused trusted model would not provide sufficient visibility across the wider cargo movement chain. The concept has therefore been evolved into a broader **Corridor Trusted Supply Chain Assurance Programme (CTSAP)**, which brings together existing certifications and compliance information from multiple regulatory authorities through a common digital trust framework.

The proposed framework combines **multi-agency accreditation, a Corridor Trust Registry, dynamic trust scoring, AI-enabled risk assessment and risk-based inspection**. Rather than replacing the statutory role of individual regulators, the framework is intended to connect their existing approvals and compliance information to enable more intelligent and differentiated border processing. This provides a pathway towards progressively reducing inspection intensity for consistently compliant supply-chain participants while allowing border agencies to focus resources on higher-risk movements.

Strengthening the Financing Proposition

Given the capital-intensive nature of the proposed intervention, the report further examines the equity component of the blended financing structure developed during pre-feasibility. While the proposed financing model envisages a combination of debt and equity/catalytic capital, the ability of TCA to mobilize the entire equity requirement on its own is constrained. The report therefore explores the potential for **co-equity participation by strategic development and institutional partners**, including JICA and BII, alongside TCA.

To support these engagements, the pre-feasibility proposition was translated into a dedicated **project investment proposition**, presenting the intervention not only as a border infrastructure programme but as an investment opportunity supported by measurable financial, economic and developmental benefits. The proposition considered the potential for financial returns alongside wider benefits such as logistics-cost savings, employment generation, improved freight efficiency and reduced emissions.

Validation Against Emerging Corridor Developments

The report also assesses the implications of **recent and planned developments across the Northern Corridor**, particularly the continued development of SGR and MGR connectivity, Lake Victoria multimodal freight infrastructure and supporting road networks. These developments have the potential to alter the future distribution of freight between road, rail and inland-water transport.

The review confirms that the underlying pre-feasibility traffic framework already recognized progressive modal shift and therefore does not fundamentally change the project rationale. However, the emerging infrastructure pipeline reinforces the importance of **testing traffic and revenue assumptions during feasibility**.

Strengthening Regional Governance and Institutional Alignment

Following the pre-feasibility study, further engagement with the **EAC, KRA and URA** provided greater clarity on the institutional pathway required to take the Kenya–Uganda pilot forward. The discussions reinforced the importance of anchoring implementation within existing EAC and national governance mechanisms rather than creating parallel institutional structures.

The report therefore sets out the emerging **multi-tier governance and coordination framework**, including the role of the EAC regional structures, national authorities and a dedicated joint technical/task-force mechanism for project preparation. The engagement also identified legal and institutional matters that require further development during feasibility, including the legal basis for user charges, cross-border revenue arrangements, PPP structuring, operational protocols and the institutional requirements for risk-based border management.

Defining a Phased Implementation Pathway

The report also translates the proposed solution into a **sequenced implementation roadmap**, recognizing that the operational reforms and physical investments should not be implemented simultaneously. The recommended sequencing begins with deployment of the Trusted Trader Facilitation Programme and its supporting digital and institutional foundations, followed by the development of Lwakhakha as an express border post, and subsequently the targeted infrastructure augmentation at Malaba OSBP.

This sequencing is intended to establish the governance, operational and digital foundations before committing to larger capital investments. It also provides flexibility to respond to changes in traffic patterns, corridor infrastructure and stakeholder readiness, while reducing disruption to ongoing border operations. The detailed evolution and implementation requirements of the trusted-trader framework are set out separately in chapter 3 of this report.

Outcome of the report

This report strengthens the approved pre-feasibility outcomes by enhancing the proposed operational interventions, enhancing the blended financing and capital structuring framework, validating project assumptions against emerging corridor-wide developments, and reinforcing institutional alignment among key regional stakeholders. The report therefore serves as a critical bridge between concept development and feasibility, improving implementation readiness while providing a scalable framework that can subsequently be replicated across other strategic border corridors within the East African Community.

3 Corridor Trusted Supply Chain Assurance Programme (CTSAP)

Border operations across Busia, Malaba and Lwakhakha currently follow a conventional, inspection-driven model: nearly 100% of trucks are physically inspected irrespective of operator compliance history or cargo risk. This model was manageable at lower volumes, but combined handling capacity across the three posts (~4,000 trucks/day) is projected to be overwhelmed as demand rises to almost 12,350 trucks/day by 2047, a near four-fold increase. Continuing to inspect every truck under this growth trajectory would produce severe congestion, escalating logistics costs and repeated, capital-intensive infrastructure expansion.

The Final Northern Corridor Strategy Pre-Feasibility Report therefore proposed a Trusted Trader Facilitation Program: a shift from an “inspect-everyone” model to an intelligence-led, risk-based processing framework in which inspection intensity is calibrated to operator compliance history, cargo characteristics and digital risk profiling.

The concept intended to facilitate faster movement of cargo along the Kenya-Uganda corridor and was designed to reduce inspection rates, shorten border crossing times, improve predictability for transport operators, and support the proposed Cost Recovery Mechanism through premium facilitation services.

However, during detailed stakeholder consultations to discuss the findings of the final report, operational assessments uncovered that a conventional customs-led Trusted Trader model would not adequately address the complex and multi-agency nature of border management within the Northern Corridor. This led to a progressive evolution of the concept toward a broader corridor-wide trust framework. The final recommendation therefore extends beyond customs compliance and seeks to establish trust across the entire logistics chain, supported by digital integration, risk-based management, and coordinated regulatory oversight.

3.1 Evolution of the Programme

During the refinement of the **Trusted Trader Facilitation Programme (TTFP)**, it became evident that while the programme represented a significant shift towards risk-based border management, it remained primarily centre on the transport operator as the principal unit of trust. Although this approach could improve border efficiency, it did not provide complete visibility over the broader supply chain or adequately address risks associated with other entities involved in the movement of goods.

The programme was therefore expected to adopt a broader end-to-end value chain approach, recognizing that cargo integrity depends on the collective compliance of all participants involved in the logistics chain, including manufacturers, exporters, customs brokers, freight forwarders, transport operators, warehouse operators, shipping lines, importers and drivers. This evolution strengthened end-to-end traceability and enhanced the potential for AI-enabled, risk-based border management.

Further assessment, however, highlighted that implementing a single accreditation framework across the entire supply chain would present institutional challenges, as the various participants are regulated by different competent authorities, including customs, standards, health, pharmaceutical, sanitary and phytosanitary, transport and other sector regulators. Establishing a new overarching accreditation authority would therefore duplicate existing regulatory mandates and increase implementation complexity.

Consequently, the study recommends the **Corridor Trusted Supply Chain Assurance Programme (CTSAP)**. Rather than introducing a new certification regime, CTSAP builds upon existing regulatory approvals issued by competent authorities and integrates them through a common Corridor Trust Registry. This creates a unified digital trust framework that supports end-to-end supply chain visibility, AI-enabled risk assessment, progressive reductions in inspection levels based on sustained compliance, and expedited border processing while preserving the statutory responsibilities of individual regulators.

3.2 Recommended Framework: Corridor Trusted Supply Chain Assurance Programme (CTSAP)

The framework recognizes certifications issued by Customs authorities and Standards agencies, Food safety regulators, pharmaceutical regulators, Veterinary authorities, Plant health authorities, Transport licensing agencies, Driver licensing authorities. Each agency continues performing its statutory function while a centralized Corridor Trust Registry aggregates these certifications and creates a consolidated trust profile for every shipment moving through the corridor.

CTSAP Programme Architecture

CTSAP federates the accreditations already issued by competent regulators – customs, standards, health, drug, plant health, veterinary, transport licensing, driver licensing and revenue authorities – for every node of the cargo chain, from manufacturer/exporter through to importer/consignee, into a single digital Corridor Trust Registry. CTSAP does not replace any regulator or its statutory mandate; it federates their existing approvals into one interoperable trust framework.

Why CTSAP is recommended

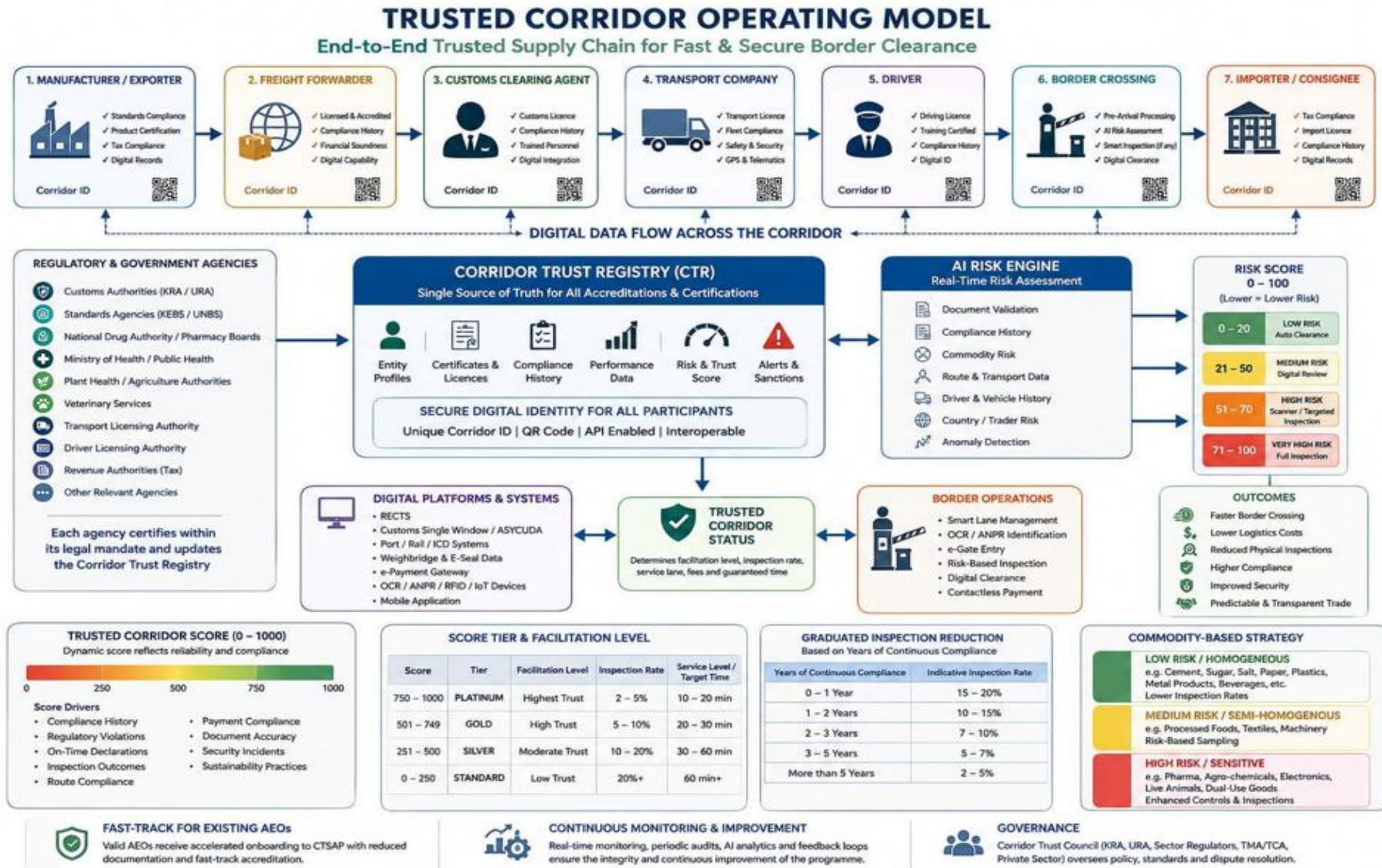
- Builds on existing regulatory frameworks
- Avoids duplicate certifications
- Enables end-to-end visibility
- Supports AI-driven risk management
- Scalable across EAC
- Supports premium corridor services
- Supports CRM/cost recovery mechanism

Why CTSAP Changes the Economics of Border Management

- Reduction in inspection rates
- Increase in border throughput
- Reduced requirement for future CAPEX
- Reduction in operating costs
- Increased predictability
- Improved revenue assurance

Figure 1: Trusted Corridor Operating Model

End-to-end digital trust architecture from accredited participants through the Corridor Trust Registry, AI Risk Engine and Border Operations to outcomes



CTSAP consists of five integrated components:

- Multi-Agency Accreditation
- Corridor Trust Registry
- Trusted Corridor Score
- AI Risk Engine
- Risk-Based Processing Framework

Accredited Participants

CTSAP accredits every entity that touches the shipment, each issued a unique digital Corridor ID (QR-enabled) by its competent regulator and recorded in the Corridor Trust Registry:

Table 1: Accredited corridor participants and illustrative certification requirements

<i>Participant</i>	<i>Illustrative Accreditation Checks</i>	<i>Certifying Agency</i>
Manufacturer / Exporter	Standards compliance, product certification, tax compliance, digital records	Standards agency; Revenue authority
Freight Forwarder	Licensing/accreditation, compliance history, financial soundness, digital capability	Customs / Transport licensing authority
Customs Clearing Agent / Broker	Customs Licence, compliance history, trained personnel, digital integration	Customs authority
Transport Company	Transport Licence, fleet compliance, safety & security, GPS/telematics	Transport licensing authority
Driver	Driving Licence, training certification, compliance history, digital ID	Driver licensing authority
Warehouse / ICD Operator	Facility Licence, security compliance, e-seal/weighbridge integration	Customs; Port/ICD authority
Shipping Line / Rail Operator	Operating Licence, cargo manifest accuracy, digital data exchange	Port/Rail authority (where applicable)
Importer / Consignee	Tax compliance, import Licence, compliance history, digital records	Customs authority; Revenue authority

Multi-Agency Institutional Framework

Certification remains vested with the competent authority in each domain; CTSAP aggregates – rather than substitutes – these approvals:

Table 2: Multi-agency certification responsibilities

<i>AGENCY</i>	<i>RESPONSIBILITY</i>
Customs Authorities (KRA / URA)	Importers, exporters, brokers, customs compliance
Standards Agencies (KEBS / UNBS)	Product standards and quality
Drug Authority / Pharmacy Boards	Pharmaceutical compliance
Health Authorities	Food and public health

AGENCY	RESPONSIBILITY
Plant Health & Veterinary Authorities	Agriculture and livestock (SPS controls)
Transport Licensing Authority	Fleet and operator licensing
Driver Licensing Authority	Driver certification
Revenue / Tax Authorities	Tax compliance
Security and Other Relevant Agencies	Security screening, sanctions and anomaly alerts

Corridor Trust Registry

The Corridor Trust Registry (CTR) serves as the digital backbone of the programme. A CTR acts as the single source of truth for entity profiles, certificates and licences, compliance history, performance data and trust corridor scores across all accredited participants, each identified by a unique, QR-coded, API-enabled Corridor ID. Only shipments with a complete and valid chain of certifications across all involved participants qualify for Trusted Corridor processing. The registry will:

- Integrate certifications from different agencies.
- Maintain real-time compliance records.
- Track supply-chain participants.
- Generate shipment-level trust ratings.
- Support risk-based border processing.
- Enable interoperability between Kenya and Uganda border systems.

The Registry integrates with existing digital platforms – RECTS, Customs Single Window/ASYCUDA, Port/Rail/ICD systems, weighbridge and e-seal data, e-payment gateways, OCR/ANPR/RFID/IoT devices and a mobile application – so that Trusted Corridor status, once determined, automatically sets the applicable inspection rate, service lane, fee and guaranteed processing time at Border Operations (smart lane management, OCR/ANPR identification, e-gate entry, risk-based inspection, digital clearance and contactless payment).

Box 1: Example of a Trusted Shipment Journey

Manufacturer uploads certificate (certified by standards agency) → Exporter certified by Customs → Transport operator accredited → Driver validated → Shipment registered in CTR → AI generates TCS → Shipment allocated green lane → Truck receives expedited processing

AI Risk Engine

The platform will provide border agencies with complete visibility of all entities associated with any shipment and support automated decision-making through integrated risk engines. An AI Risk Engine is proposed that continuously evaluates each participating entity in the shipment journey. This risk score maybe based upon indicators such as document validation, compliance history, commodity risk, route and transport data, driver and vehicle history, and country/trader risk. This will be recorded register for each entity to detect anomalies and generate a real-time risk score (0–100, Lower = lower risk) that feeds into the TCS.

Table 3: Risk-based processing bands generated by the AI Risk Engine

RISK SCORE	RISK LEVEL
0–20	Low Risk
21–50	Medium Risk
51–70	High Risk
71–100	Very High Risk

Trusted Corridor Score (TCS)

A key innovation proposed under the programme is the development of a Trusted Corridor Score. Unlike conventional approaches where all accredited operators receive the same treatment, this model introduces performance-based facilitation. The TCS is a composite score derived from multiple factors including historical compliance performance, regulatory compliance, operational behaviour, inspection outcomes, tax compliance, security records, digital reporting compliance and sustainability practices.

Table 4: Indicative Trusted Corridor Score Factors and Weights

Factor	Weight (Indicative)
Historical compliance performance	15%
Commodity Risk	15%
Accuracy of declarations	10%
Regulatory violations	10%
Payment and tax compliance	5%
Security incidents	10%
Driver conduct & history	10%
Route adherence	10%
Digital reporting compliance	5%
Inspection outcomes	5%
Sustainability practices.	5%

A shipment's composite score is derived from the scores of all participating entities and determines its facilitation tier, refining the Silver/Gold/Platinum structure proposed for local truck operators into a single, transparent scale:

Table 5: Trusted Corridor Score bands, facilitation tiers and inspection targets

TCS	TIER	FACILITATION LEVEL	INSPECTION RATE
750–1000	Platinum	Highest Trust	25%
501–749	Gold	High Trust	50%
251–500	Silver	Moderate Trust	75%

TCS	TIER	FACILITATION LEVEL	INSPECTION RATE
0–250	Bronze	Low Trust (baseline)	100%

This dynamic scoring system allows regulators to continuously adjust facilitation levels according to actual operating behaviour rather than relying solely on periodic certification.

Illustrative Example: From AI Risk Assessment to Trusted Corridor Score

Consider a shipment moving from Kenya to Uganda. The shipment may involve several participants, including the **manufacturer, exporter, transport operator, driver etc.** Each participant has a different role in the movement of the shipment and may therefore present different types of risks. For example, the manufacturer may have a particular compliance and certification history, the exporter may have a history of customs declarations and tax compliance, the transport operator may have a record relating to route adherence and vehicle compliance, while the driver may have a history of driving or security-related incidents.

The AI Risk Engine would first assess each of these participants individually using the information available on the digital platform. It would consider the relevant risk indicators for each participant and assign an **AI Risk Score between 0 and 100**, where a lower score represents lower risk. For example, for one shipment, the manufacturer could have a score of 15, the exporter 20, the transport operator 30 and the driver 10. These scores do not represent the final trust score of the shipment. Instead, they provide the underlying risk assessment of the different participants associated with that shipment.

The next step is to use this information to calculate the **Trusted Corridor Score (TCS)** for the shipment. The TCS looks at the complete value chain rather than any one participant in isolation. For each of the factors identified under the TCS framework such as historical compliance performance, commodity risk, accuracy of declarations, regulatory violations, payment and tax compliance, security incidents, driver conduct, route adherence, digital reporting compliance and inspection outcomes, the relevant information from all participants is considered together.

For example, when calculating the **Historical Compliance Performance** factor, the system would consider the compliance history of the manufacturer, exporter, transport operator and other relevant participants. Similarly, the **Driver Conduct & History** factor would primarily reflect the driver's record, while **Accuracy of Declarations** would draw more heavily on the exporter and customs-related information. In this way, each TCS factor captures the most relevant information available across the value chain rather than simply taking the score of one participant.

For illustration, assume the following composite scores are obtained for this shipment after assessing the complete value chain:

TCS Factor	Composite Score (/1000)	Weight	Weighted Score
Historical compliance performance	900	15%	135
Commodity risk	800	15%	120
Accuracy of declarations	950	10%	95
Regulatory violations	1000	10%	100
Payment and tax compliance	950	5%	47.5
Security incidents	900	10%	90
Driver conduct & history	950	10%	95
Route adherence	900	10%	90
Digital reporting compliance	1000	5%	50
Inspection outcomes	950	5%	47.5
Sustainability practices	800	5%	40
Total	100%		910

In this illustration, the weighted composite score is **910 out of 1000**. The example demonstrates the distinction between the two scores: the AI Risk Engine generates individual risk scores for the participants associated with a shipment, while the TCS brings together the relevant information across the complete value chain, applies the defined factor weightages and produces one consolidated trust score for the shipment.

The distinction between the two scores is therefore important. The AI Risk Engine Score is an assessment of risk at the individual participant level, while the Trusted Corridor Score is a consolidated assessment of the trustworthiness of the complete shipment value chain. The AI Risk Engine provides the underlying risk intelligence, while the TCS converts the relevant information into a single score that can be used to determine the appropriate level of facilitation for the shipment.

Box 2: Why Trusted Corridor Score (TCS) Uses Entire Supply Chain

A trusted importer alone does not guarantee cargo integrity if the freight forwarder, transport operator, warehouse, or driver demonstrates poor compliance performance. Consequently, trust must apply to the entire supply chain rather than a single participant.

3.3 Risk-Based Inspection Framework

Inspection Philosophy: The programme proposes replacing the current inspection-heavy approach with a graduated risk-based model. Operators maintaining strong compliance records progressively benefit from reduced inspections and faster clearance, while violations trigger increased monitoring and reduction in TCS. The framework creates strong incentives for sustained compliance while enabling customs authorities to focus resources on higher-risk cargo.

Tier-based Inspection: Operators enter the bronze tier and progress to Silver, Gold and Platinum on demonstrated performance. The Bronze Category acts as a catch all, it is available to all users accessing the border and represents the basic registration and compliance-record stage, with no preferential facilitation benefits, enabling operators to establish a profile before progressing to categories with higher facilitation of clearance. The Bronze category provides a transporter with a means to book access to the green lanes. The category was introduced to enable the Authorities to register as many border users as possible thus facilitating improved data and intelligence for future border development. The bronze category has been created to facilitate onboarding of potential transporters and other related parties of the value chain into the CTSAP. This category is expected to commence and pool members at least 2 years prior to the upgrades at the selected border posts. Taking this approach will help reduce lead times and to ensure early acceptance and create a mechanism to improve the program ahead of launch. Accordingly, once the infrastructure is in place and the risk-based inspection methodology is applied, the below inspection rate gradient will become applicable. Inspection intensity will reduce automatically with prespecified tenure of clean compliance, independent of TCS-band movement.

Table 6: Tier based inspection rate gradient

YEARS OF CONTINUOUS COMPLIANCE	INDICATIVE INSPECTION RATE*	PROGRAMME REFERENCE
0–2 year	100%	Bronze**
2–4 year	75%	Silver
4–6 years	50%	Gold
More than 6 years	25%	Platinum

Note: (*) A major violation resets the TCS and triggers enhanced monitoring

(**) Bronze represents a pre-operational onboarding and registration stage and is not considered part of the active inspection hierarchy. Upon commencement of risk-based processing, all compliant participants begin at Silver

AI Random Selection: Inspection selection is never manually discretionary. The **AI Risk Engine** sets the applicable inspection percentage for each operator's tier, and the specific consignments selected within that percentage are chosen randomly and confidentially – neither the operator nor the border officer can predict which truck will be stopped. This preserves enforcement integrity even as overall inspection intensity falls, because every truck retains some probability of inspection, incentivizing fleet-wide compliance rather than selective compliance.

A companion **Smart Caller Scheduling System** lets operators pre-book truck arrival slots, submitting cargo, driver and route details before dispatch and paying a nominal facilitation fee. The system dynamically allocates crossing slots across Busia, Malaba and Lwakhakha using real-time congestion, queue and inspection-capacity data, and flags trucks showing abnormal transit behaviour for inspection even before arrival – giving border agencies advance visibility of incoming traffic, cargo and compliance history so that manpower and inspection resources can be planned proactively rather than reactively.

3.4 Commodity-Based Facilitation

The study recognizes that not all commodities present the same risk profile.

Table 7: Inspection strategies based on commodity risk

RISK CATEGORY	ILLUSTRATIVE COMMODITIES	APPROACH
Low Risk / Homogeneous	Cement, sugar, salt, paper, plastics, metal products, beverages	Lower inspection rates, statistical sampling
Medium Risk / Semi-Homogeneous	Processed foods, textiles, machinery	Risk-based sampling
High Risk / Sensitive	Pharmaceuticals, Agro-chemicals, electronics, live animals, dual-use goods	Enhanced controls and inspections

Integration with Existing AEO Programmes

To encourage early adoption and minimize duplication, the framework proposes fast-track onboarding for operators already enrolled in existing national AEO programmes.

Such operators would receive:

- Recognition of prior audits
- Reduced onboarding requirements
- Accelerated registration
- Assessment only for corridor-specific requirements

These requirements may include multi-agency integration, transport traceability, digital reporting, and corridor compliance standards.

Strategic Importance for the Northern Corridor

The programme aligns closely with the Northern Corridor modernization strategy, which seeks to move away from repeated infrastructure expansion towards smarter border management solutions. The projected increase in traffic will make traditional inspection-based models unsustainable. By creating a corridor-wide digital trust ecosystem, CTSAP will enable authorities to handle growing traffic volumes while maintaining security, compliance, and operational efficiency. The proposed framework is expected to deliver substantial benefits:

For Governments	For Traders and Logistics Operators	For the Corridor
- Improved regulatory oversight - Better risk targeting - Reduced fraud - Enhanced revenue protection - More efficient resource utilization	- Reduced delays - Lower logistics costs - Predictable border crossing times - Reduced inspection burden - Improved competitiveness	- Higher throughput capacity - Reduced congestion - Better trade facilitation - Stronger regional integration - Improved attractiveness for investment

Governance and Continuous Monitoring

A Corridor Trust Council – comprising KRA, URA, sector regulators, TMA/TCA and private-sector representatives – oversees policy, standards and dispute resolution. Each agency continues to certify strictly within its own legal mandate and updates the Corridor Trust Registry accordingly; CTSAP federates and does not substitute existing regulatory authority. Real-time monitoring, periodic audits, AI analytics and structured feedback loops sustain the integrity and continuous improvement of the programme over time.

Implementation Roadmap

Table 8: Phased implementation roadmap for CTSAP

TIMELINE	KEY ACTIVITIES
0–6 months	Establish governance (Corridor Trust Council), define accreditation criteria and score methodology, build the Corridor Trust Registry
6–12 months	Pilot accreditation of transport operators and fast-track existing AEOs at Malaba
12–18 months	Digital integration with RECTS, Customs Single Window/ASYCUDA, weighbridge/e-seal and Smart Caller Scheduling System
18–30 months	Corridor-wide rollout across Busia, Malaba and Lwakhakha; onboard remaining accredited participant categories (freight forwarders, warehouses/ICDs, shipping/rail operators)

Beyond 30 months	Expansion, optimization and periodic recalibration of score thresholds, commodity strategy and inspection bands based on programme data
-------------------------	---

Conclusion

The proposed CTSAP represents a significant evolution from a traditional customs-focused Trusted Trader Programme. By integrating multiple regulatory agencies, introducing dynamic trust scoring, leveraging digital technologies, and applying risk-based facilitation principles, the programme creates a comprehensive corridor trust ecosystem. This approach provides a scalable platform for improving trade facilitation, strengthening regulatory compliance, supporting AI-enabled border management, and enabling the long-term sustainability of the Northern Corridor modernization agenda.

3.5 International Good Practices Informing the CTSAP

The proposed Corridor Trusted Supply Chain Assurance Programme (CTSAP) has been developed after reviewing international good practices in trusted trader programmes, supply chain security, coordinated border management, digital trade facilitation and customs modernization. While no single country has implemented a framework identical to CTSAP, numerous jurisdictions have successfully deployed complementary initiatives that demonstrate the feasibility of its individual components.

Traditional Authorised Economic Operator (AEO) and Trusted Trader programmes have significantly improved customs efficiency by rewarding compliant traders with expedited border clearance and reduced inspections. More recent reforms have focused on expanding these programmes through digital customs systems, multi-agency collaboration, coordinated border management and end-to-end cargo visibility.

CTSAP builds upon these established practices while introducing several innovations specifically designed for the Northern Corridor, including:

- Multi-agency accreditation.
- Corridor Trust Registry.
- Trusted Corridor Score.
- Progressive inspection reduction linked to sustained compliance.
- Commodity-based facilitation.
- Recognition of existing certifications.
- AI-enabled risk-based border management.

Accordingly, CTSAP should be viewed not as a completely new programme, but as an evolution of internationally proven trade facilitation principles adapted to the institutional environment of East Africa.



1. Singapore – Secure Trade Partnership (STP/STP+)

Singapore Customs operates one of the world's most mature supply chain security programmes through the Secure Trade Partnership (STP) and STP-Plus schemes. Unlike traditional customs compliance programmes, STP places significant emphasis on end-to-end supply chain security by encouraging businesses to implement internationally recognized security practices across manufacturing, warehousing, transportation and logistics operations.

The programme recognises multiple categories of supply chain participants, including manufacturers, logistics providers, warehouse operators, freight forwarders and exporters. Accredited operators benefit from reduced customs interventions, simplified procedures and access to international Mutual Recognition Arrangements (MRAs).

Relevance to CTSAP

Singapore demonstrates that trusted trade facilitation should extend beyond customs declarations and incorporate broader supply chain assurance. This principle informs the CTSAP proposal to include manufacturers, transport operators, freight forwarders, customs brokers, warehouses and importers within a common trust framework.

However, Singapore's programme remains largely customs administered. CTSAP extends this concept further by integrating approvals issued by multiple regulatory agencies through the proposed Corridor Trust Registry.

2. New Zealand – Secure Exports Scheme (SES)

New Zealand's Secure Exports Scheme (SES) represents an important evolution in trusted trade by recognizing that export security depends on every organisation involved in moving cargo.

Participation requires secure operational procedures covering cargo handling, transport, storage and loading operations. Rather than focusing solely on customs declarations, SES encourages collaboration between exporters, transport companies and logistics operators to maintain cargo integrity throughout the export journey.

Relevance to CTSAP

SES reinforces the principle that trust should be established across the logistics chain rather than being limited to importers or exporters. This directly supports the CTSAP concept of supply chain-wide accreditation.

Source: New Zealand – Secure Exports Scheme (SES)

3. European Union and Netherlands – Authorised Economic Operator (AEO)

The European Union operates one of the world's largest AEO programmes, providing customs simplifications and security benefits to compliant operators.

A notable feature of the European model is its increasing reliance on digital information exchange and recognition of existing management systems and internationally accepted security certifications. Customs authorities seek to minimise duplicate compliance assessments while promoting partnership with trusted businesses.

Relevance to CTSAP

The European experience highlights three important principles adopted within CTSAP:

- Regulatory trust should be earned through demonstrated compliance.
- Existing certifications should be recognized wherever possible.
- Digital information sharing should replace repetitive document verification.

Source: European Commission – Union Customs Code (UCC); European Commission AEO Guidelines; WCO SAFE Framework of Standards

4. Singapore National Trade Single Window

Singapore's National Trade Single Window represents one of the world's leading examples of coordinated border management. Rather than creating a single regulator, the platform enables traders to submit information once while multiple government agencies simultaneously process approvals within their respective legal mandates. This significantly reduces duplication, accelerates cargo clearance and improves regulatory coordination.

Relevance to CTSAP

The Single Window philosophy strongly informs the design of the proposed Corridor Trust Registry. Similar to Singapore's approach, CTSAP does not propose replacing customs, health, standards or transport regulators. Instead, it provides a digital platform through which existing regulatory approvals can be shared and verified across agencies.

Source: Singapore Customs – Secure Trade Partnership (STP/STP+); Singapore Customs – STP Handbook (Dec 2024); Singapore Customs – Import/Export Facilitation Schemes

5. India – Integrated Digital Trade Facilitation Ecosystem

India provides perhaps the closest institutional example of how multiple digital trade facilitation initiatives can be integrated while preserving independent regulatory mandates. Rather than relying upon a single programme, India has progressively developed a comprehensive digital ecosystem comprising:

- Authorised Economic Operator (AEO) Programme
- ICEGATE
- Indian Customs EDI System (ICES)
- SWIFT (Single Window Interface for Facilitating Trade)
- eSanchit
- Logistics Data Bank (LDB)
- Unified Logistics Interface Platform (ULIP)
- PM Gati Shakti National Master Plan

Collectively, these initiatives demonstrate how customs, logistics operators, infrastructure agencies and partner government departments can exchange verified information through interoperable digital platforms. The Indian AEO programme provides differentiated treatment for compliant traders through reduced inspections and expedited customs clearance. ICEGATE and ICES enable electronic customs declarations and digital customs processing. SWIFT integrates approvals from multiple Government Agencies, reducing repetitive documentation. eSanchit enables fully electronic submission of supporting trade documents. The Logistics Data Bank provides real-time visibility of container movement across ports and logistics corridors using RFID technology. ULIP further expands interoperability by connecting logistics data across multiple ministries and private sector participants through common APIs. Finally, PM Gati Shakti provides a digital planning platform supporting coordination between infrastructure agencies and logistics stakeholders.

Relevance to CTSAP

India demonstrates that digital integration is more important than institutional consolidation; multiple agencies can continue exercising independent legal mandates while sharing information digitally; trusted trader programmes become significantly more effective when integrated with logistics visibility platforms and digital interoperability reduces duplication and transaction costs. These principles form the foundation of the proposed Corridor Trust Registry.

Source: India – ICEGATE (Indian Customs Electronic Gateway); CBIC – Authorised Economic Operator (AEO) Programme; DPIIT – Unified Logistics Interface Platform (ULIP); PM Gati Shakti National Master Plan; Logistics Data Bank (LDB)

6. Australia–Singapore Mutual Recognition Arrangement

Singapore and Australia have established Mutual Recognition Arrangements (MRAs) allowing trusted traders accredited in one jurisdiction to receive facilitation benefits in the other. The arrangement reduces duplicate validation while improving supply chain predictability.

Relevance to CTSAP

The MRA concept supports future expansion of CTSAP across East African Community Partner States by enabling mutual recognition of trusted operators and reducing the need for repeated accreditation across borders.

Source: Australia–Singapore Mutual Recognition Arrangement (MRA); Singapore Customs MRA information (included within STP documentation); WCO MRA Compendium; Australia Border Force – Australian Trusted Trader Recognition of trusted operators across jurisdictions, reduced duplication, cross-border facilitation.

7. Lessons Incorporated into CTSAP

The review of international practice demonstrates that the proposed CTSAP combines internationally recognized approaches while introducing several new features tailored to the Northern Corridor.

International Good Practice	Incorporated in CTSAP
Trusted Trader / AEO	Yes (✓)
Secure Supply Chain ✓	Yes (✓)
Multi-agency coordination ✓	Yes (✓)
Digital Single Window principles ✓	Yes (✓)
Recognition of existing certifications ✓	Yes (✓)
Mutual Recognition principles ✓	Yes (✓)
Risk-based inspections ✓	Yes (✓)
Corridor Trust Registry	New innovation
Trusted Corridor Score	New innovation
Progressive inspection reduction linked to compliance history	New innovation
Commodity-based facilitation strategy	New innovation
AI-enabled corridor-wide risk engine	New innovation

Conclusion

The international experience demonstrates that the building blocks of CTSAP are already well established globally. Trusted trader programmes, digital customs platforms, coordinated border management, secure supply chain initiatives and logistics visibility systems have all delivered measurable improvements in trade facilitation and compliance.

CTSAP brings these proven elements together within a single corridor-wide governance framework while introducing innovations specifically designed for the Northern Corridor. By integrating existing regulatory approvals through a Corridor Trust Registry, applying a Trusted Corridor Score, enabling progressive compliance incentives and supporting AI-enabled risk-based inspections, the proposed framework provides a scalable pathway towards a secure, efficient and digitally integrated trade facilitation ecosystem.

3.6 Synergies with Existing TradeMark Africa Programmes

The proposed Corridor Trusted Supply Chain Assurance Programme (CTSAP) has been designed to complement and enhance ongoing TradeMark Africa initiatives rather than creating a parallel intervention. By leveraging existing digital infrastructure, institutional partnerships and trade facilitation programmes, CTSAP can accelerate implementation while maximizing the value of previous investments.

Synergy with GRID/FRESH Programme

The GRID/FRESH Programme seeks to improve the movement of agricultural and perishable products through strengthened logistics, digitalization and improved border efficiency.

CTSAP complements these objectives by introducing a trusted supply chain framework that strengthens cargo traceability, improves regulatory confidence and enables differentiated border treatment for compliant operators. The following areas of synergy are envisaged:

GRID/FRESH Objectives	CTSAP Contribution
Reduced transit time for perishables	<i>Trusted operators receive priority processing and lower inspection rates</i>
Improved cold chain reliability	<i>Faster border clearance reduces spoilage and temperature excursions</i>
Digitalization of supply chains	<i>Corridor Trust Registry provides digital visibility across the logistics chain</i>
Risk-based border management	<i>Trusted Corridor Score supports intelligence-led inspections</i>
Strengthened compliance	<i>Multi-agency accreditation improves regulatory assurance across the value chain</i>

For agricultural products requiring SPS, veterinary and food safety clearances, CTSAP provides a mechanism for integrating these regulatory approvals into a single digital trust profile, reducing repetitive verification while maintaining regulatory oversight.

Synergy with the SITA Programme

Sustainable Inclusive Trade in Africa (SITA) focuses on improving sanitary and phytosanitary (SPS) compliance, food safety and trade facilitation for agricultural commodities. CTSAP complements SITA by extending trust beyond regulatory compliance to encompass the entire logistics chain. Potential areas of integration include:

- Recognition of SPS-certified producers within the Corridor Trust Registry.
- Integration of plant health and veterinary certifications into the trusted shipment profile.
- Digital verification of food safety approvals.

- Risk-based inspection planning using SPS compliance history.
- Reduced physical inspections for consistently compliant exporters and transporters.
- Improved traceability for high-value agricultural exports.

By integrating SITA certification data into CTSAP, border agencies can shift from document verification towards intelligence-led compliance management.

Integrated Digital Ecosystem

Collectively, the three initiatives create complementary layers of trade facilitation.

Programme	Primary Focus	CTSAP Integration
GRID/FRESH	Efficient movement of agricultural and perishable cargo	Trusted logistics and expedited border processing
SITA	SPS, food safety and regulatory compliance	Multi-agency digital trust and integrated regulatory verification
CTSAP	Corridor-wide trusted supply chain assurance	Digital trust platform integrating existing programmes

Rather than operating independently, CTSAP provides the digital governance framework through which existing investments in digital trade facilitation, SPS compliance and logistics modernization can be leveraged to support faster, more predictable and secure border crossings.

4 Strengthening the proposed Financing Structure through Co-Equity Participation

The pre-feasibility study proposed a **blended financing framework** for the Kenya–Uganda OSBP upgrade programme to support implementation of the proposed infrastructure and operational interventions through a combination of development finance, equity participation and catalytic grant funding. Based on the preliminary financial assessment, the overall funding requirement, including capital costs, financing costs, inflation and associated contingencies, was estimated at ~**USD 142 million**, with the proposed capital structure comprising approximately **70% debt and 30% equity**. Under this structure, long-term debt financing was envisaged to be mobilized from DFIs, while TCA was proposed to act as the anchor equity partner under the envisaged PPP implementation framework.

The financial assessment undertaken during the pre-feasibility stage also indicated that, while the proposed debt component could be mobilized through development finance institutions, the overall equity requirement would significantly exceed the level of equity that could reasonably be mobilized by TCA alone. With TCA expected to contribute an anchor equity investment of ~**EUR 5 million**, additional equity participation would be required to achieve the proposed capital structure and provide a sufficiently robust equity base against which long-term debt financing could be leveraged.

Accordingly, following endorsement of the pre-feasibility study by the key project stakeholders, further engagement was undertaken with selected development and impact-oriented institutions to explore opportunities for **co-equity participation** alongside TCA. The objective of these engagements was not only to bridge the equity requirement, but also to strengthen investor confidence, diversify the capital structure and improve the attractiveness of the project to prospective lenders and development finance institutions. In this context, discussions were held with the **Japan International Cooperation Agency (JICA)** and **British International Investment (BII)** to present the proposed financing structure, understand their investment perspectives and explore their potential role in supporting the project through appropriate equity or blended financing instruments.

4.1 Development of the Project Investment Proposition

The prefeasibility study outcomes were translated into a dedicated **Infrastructure Investment Proposition** to support engagement with prospective co-equity partners. The investment proposition positioned the Kenya–Uganda border upgrade program as a commercially structured, corridor-wide investment opportunity under a Public–Private Partnership framework. The investment proposition consolidated the technical concept, implementation strategy, financial structure, revenue model, governance framework and phased development approach into a coherent investor-focused narrative, enabling potential investors to evaluate the commercial rationale, implementation readiness, risk allocation principles and long-term investment potential.

Assessment of Financial Returns and Investment Attractiveness

The investment proposition further strengthened the financial case by translating the pre-feasibility financial model into a comprehensive investor-oriented assessment of commercial performance. Building upon the traffic forecasts, phased capital investment programme, operating expenditure assumptions, user fee framework and blended financing structure developed during the pre-feasibility study, a range of financial scenarios and sensitivity analyses were evaluated to assess project resilience under different traffic growth and revenue conditions. Particular emphasis was placed on demonstrating long-term equity returns, debt servicing capacity, cash flow adequacy and repayment profiles, while illustrating how the proposed blended financing structure enhances project bankability and optimizes risk allocation between public and private stakeholders.

All scenarios are based on a conservative assumption of a minimum user fees [USD 10 for local trucks and USD 20 for transit trucks], with no indexation applied over the project period.

Table 9: Financial Outputs - Case 1

Total Funding Envelope	Senior Debt	Sub Debt	Equity
~USD 142	~USD 80	~USD 20	~USD 42
Base Case	High Case	Low Case	
Traffic Growth (CAGR): 6.05%	Traffic Growth (CAGR): 7.05%	Traffic Growth (CAGR): 5.05%	
Free Cash Flow to Firm (NPV): ~USD 180 M	Free Cash Flow to Firm (NPV): ~USD 299 M	Free Cash Flow to Firm (NPV): ~USD 90 M	
Free Cash Flow to Equity (NPV): ~USD 205 M	Free Cash Flow to Equity (NPV): ~USD 323 M	Free Cash Flow to Equity (NPV): ~USD 116 M	
Project IRR: 8.85%	Project IRR: 11.16%	Project IRR: 6.52%	
Equity IRR: 14.46%	Equity IRR: 17.44%	Equity IRR: 11.37%	
Debt Payback Period: 12 Years of Operations	Debt Payback Period: 11 Years of Operations	Debt Payback Period: 12 Years of Operations	

Based on the results presented above, the project demonstrates strong financial viability from a private sector perspective. Notably, even modest upward revision in user fees significantly enhances returns, with an Equity IRR of > 16% achievable at a **user fee of USD 15 for local trucks and USD 30 for transit trucks** under the same assumptions. The corresponding financial output for this revised pricing scenario is presented below:

Table 10: Financial Outputs - Case 2

Total Funding Envelope	Senior Debt	Sub Debt	Equity
~USD 142	~USD 80	~USD 20	~USD 42
Base Case	High Case	Low Case	
Traffic Growth (CAGR): 6.05%	Traffic Growth (CAGR): 7.05%	Traffic Growth (CAGR): 5.05%	
Free Cash Flow to Firm (NPV): ~USD 742 M	Free Cash Flow to Firm (NPV): ~USD 946 M	Free Cash Flow to Firm (NPV): ~USD 569 M	
Free Cash Flow to Equity (NPV): ~USD 762 M	Free Cash Flow to Equity (NPV): ~USD 965 M	Free Cash Flow to Equity (NPV): ~USD 589 M	
Project IRR: 16.94%	Project IRR: 18.65%	Project IRR: 15.21%	
Equity IRR: 24.33%	Equity IRR: 26.39%	Equity IRR: 22.26%	
Debt Payback Period: 9 Years of Operations	Debt Payback Period: 8 Years of Operations	Debt Payback Period: 9 Years of Operations	

The analysis demonstrated that the proposed financing structure is capable of generating competitive long-term investment returns while maintaining affordability for corridor users, thereby positioning the project as an attractive opportunity for development finance institutions, impact investors and strategic co-equity partners.

The analysis above is based on a 3.0% discount rate; NPV sensitivity at discount rates of 4.0% and 5.0% is presented in Section 9.3.3.

Assessment of Development Impact

Recognizing that development finance institutions assess investments on the basis of both commercial viability and measurable development outcomes, the investment proposition also quantified the wider economic, social and environmental benefits expected to arise from implementation of the proposed programme. The assessment combined outputs from the traffic forecasting model, financial model, willingness-to-pay assessment and operational analyses undertaken during the pre-feasibility study to estimate the broader value created by the proposed interventions.

The **economic benefit assessment** was primarily derived by estimating the reduction in delay costs achieved through improved border operations. Using the projected reduction in average border crossing time **~3.5 hours per truck per border crossing** for the majority of corridor users, with substantially higher savings for trucks utilizing the premium facilitation services, the analysis quantified the monetary value of time savings over the concession period of 20 years. From these gross delay cost savings, the capital and operating expenditure and user fees paid by benefiting trucks for accessing the enhanced border services were deducted to estimate the **net economic benefit accruing to corridor**

users, resulting in an estimated **Net Present Value of ~USD 874 million discounted at assumed 3% discount rate** over the project life of 20 years.

[3% discount rate reflects a conservative long-term macroeconomic assumption for the Kenya–Uganda corridor. This assumption is consistent with methodologies commonly applied to multi-country infrastructure projects and represents a base-case scenario in which inflation is expected to remain low and stable across both economies. The analysis assumes medium-term core inflation of 4% to 5% in Uganda, while Kenya's inflation target is maintained within a 3% to 5% range, with a ±1.5 percentage point tolerance band based on historical trends.]

As a sensitivity check, the NPV of the estimated savings remains substantial even under higher discount-rate assumptions. At a **4% discount rate, the NPV is ~USD 807 million**, while at a more conservative **5% discount rate, the NPV remains ~USD 747 million**. This demonstrates that the overall economic case remains robust even when applying a higher discount rate than the 3% base-case assumption.

Employment Assessment

The employment impact of the proposed programme has been estimated using a project-level Employment Impact Assessment approach, consistent with the methodology promoted by the International Labour Organization (ILO) for infrastructure investments. The approach distinguishes between direct employment generated by the project, indirect employment generated through the project supply chain, and employment associated with the operation and maintenance of the completed infrastructure.

For the present pre-feasibility assessment, the calculation has been structured around the indicative **~USD 120 million CAPEX** for the proposed interventions at Malaba and Lwakhakha, an assumed **3-year construction period**, and approximately **17 years of operations**. Given the absence of detailed BOQs, contractor staffing plans and final operating arrangements at this stage, the employment parameters below are treated as indicative pre-feasibility assumptions and are intended to establish the order of magnitude of employment impact. They should be replaced by project-specific data during feasibility.

Construction-phase employment

- **Employment assumption:** For the pre-feasibility assessment, **20% of total CAPEX** is assumed to represent labour-related expenditure. This is a **project-specific assumption** and reflects the employment components of the proposed works, including civil works, buildings, yards, roads, utilities, installation and associated construction activities. The balance of CAPEX relates primarily to materials, equipment, technology, scanners, smart gates, ICT and other capital inputs.

USD 120 million x 20% = USD 24 million

- **Blended labour cost:** An indicative **USD 16,700 per worker/annually** is applied as a blended cost across skilled, semi-skilled and general construction labour. This is also a pre-feasibility project assumption, reflecting the expected mix of employment categories rather than a published infrastructure-wide wage benchmark.

- **Direct construction employment:**

$$\text{USD 24 million} \div \text{USD 16,700} = \sim 1,437 \text{ jobs}$$

Since construction is assumed to take approximately **three years**, these represent **temporary/contractual construction employment**, rather than 1,437 permanent positions.

- **Indirect construction employment:** The construction programme will also generate employment through suppliers and subcontractors providing construction materials, equipment, transportation, logistics, professional services and other project inputs. For the pre-feasibility assessment, an indicative 50% indirect-to-direct employment ratio is applied:

$$1,437 \times 50\% = \sim 719 \text{ jobs}$$

- **Total construction employment:**

$$\sim 1,437 \text{ direct} + \sim 719 \text{ indirect} = \sim 2,156 \text{ jobs}$$

The use of an indirect-employment component is consistent with the ILO framework, under which indirect employment arises from increased demand for inputs from supplying sectors. The precise multiplier, however, is highly dependent on local sourcing, sector structure and the national input-output relationships and should therefore be calibrated during feasibility.

Operations and maintenance employment

The operating-phase assessment is treated differently from construction because the proposed border infrastructure will require a **recurring workforce over the operating period**. The estimate therefore focuses on the incremental employment associated with the new/expanded facilities and systems, rather than counting the existing KRA, URA, immigration, standards, security and other government personnel already deployed at the border posts.

- The proposed interventions introduce additional requirements relating to facility and yard management, traffic management, ICT and digital systems, smart gates, OCR/scanning equipment, equipment maintenance, security, administration and facility services.
- For the pre-feasibility assessment, an indicative **40 incremental O&M positions across Malaba and Lwakhakha** has been assumed, equivalent to ~20 incremental positions per border post.
- This indicative workforce can be broadly structured as:

O&M function	Indicative positions
Facility and yard / traffic management	8
ICT and digital systems support	6
Smart gates, OCR and scanning equipment support	6
Facility and equipment maintenance	6
Security and access management	6
Administration and service support	4
Technical supervision / management	4
Total	40

- The **40 positions** are intended to represent incremental project-related employment, particularly for functions created or expanded by the new infrastructure and technology. They do not represent the total workforce of the OSBPs.
- Applying the assumed **17-year operating period**:
 $40 \text{ employees} \times 17 \text{ years} = 680 \text{ direct O\&M jobs}$

This project-level approach is consistent with the ILO's infrastructure employment methodology, which assesses direct employment separately for both the construction and operation/maintenance phases.

- **Indirect O&M employment:** The operating facilities will also create demand for outsourced and supporting services, including equipment and ICT maintenance, cleaning, facility services, security support, utilities, technology providers and other local suppliers.
- An indicative **25% indirect employment factor** is applied to direct O&M employment:
 $680 \times 25\% = \sim 170 \text{ indirect O\&M jobs}$

- **Total O&M employment:**
 $\sim 680 \text{ direct} + \sim 170 \text{ indirect} = \sim 850 \text{ jobs}$

The 25% factor is a **project-specific pre-feasibility assumption**, not a universal infrastructure multiplier. International employment-impact methodologies recognize that indirect and induced effects should ideally be derived from local supply-chain or input-output data.

Employment component	Calculation	Indicative impact
Direct construction	USD 120m × 20% ÷ USD 16,700	~1,437
Indirect construction	1,437 × 50%	~719
Direct O&M	40 × 17 years	680
Indirect O&M	680 × 25%	170
Total employment impact	~3,000 jobs	

Accordingly, the programme is estimated to support approximately **3,000 direct and indirect jobs** across its construction and operating phases. The estimate captures both the temporary employment associated with the initial infrastructure investment and the recurring employment generated by operation and maintenance of the upgraded facilities, together with employment supported through associated supply chains.

Importantly, the ~3,000 figure should be understood as an indicative employment impact over the project horizon. The construction component is predominantly contractual and temporary, while the O&M component represents recurring employment over the operating period. This distinction is consistent with the ILO approach, which recommends accounting for both the number of people employed and the duration of employment.

Basis for refinement during feasibility

The above calculation provides a **pre-feasibility order-of-magnitude estimate**. During the feasibility stage, the methodology can be strengthened by replacing the indicative assumptions with project-specific data, including:

- *detailed BOQ and CAPEX breakdown by construction package;*
- *actual employment requirements for civil works, buildings, roads, utilities and technology installation;*
- *contractor and subcontractor staffing plans.*

The employment estimate presented above is project-specific and intentionally limited to the direct and readily attributable employment associated with the proposed infrastructure investment and its O&M requirements. The broader economic impact of the programme is expected to extend beyond these quantified jobs. Improved border efficiency, reduced delays, increased freight throughput, improved connectivity and the anticipated growth in corridor traffic are expected to generate additional

employment across logistics, transport services, warehousing, freight forwarding, trade-support services, maintenance, local businesses and other corridor-linked activities. These wider employment effects have not been included in the ~3,000 estimate at the pre-feasibility stage to avoid overstating the impact. During the feasibility stage, these indirect and induced employment effects will be assessed in greater detail using refined traffic forecasts, corridor-level economic activity, local procurement assumptions and appropriate sectoral employment multipliers.

Environmental Assessment

The **environmental assessment** focused on the operational efficiencies created by the proposed corridor-wide interventions. By reducing truck queuing, idling and stop-start movements at border crossings, together with enabling faster processing through risk-based inspections and digital border management systems, the proposed programme is expected to substantially reduce fuel consumption and associated greenhouse gas emissions. Based on projected truck volumes and the estimated reduction in average vehicle idling time of approximately **3.5 hours per truck per border crossing**, the assessment estimated that the proposed interventions could avoid approximately **60,000 tonnes of CO₂ emissions annually**, while simultaneously improving air quality and contributing towards the broader climate objectives associated with sustainable transport and logistics infrastructure.

The potential environmental benefit was estimated by linking the **reduction in border-processing delays** expected from the proposed interventions with the associated reduction in truck queuing time and processing time. The calculation uses the projected scale of truck movements and the estimated **3.5-hour average reduction in border-related delay per truck** once the system is operating at scale.

Parameter	Indicative assumption
Annual truck movements benefiting from improved processing	~2.15 million
Average delay reduction per truck	~3.5 hours
Total vehicle-hours avoided	~7.5 million hours/year
Indicative fuel consumption during idling/slow movement	~3 Liters/hour
Diesel consumption avoided	~22.6 million Liters/year
CO ₂ emission factor for diesel	~2.68 kg CO ₂ /litre
Estimated CO₂ emissions avoided	~60,000 tonnes/year

The assessment considers annual truck movements across the three focus border posts to increase from approximately 1.2 million trucks in 2025 to around 4.5 million trucks annually over the forecast period till 2047 as indicated in Annexure 9.1. For estimating the potential CO₂ reduction, an average annual volume of approximately **2.15 million truck movements** has therefore been considered as a representative traffic volume over the assessment period. Of this volume, approximately **15% comprise transit trucks**, with the remaining **85% comprised of local trucks**. The transit and local truck categories includes both trucks that are expected to participate in the proposed express solution arrangements and those that may continue to use the conventional border-processing route. The latter are nevertheless expected to receive some indirect benefits from reduced congestion and faster processing as eligible trucks are diverted towards the proposed express processing arrangements.

The time savings vary depending on the type of truck and the extent to which it directly uses the proposed interventions. Transit trucks using the Lwakhakha express facility and No-stop local trucks under CTSAP are expected to receive the largest benefit, with an average saving of around **7 hours** per truck per border crossing. Local trucks participating in the proposed solution but still subject to inspection are expected to save approximately **2.5 hours** per border crossing, while trucks continuing through the conventional process could benefit indirectly from reduced congestion and shorter queues, with indicative savings of approximately **1–2 hours**. Please refer to Annexure 9.3.4 for more details on time savings on different categories of trucks.

Given these different benefit levels, an indicative **average time saving of 3.5 hours per truck per border crossing** has been adopted for the broad-level CO₂ assessment. This should therefore be interpreted as an average across the different categories of beneficiaries rather than as the saving applicable to every truck; the substantially higher savings for zero-stop transit movements are offset by the lower direct and indirect savings for other categories. The emissions estimate should be further validated during the feasibility stage using updated traffic projections, observed baseline waiting times, vehicle fleet characteristics and measured fuel-consumption parameters.

4.2 Engagement with JICA – Synergy with existing border investments



Engagement with JICA was undertaken to explore how the proposed Kenya-Uganda OSBP upgrade program could complement ongoing and planned development-partner investments along the Kenya–Uganda corridor. This was particularly relevant given JICA's existing focus on the **Malaba West Post**, creating a natural interface between the physical improvements already being considered and the wider infrastructure, technology and process-transformation interventions proposed under the pre-feasibility assessment.

The engagement reinforced an important principle for the next stage: the proposed project should not be developed as another standalone border infrastructure intervention. Rather, it can provide a

complementary layer around existing and committed investments, addressing areas such as express processing facilities, technology-enabled traffic management, risk-based inspections, smart gates, digital scheduling and sustainable financing of border improvements.

The engagement also highlighted the importance of aligning border investments with the wider corridor infrastructure pipeline, including proposed road and expressway improvements and AfDB-supported initiatives being coordinated through the EAC. The effectiveness of the proposed facilities will ultimately depend upon adequate feeder-road and corridor connectivity, making continued development-partner coordination important during the feasibility stage.

From a financing perspective, JICA's relevance therefore extends beyond being a potential source of capital. Existing and planned development-partner investments could potentially be **integrated with the wider CRM financing architecture**, reducing duplication and allowing different institutions to support components aligned with their respective mandates. The precise form of JICA's participation through complementary infrastructure, development finance, technical assistance or other instruments can be explored further as the project progresses through feasibility.

4.3 Engagement with BII



British
International
Investment

The project was positioned to BII as an **infrastructure and impact investment opportunity**, translating the technical recommendations of the pre-feasibility study into an investible proposition comprising targeted investments at Malaba and Lwakhakha, a 20-year concession framework, identifiable users of premium services, a defined user-fee mechanism and projected revenue streams capable of supporting debt servicing and equity returns. The purpose of the analysis presented in section 4.1 was not to establish the final tariff, but to demonstrate the relationship between **service benefits, user-fee levels, traffic adoption and investor returns**, enabling the project to be evaluated through conventional infrastructure-investment parameters. The investment case is further supported by substantial development benefits.

At this stage, such engagement remains preliminary and subject to detailed feasibility, due diligence and investment approvals. Nevertheless, it represents an important progression from establishing the financial viability of the CRM towards determining **how that viability can be converted into a bankable capital structure bringing together TCA, co-equity investors, DFIs and appropriate risk-mitigation instruments**.

4.4 Implications for the Financing Strategy Going Forward

The engagements undertaken following completion of the pre-feasibility study provides an important next layer of validation for the proposed financing framework. The emerging financing strategy



therefore envisages a **multi-partner capital structure rather than dependence on a single financing source.**

The positive preliminary engagement with **JICA and BII**, viewed alongside earlier discussions with DFIs and guarantee institutions, indicates that the project is capable of generating interest across different classes of development-oriented capital. At this stage, these discussions should therefore be viewed as **preliminary market validation rather than financing commitments.** The next step during the feasibility stage will be to translate this interest into a more defined financing plan based on detailed engineering costs, confirmed traffic and user-fee assumptions, final institutional and legal arrangements, allocation of project risks, SPV and concession structures and detailed lender/investor due diligence.

5 Strengthening the Regional Governance and Implementation Framework

Following completion of the pre-feasibility study, a joint workshop was held with the **EAC, KRA and URA** in Arusha to further strengthen the institutional, governance and implementation arrangements required for progressing the proposed Kenya-Uganda border upgrade program into the feasibility stage. While the technical, financial and operational viability of the proposed interventions had already been established during the pre-feasibility assessment, these engagements focused on defining **how the project should be governed, coordinated and implemented** within the existing regional and national institutional framework. The discussions reaffirmed that the proposed initiative should not be viewed as a standalone infrastructure investment, but rather as a **regional trade facilitation programme** requiring coordinated participation of multiple governments, border agencies and regional institutions.

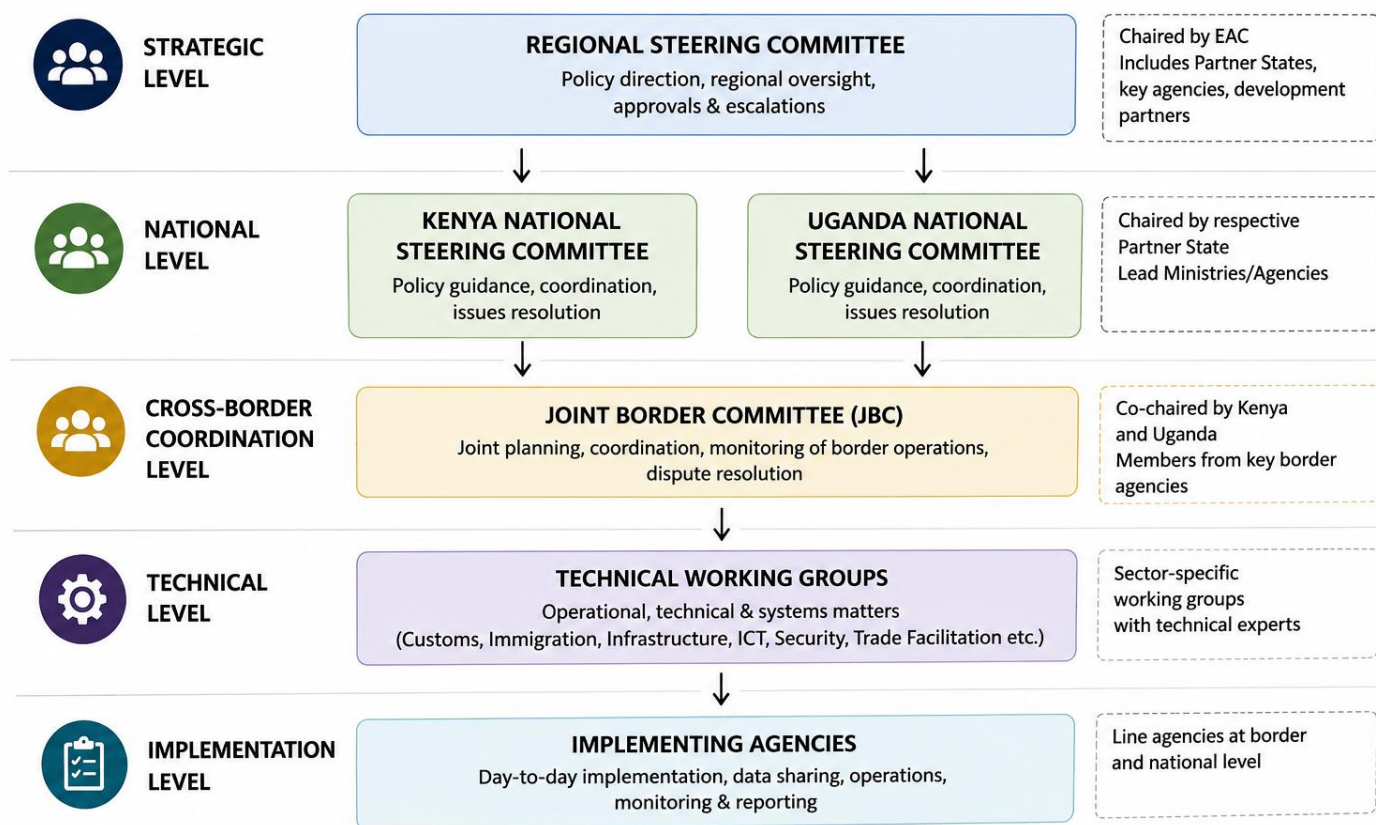
Although the Kenya–Uganda corridor represents the most appropriate pilot owing to its high traffic volumes, institutional readiness and immediate congestion challenges, stakeholders agreed that the implementation approach should be developed within the broader policy architecture of the **East African Community**, thereby creating a framework that could subsequently be replicated across other strategic border crossings within the region.

A key outcome of these engagements was the development of a **clearer governance structure** for the next stage of project preparation. Rather than establishing new implementation institutions, the EAC advised that the feasibility stage should leverage the existing regional governance mechanisms already established under the OSBP framework.

These include the **Regional Steering Committee, National Steering Committees, Joint Border Committees and thematic Technical Working Groups**, each operating within clearly defined mandates. Under this approach, overall regional coordination would be undertaken through the EAC Secretariat, while implementation responsibility would remain with the respective Partner States through their designated lead agencies, ensuring consistency with existing institutional arrangements and regional decision-making processes.

The consultations also reinforced the importance of adopting a **multi-tier governance model** to manage the complexity of a cross-border Public–Private Partnership. While strategic oversight would continue through the established regional governance structures, stakeholders recommended establishing a dedicated **joint project task force** during the feasibility stage to coordinate technical studies, financial structuring, legal assessments, stakeholder engagement and project preparation activities. Such an arrangement would improve coordination between Kenya and Uganda while ensuring that project decisions remain aligned with the broader regional policy objectives of the EAC.

Figure 2: Proposed Multi-Tier Governance Framework



Another important outcome was greater clarity regarding the pathway through which regional policy decisions and legal reforms would be progressed. The EAC emphasized that matters requiring amendments to regional instruments, adoption of new policy measures or endorsement of implementation frameworks should continue to progress through the established EAC technical committees and sectoral organs before submission to the **Council of Ministers**, thereby ensuring regional ownership and legal enforceability. The Secretariat also highlighted its convening role in coordinating future technical meetings, stakeholder consultations and policy discussions, ensuring that implementation of the Kenya–Uganda pilot remains fully aligned with the wider regional integration agenda.

The consultations further recognized that successful implementation extends beyond governance arrangements alone and requires sustained institutional coordination between customs administrations, immigration authorities, standards agencies, security agencies and other border management institutions. Stakeholders therefore emphasized the need to progressively strengthen regional cooperation in areas such as **risk-based inspection methodologies, mutual recognition of compliance, customs data exchange, scanner image sharing and coordinated border operations**, all of which will form important components of the feasibility stage and subsequent implementation programme.

Box 3: Consultation with KRA Legal Team

Complementing the broader regional governance discussions, a separate consultation was undertaken with the **KRA Legal Team** to examine the legal and contractual arrangements required for implementing a privately financed, cost-recovery model within Kenya's existing statutory framework. The discussions moved beyond the conceptual feasibility established during the pre-feasibility study and focused on identifying the legal principles that should guide detailed structuring during the feasibility stage.

The KRA Legal Team highlighted that implementation should be structured as a **government-enabled Public-Private Partnership**, recognizing that core border management functions remain sovereign responsibilities while allowing the private sector to finance, develop and operate agreed infrastructure and service components under clearly defined contractual arrangements. Accordingly, the respective responsibilities of government agencies and the private concessionaire would need to be transparently allocated through an appropriate concession or PPP framework, supported by clearly defined performance standards, operational obligations, revenue management arrangements and government oversight mechanisms.

Particular emphasis was placed on establishing a robust legal basis for the proposed **user-pay mechanism**. The discussions concluded that implementation would require careful examination of the existing statutory framework governing border charges to determine whether the proposed service fee could be accommodated within current legislation or whether additional legislative or regulatory provisions would be required. This legal clarity will be fundamental to ensuring transparency in revenue collection, investor confidence, long-term contractual certainty and public accountability.

The legal consultation also aligned closely with discussions held with the **Uganda PPP Unit**, where similar emphasis was placed on establishing an appropriate concession framework, demonstrating Value for Money, obtaining the necessary government approvals and ensuring that the proposed financing structure is fully supported by the applicable legal and institutional framework. Collectively, these consultations have significantly strengthened the governance and implementation pathway for the project, providing a robust institutional foundation for advancing the Kenya-Uganda pilot into detailed feasibility while establishing governance principles that can support future replication across the East African Community.

6 Corridor Infrastructure development and alignment

The pre-feasibility study assessed the proposed Cost Recovery Mechanism (CRM) within the wider context of freight movement along the Northern Corridor, recognizing that traffic through the Kenya–Uganda border posts are influenced not only by conditions at the border itself but also by developments across the broader transport network. Road capacity improvements, railway investments, inland logistics facilities and Lake Victoria transport can influence the choice of freight mode and route and, consequently, the long-term volume of trucks using individual border crossings.

Since the traffic assessment and financial modelling were undertaken, a number of major transport initiatives along the corridor have progressed. Most notably, Kenya has commenced construction of the **Naivasha–Kisumu section of the Standard Gauge Railway (SGR)**, with the planned extension onwards from Kisumu to Malaba; Uganda is progressing the corresponding **Malaba–Kampala SGR**; investments in the existing **Metre Gauge Railway (MGR)** are continuing; and multimodal freight connectivity through **Kisumu Port and Lake Victoria** is being strengthened.

These developments raise an important question for the proposed Kenya-Uganda OSBP upgrade program: *Could increasing rail and lake-transport capacity divert a material proportion of freight currently transported by road and therefore affect the traffic and revenue assumptions underlying the proposed investments at Malaba and Lwakhakha?*

This section reviews the principal developments and assesses their implications for the assumptions adopted during the pre-feasibility study.

6.1 Development of the Standard Gauge Railway along the Northern Corridor

Kenya: Naivasha–Kisumu SGR

The most significant recent development on the Kenyan side is the progression of the SGR westwards from Naivasha towards **Kisumu and ultimately Malaba**. Following the formal launch of the extension in March 2026, Kenya Railways confirmed that **actual construction works on the Naivasha–Kisumu section commenced in July 2026**, with construction being progressed from both ends of the alignment. The project represents Phase 2B of Kenya's SGR programme and forms part of the wider railway connection towards Malaba.

Reference: <https://citizen.digital/article/kenya-railways-begins-construction-of-naivasha-malaba-sgr-project-n385610>

Kenya Railways –Kisumu–Malaba SGR construction

The subsequent **Kisumu–Malaba section** is intended to extend the modern railway system to the Kenya–Uganda border, where it would interface with Uganda's Malaba–Kampala SGR. Uganda's

Ministry of Works and Transport describes this as part of a continuous regional railway connection between Mombasa and Malaba and ultimately Kampala.

The development is important for the proposed Kenya-Uganda OSBP upgrade program because the completed railway is explicitly intended to shift a greater proportion of long-distance and heavy freight from road to rail.

Uganda: Malaba–Kampala SGR

The corresponding railway investment is also progressing on the Ugandan side. Construction of the approximately **272–273 km Malaba–Kampala SGR** was formally launched in November 2024, and Uganda's FY2025/26 Budget Speech confirmed that initial construction works had commenced.

The programme has achieved an important financing milestone since. In June 2026, the Islamic Development Bank approved approximately **EUR 650.75 million** of financing for the project, including the Jinja Nile Bridge, Mbuya–Kampala tunnel, six stations and associated workshops. The Government of Uganda indicated that it was working towards financial closure for the wider project.

Reference: <https://www.railwaygazette.com/infrastructure/2024/11/29/president-launches-construction-of-ugandan-standard-gauge-railway/>

Taken together, the Kenyan and Ugandan investments indicate the progressive development of a continuous modern rail freight axis:

Mombasa → Nairobi → Naivasha → Kisumu → Malaba → Kampala

6.2 Continued Role and Rehabilitation of the Metre Gauge Railway

The development of the SGR does not mean that the existing railway network will remain static until the new system is completed. Investments are simultaneously being made in the **Metre Gauge Railway**, creating a nearer-term potential influence on freight modal share.

On the Kenyan side, rehabilitation works have continued on sections of the MGR network. In January 2026, Kenya Railways completed a successful test operation on the rehabilitated **Uplands–Longonot–Kijabe MGR corridor**, following works including bridge strengthening, drainage reconstruction, embankment stabilization and track realignment.

On the Ugandan side, the MGR continues to provide the principal operational railway connection between the Kenyan border and Kampala. Uganda's latest transport strategy identifies the **Malaba–Tororo–Kampala line as operational**, while a wider railway rehabilitation programme is being implemented to strengthen freight connectivity.

Of particular relevance is the **EAC Railway Rehabilitation Project**, supported by the African Development Bank and Government of Uganda. The programme includes rehabilitation of the Malaba–Kampala MGR, rolling stock and marine vessels, trade facilitation measures and climate-resilience interventions, with the objective of reducing transport costs and improving trade competitiveness along the Northern Corridor.

Accordingly, the potential shift of freight towards rail should be viewed as a **progressive development rather than a single future event associated only with SGR completion**. Improvements to the MGR can influence modal choice in the near to medium term, while completion of the SGR would provide a more significant structural increase in rail capacity over the longer term.

6.3 Strengthening of Kisumu–Lake Victoria Multimodal Connectivity

A further development relevant to future freight distribution is the strengthening of the **Kisumu–Lake Victoria multimodal transport system**.

Kisumu Port provides an interface between Kenya’s railway network and Lake Victoria, enabling cargo to move by rail to Kisumu and subsequently by vessel towards Uganda. Kenya Railways identifies the **Kisumu–Port Bell route** as an established freight connection, with MV Uhuru capable of carrying approximately **1,400 tonnes** and operating between Kisumu and Port Bell.

This capacity has subsequently been strengthened through **MV Uhuru II**, which was handed over to Kenya Railways in September 2024 and has commenced operations. Kenya Railways specifically identifies the vessel as part of a multimodal system integrating **road, rail and water transport**, allowing cargo to move from Mombasa to Naivasha by SGR, onwards to Kisumu by MGR and subsequently across Lake Victoria towards Uganda and northern Tanzania.

Reference: <https://www.standardmedia.co.ke/farmkenya/article/2001503001/kdf-hands-over-sh2-4-billion-mv-uhuru-ii-to-kenya-railways>

Kenya Railways – MV Uhuru II and Kisumu multimodal connectivity

Developments are also occurring on the Ugandan side of Lake Victoria. Uganda is progressing **Bukasa Port near Kampala**, which is planned as a multimodal facility supported by road and rail connections. Uganda’s infrastructure plan identifies **Port Bell–Kisumu and Port Bell–Mwanza** as operational regional Lake Victoria routes.

Collectively, these developments strengthen an alternative multimodal freight chain:

Mombasa → Rail → Kisumu → Lake Victoria → Uganda

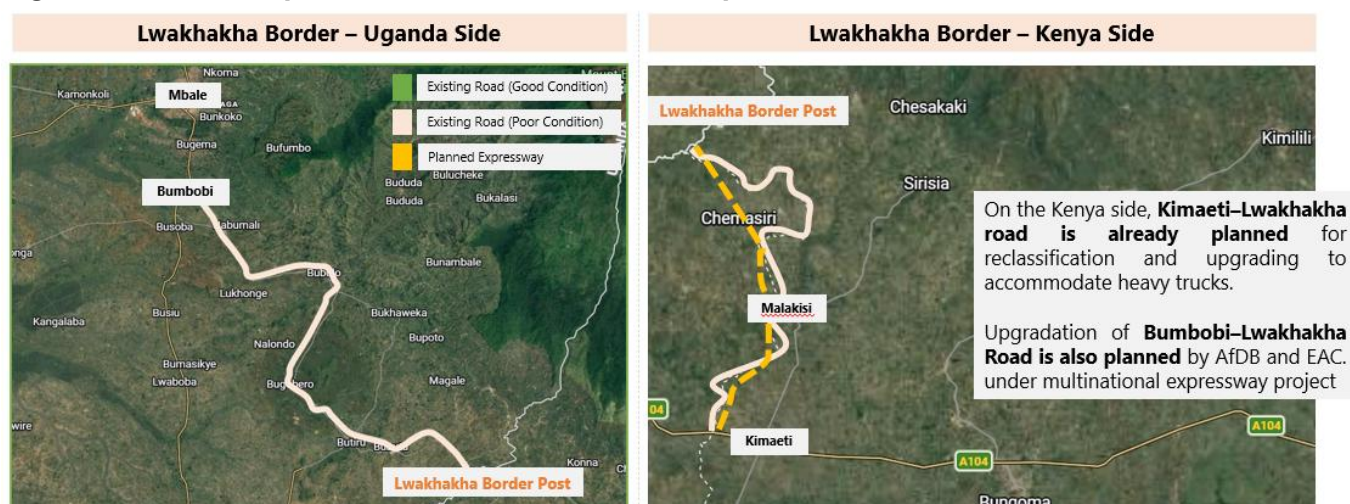
For certain cargo categories, particularly bulk and less time-sensitive freight, this can provide an alternative to the end-to-end road movement through the Kenya–Uganda land border posts.

6.4 Road Network developments

The proposed development of Lwakhakha as a “Zero-stop” transit-focused border crossing is closely linked to the capacity and condition of its connecting road network on both the Kenya and Uganda sides. During the pre-feasibility assessment, road connectivity was therefore reviewed alongside the border infrastructure requirements to determine whether the surrounding network could support the anticipated redistribution of freight traffic towards Lwakhakha.

On the **Kenyan side**, the **Kimaeti–Lwakhakha road** provides the principal connection between the border and the wider road network around Bungoma. The road is currently a two-lane single carriageway; however, its **reclassification and upgrading to accommodate heavy commercial vehicles is already planned**. The assessment recommended retaining the two-lane configuration based on projected traffic requirements, together with improvement of the intersection at Kimaeti to a full-clover Grade-Separated Interchange (GSI) to facilitate efficient movement between the Lwakhakha approach and the wider highway network.

Figure 3: Road Developments around Lwakhakha border post



On the **Ugandan side**, the **Bumbobi–Lwakhakha corridor** provides the principal connection from the border towards Mbale and the wider Ugandan road network. Upgradation of this corridor is also planned under the **AfDB/EAC multinational expressway programme**. Based on the traffic assessment undertaken during the pre-feasibility study, the existing two-lane configuration can initially be maintained with targeted capacity and safety improvements over the design horizon. This provides an important linkage between Lwakhakha and the wider Northern Corridor network and supports its potential role in accommodating additional transit freight.

Importantly, the pre-feasibility study also recognized that road requirements will need to evolve alongside the progressive development of Lwakhakha. As freight volumes increase and the border assumes a greater role in handling transit traffic, the connecting roads may ultimately require expansion to a **four-lane configuration**, together with associated **bridge widening within the Lwakhakha border area**.

The planned improvements on both sides of the border are important because the proposed Kenya-Uganda OSBP upgrade program does not assume that Lwakhakha will operate independently of the surrounding transport network. Its development as a **transit-oriented alternative to Busia and Malaba** depends on providing reliable connectivity between the border and the principal freight corridors in both countries. The identified improvements to the Kimaeti-Lwakhakha and Bumbobi-Lwakhakha roads therefore complement the proposed border-level interventions and provide a pathway for accommodating the traffic redistribution envisaged under the corridor-wide solution.

Emerging Strategic Road Corridors Supporting the Northern Corridor

Beyond the road improvements immediately surrounding Lwakhakha, a number of strategic highway developments are expected to strengthen freight connectivity into the Kenya-Uganda border region over the medium to long term. One of the important initiatives is the continued development of the **Eldoret-Kitale-Lodwar-Nadapal-South Sudan corridor**, which forms part of the broader regional transport network connecting Kenya with South Sudan. Parallel to this, the proposed **Eldoret Ring Road** is expected to improve freight circulation around Eldoret by diverting through traffic away from the urban core and creating a more efficient interface between the Northern Corridor and the north-western highway network.

While these developments are not directly associated with the proposed Kenya-Uganda OSBP upgrade programme, they are expected to improve the overall efficiency and resilience of the regional freight network feeding into western Kenya. Improved connectivity towards **Kitale and the north-western corridor** would provide greater operational flexibility for long-haul freight, reduce congestion at critical urban bottlenecks, and strengthen access to the western border region. Over the longer term, these complementary investments are expected to reinforce the corridor-wide traffic management strategy proposed under this study by improving hinterland accessibility to **Malaba, Busia and Lwakhakha**, thereby supporting more efficient distribution of freight across the three border crossings rather than concentrating demand on a single OSBP.

Alignment with the East African Community Regional Transport Investment Pipeline

Engagements with the **EAC** also highlighted that the proposed Kenya-Uganda OSBP Upgrade Programme is being advanced within a much broader regional transport investment programme aimed



at strengthening the Northern Corridor and improving cross-border connectivity across East Africa. Alongside the proposed OSBP interventions, the EAC is progressing several complementary road infrastructure projects, including the **Kisumu–Busia/Kakira–Malaba Expressway, Jinja–Kakira–Malaba Corridor, Busitema–Busia Road, Kimaeti–Lwakhakha Road, Bumbobi–Lwakhakha Road, Kisumu Bypass**, and associated improvements to the **Busia, Malaba and Lwakhakha border posts**. These projects are at different stages of project preparation, ranging from feasibility studies and preliminary engineering design to detailed design and implementation planning, reflecting a coordinated regional effort to remove infrastructure bottlenecks across the Kenya–Uganda trade corridor.

The significance of these investments extends beyond improving individual road sections. Collectively, they establish a continuous freight movement corridor connecting the Port of Mombasa with western Kenya, eastern Uganda and the wider hinterland, while simultaneously strengthening connectivity between major urban centres, logistics hubs, border crossings and multimodal transport facilities. The proposed expressway improvements are expected to enhance long-distance freight efficiency along the primary corridor, whereas upgrades to the **Kimaeti–Lwakhakha** and **Bumbobi–Lwakhakha** roads will improve accessibility to Lwakhakha and support its planned role as a transit-oriented border crossing. Similarly, improvements along the **Busitema–Busia** and **Jinja–Kakira–Malaba** corridors will enhance access to the two principal Kenya–Uganda border crossings, creating greater operational flexibility in the distribution of freight traffic across **Busia, Malaba and Lwakhakha**. This integrated approach closely aligns with the corridor-wide traffic management strategy developed under the pre-feasibility study, where border performance is enhanced not only through investments within the OSBPs themselves but also through improvements in the supporting transport network.

The EAC also emphasized that these corridor investments should not be viewed as isolated transport projects, but as part of a wider programme for regional economic integration under the **East African Community Regional Trunk Road Network (RTRN)** and the **Trans-African Highway (TAH)** framework. The long-term objective is to develop an integrated transport system in which highways, border infrastructure, railways, inland water transport and logistics facilities operate as complementary components of a single regional freight network. Consequently, the proposed Kenya–Uganda OSBP Upgrade Programme represents an important enabling intervention within this broader strategy, improving the efficiency of border operations while complementing parallel investments in road and multimodal infrastructure.

From the perspective of the proposed **Cost Recovery Mechanism**, the continued progression of these regional transport investments further strengthens the long-term rationale for the project. Improved road connectivity is expected to enhance accessibility to the border crossings, support higher and more reliable freight volumes, improve network resilience by providing alternative routing options, and

facilitate the phased redistribution of traffic across **Busia, Malaba and Lwakhakha**. Together, these complementary initiatives create a stronger foundation for the long-term operational sustainability and financial viability of the proposed Kenya–Uganda OSBP Upgrade Programme.

6.5 Implications of recent corridor development on Traffic Projections of OSBP upgrade program

The continued development of the SGR, rehabilitation and strengthening of the MGR, and enhancement of freight connectivity through Lake Victoria raises an important consideration for the long-term road traffic projections adopted for the proposed OSBP upgrade program. At first sight, substantial investment in rail and inland-water transport could suggest that future truck volumes through the Kenya–Uganda OSBPs may be lower than anticipated. This consideration is highly relevant, as the proposed revenue mechanism ultimately depends on the increasing volume of eligible road freight using the enhanced border facilities.

The phasing of the traffic forecast is deliberately aligned with the expected sequencing of these specific investments rather than applying a uniform deceleration. The moderation from an 8.4% to 8.0% growth range from 2028-2030 reflects the period over which the Naivasha–Kisumu SGR section, under construction since July 2026, is expected to progress toward operational readiness. The further moderation to 7.5% (2031-2033), 7% (2034-2036) and 6.5% (2037-2039) reflects the anticipated commissioning of the Kisumu–Malaba and Malaba–Kampala SGR sections, the latter now underpinned by the Islamic Development Bank's approximately EUR 650.75 million financing approval in June 2026 together with continued MGR rehabilitation. The stabilization of growth at 4% from 2040 onwards reflects an assumed mature multimodal corridor in which the SGR is fully operational and Lake Victoria connectivity, including MV Uhuru II, is well established alongside continuing road demand growth in line with long-term GDP trends. Framing the phase boundaries around these specific, dated milestones rather than generic multi-year blocks provides a clearer basis for testing the forecast as project timelines are confirmed during the feasibility stage.

The underlying traffic and financial models were not re-run as the phased traffic-growth assumptions already incorporated the anticipated effects of progressive modal shift arising from planned rail, lake and multimodal transport developments along the corridor.

However, the relevant question is not whether some freight will shift from road to rail or other modes. Such modal shift is an intended outcome of the ongoing corridor investments and should reasonably be expected. Rather, the key consideration is whether, after accounting for the progressive diversion of suitable freight to rail and alternative multimodal routes, the residual road-freight market remains sufficient to support the traffic and financial assumptions underlying the proposed OSBP upgrade program.

Modal shift has been already incorporated into the traffic forecasting framework

The long-term traffic forecasts developed during the pre-feasibility study were **not based on a continuation of the existing road-dominated modal structure**. The forecasting methodology explicitly recognized that alternative freight modes would develop progressively over the assessment period and that their increasing availability and operational efficiency would moderate the rate of growth in road freight. Therefore, the assumptions were aligned with the anticipated sequencing of corridor developments rather than applying a single road-traffic growth rate throughout the forecast period:

- **In the initial years (2028–2030)**, road freight was assumed to remain the dominant mode (**assuming growth rate of ~8%**) while trade and port throughput recover and expand, with the benefits of the major alternative freight investments yet to be fully realized.
- **From 2031 -2033**, the forecast deliberately moderates road-traffic growth to ~7.5%, reflecting the expected improvement in SGR operations and MGR connectivity and the resulting gradual diversion of suitable bulk freight from road to rail.
- **From 2034-2036 & 2037- 2039**, traffic growth is further moderated to **7% and 6.5% respectively**, corresponding with the anticipated strengthening of Lake Victoria freight capacity and greater integration of rail-lake multimodal movements between Kenya and Uganda.
- **By 2040–2047**, the forecast assumes a more mature multimodal corridor in which road, rail and inland-water transport operate in a complementary manner. Accordingly, road-traffic growth stabilizes at ~4%, broadly in line with the long-term economic growth outlook for Kenya and Uganda rather than continuing at the higher rates assumed during the earlier phases.

This deceleration in road traffic growth is not an unexplained modelling assumption; it corresponds to an explicit, quantified diversion of freight to rail and inland-water transport. The elasticity-based cross-check presented in **Annexure 9.2** estimates that the road share of total corridor freight demand declines from approximately **95% in 2025** to approximately **80% by 2047** equivalent to roughly **3,090 truck-equivalents per day of freight demand** being absorbed by rail and Lake Victoria transport by 2047, rising from approximately 900 truck-equivalents per day by 2035 and 1,580 by 2040.

For context, the volume diverted by 2047 is broadly comparable to the entire corridor's current (2025) daily truck traffic. The moderation of road-traffic growth in the phase-wise forecast and this independent elasticity-based estimate are therefore two consistent ways of expressing the same underlying expectation: that the **Kenya-Uganda OSBPs will continue to carry substantial and growing road-freight volumes** even as rail and lake transport absorb an increasing share of the corridor's overall trade growth. The traffic projections underpinning the proposed Kenya-Uganda OSBP upgrades already anticipate that the relative role of road freight will evolve as rail and inland-water alternatives become increasingly operational. The moderation of road-traffic growth across successive

forecast periods is therefore not incidental, it is the mechanism through which the expected modal shift has been incorporated into the projections.

The exposure to modal diversion is also not uniform across the corridor. The underlying traffic projections (**Annexure 9.1**) indicate that **transit trucks** grow substantially faster than local trucks over the forecast period, from approximately 129,000 to 1,262,000 vehicles per annum between 2025 and 2047 (a CAGR of approximately **11%**), compared with **local trucks** growing from approximately 1,081,000 to 3,246,000 vehicles per annum over the same period (a CAGR of approximately **5%**).

Box 4: Implications for Project Bankability and Cost Recovery

The proposed Cost Recovery Mechanism has been structured on the principle that its financial sustainability does not depend on preserving the current road-dominated freight market, but rather on capturing value from the **residual road freight demand** that continues to require efficient border crossing services. The traffic forecasts adopted for the financial model already incorporate the gradual diversion of suitable bulk cargo to rail and inland-water transport over the assessment horizon. Consequently, the revenue projections are based on the expected evolution of the corridor into a mature multimodal system rather than assuming that all future trade growth remains road based.

Importantly, the introduction of rail and inland-water transport is expected to improve the **quality and operational efficiency** of the remaining road freight market. Rail is likely to absorb a significant proportion of long-haul bulk cargo, while higher-value, time-sensitive and distribution-oriented freight will continue to rely on road transport and derive greater value from reduced border crossing times, predictability and premium facilitation services. As a result, the proposed user-fee mechanism remains supported by a sufficiently large and commercially attractive road-freight base, while lower congestion further enhances the operational effectiveness of the upgraded border facilities.

From an investment perspective, this provides additional confidence in the long-term resilience of the proposed financing structure. Since the financial model has already been stress-tested against a progressively declining road modal share, future improvements in rail connectivity do not fundamentally undermine the project's ability to recover costs. Instead, they reinforce the broader corridor strategy by allowing each transport mode to serve the freight segments for which it is best suited, while the upgraded OSBPs continue to generate stable revenues from efficient, technology-enabled processing of the road freight that remains on the corridor

The recent progression of the SGR, MGR and Lake Victoria connectivity initiatives does not, in itself, invalidate the traffic assumptions adopted for the pre-feasibility assessment. Rather, these developments are directionally consistent with the multimodal transition already embedded within the

forecasting framework. As the proposed solution is designed as a corridor-wide intervention across the Kenya–Uganda border network, the traffic assessment continues to consider the overall corridor demand and the resulting distribution of freight across modes.

During the feasibility stage, the interaction between the proposed border interventions and the evolving rail, lake and road investment programmes will be examined in greater detail, including the sequencing and expected operationalization of these investments. This will enable the traffic and financial models to be updated, where required, to reflect the latest implementation timelines, capacity additions and potential changes in freight flows across the corridor.

The detailed traffic projections and the underlying assumptions are presented in **Annexures 9.1 & 9.2**.

For detailed financial assessment, including the underlying assumptions, CAPEX, OPEX, revenue projections and financial returns, please refer to **Annexure 9.3**, which presents the detailed financial model and its key assumptions.

6.6 Conclusion

The developments observed since the pre-feasibility assessment confirm that the Northern Corridor is entering a period of significant transport investment. Construction of Kenya's Naivasha–Kisumu SGR has commenced; the planned railway connection continues towards Malaba; Uganda is progressing the corresponding Malaba–Kampala SGR; both countries continue to invest in existing Metre-gauge railway infrastructure; and Kisumu–Lake Victoria connectivity is developing as an increasingly relevant component of the regional multimodal freight network.

These investments are expected to **change the modal composition of freight movement and progressively increase the share carried by rail and inland water transport**. They should therefore be recognized explicitly when considering the long-term outlook for proposed Kenya-Uganda OSBP upgrade program.

However, this does not represent a new downside to the pre-feasibility assessment. The traffic forecasting framework already recognized the expected development of competing freight modes and incorporated modal diversion while estimating future road-based freight demand. The recent developments therefore largely represent the **progression of infrastructure scenarios already contemplated in the traffic assessment**, rather than an unforeseen change in the underlying market. Accordingly, the central conclusion of the pre-feasibility study remains relevant: even after accounting for modal shift, road freight is expected to remain a substantial component of Northern Corridor trade, requiring efficient, technology-enabled and appropriately configured border infrastructure at the Kenya–Uganda crossings.

7 Implementation Roadmap and Sequencing of Proposed Interventions

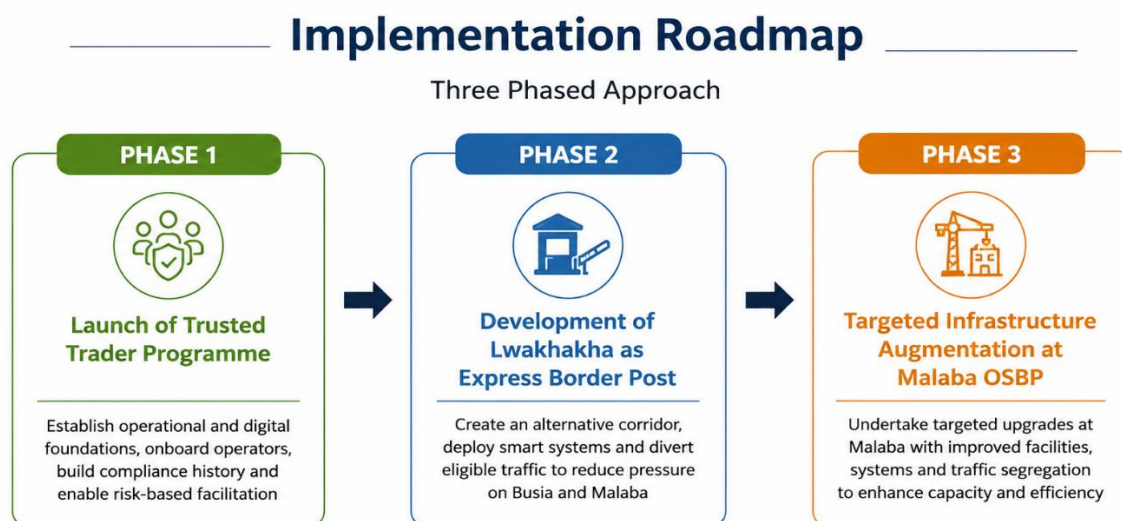
The pre-feasibility study established that the proposed Cost Recovery Mechanism should not be viewed as a conventional border infrastructure project delivered through a single construction programme. Rather, it represents a **phased transformation of border management**, combining institutional reforms, operational modernization, digital enablement and targeted infrastructure investments to progressively improve the efficiency, capacity and long-term sustainability of the Northern Corridor.

The proposed solutions are therefore intended to be implemented through a carefully sequenced programme, where each phase builds the institutional and operational foundations necessary for the next. Such sequencing is particularly important because several recommendations including the introduction of risk-based processing, Trusted Trader facilitation Programme, smart scheduling, digital integration and user-fee based premium services require behavioural change, regulatory coordination and operational maturity before major physical infrastructure investments can deliver their intended benefits.

Accordingly, the implementation roadmap is structured around **three sequential phases**.

- The first phase focuses on establishing the operational and digital foundations through implementation of the TTFP/ CTSAP.
- The second phase introduces the proposed Express Border Post at Lwakhakha to create an alternative processing corridor and operational flexibility before any major interventions are undertaken at Malaba.
- The final phase comprises targeted infrastructure augmentation at Malaba OSBP, supported by the operational reforms, traffic redistribution mechanisms and institutional coordination established during the earlier phases.

Figure 4: Implementation Roadmap



The implementation philosophy therefore prioritizes **operational efficiency before physical expansion**, ensuring that infrastructure investments are introduced only after supporting governance arrangements, digital systems and traffic management mechanisms have been established.

Phase 1 – Launch of the CTSAP

The first phase focuses on establishing the **institutional, operational and digital ecosystem** required to support the transition from conventional inspection-based border management to a modern, risk-based facilitation framework. This approach recognises that many of the current inefficiencies at Busia, Malaba and Lwakhakha arise not only from physical capacity constraints but also from existing inspection practices, fragmented agency coordination and limited use of digital risk management.

Accordingly, implementation begins with the introduction of the risk-based inspection program which creates the first operational layer of the proposed Cost Recovery Mechanism. During this phase, transport operators would be progressively enrolled into a structured compliance framework, enabling participating operators to establish compliance histories while continuing to utilize the existing border infrastructure. Initially, operators would enter the programme under the **bronze category**, with no premium facilitation benefits being offered during the onboarding period. The objective at this stage is to establish verified compliance records, familiarize operators with the programme requirements and build confidence among regulatory agencies before differentiated processing is introduced.

This phased approach enables customs administrations and other border agencies to progressively transition from blanket inspection practices towards intelligence-led border management. As operators demonstrate consistent compliance over a predefined operational period, they become eligible for progression into higher compliance categories, thereby forming the initial pool of trusted operators who can subsequently benefit from reduced inspection rates and expedited processing once the supporting infrastructure becomes operational.

The implementation approach also recognises that trusted facilitation cannot be achieved through customs reforms alone. Successful implementation depends upon coordinated participation from multiple agencies involved in border management, including customs, immigration, standards authorities, health authorities, security agencies and other border control institutions. Consequently, Phase 1 prioritizes development of common operational protocols, institutional coordination mechanisms and integrated governance arrangements required to support risk-based inspections and coordinated border processing.

In parallel, implementation of Phase 1 will build in tandem with ongoing regional digital initiatives, including the digital backbone being developed through the **SITA Programme** and the **EU Corridor 8 (GRID/ FRESH) Programme**. These programmes represent ongoing digital initiatives that can support elements of the proposed CTSAP framework, including greater digital interoperability of customs, transport and border

information. The **principles and selected capabilities envisaged under CTSAP are already being incorporated into ongoing TMA initiatives**, creating an opportunity to leverage these investments rather than duplicate the required digital infrastructure. In line with TMA's guidance and request, these initiatives have been reviewed at a broad level to identify potential areas of overlap and complementarity with the proposed CTSAP architecture. Where the required functionality is already delivered through these programmes, the CTSAP implementation can leverage such capabilities and avoid duplication of investment; where any required functionality is not covered, it would be incorporated within the CTSAP solution. The detailed assessment of system interfaces, scope boundaries, implementation dependencies and any resulting investment requirements will be undertaken during the feasibility stage, alongside closer coordination with the respective programmes.

An equally important component of Phase 1 is stakeholder engagement and market preparation. Extensive awareness and sensitization programmes would be undertaken with transport associations, freight forwarders, clearing agents and logistics operators to communicate programme objectives, onboarding requirements and the long-term benefits associated with compliance-based facilitation. These engagements are intended to encourage voluntary participation, establish trust between regulators and corridor users, and ensure sufficient market readiness before premium processing services are introduced.

As the programme evolves, the implementation framework also expands beyond the initial Trusted Trader concept. Subsequent stakeholder consultations with KRA following completion of the pre-feasibility study demonstrated that a customs-focused Trusted Trader model alone would not adequately address the complexity of modern corridor management. Accordingly, the operational framework progressively evolves towards a broader **Corridor Trusted Supply Chain Assurance Programme (CTSAP)**, extending trust beyond transport operators to encompass the wider logistics ecosystem through multi-agency certification, digital trust registries and integrated risk-based processing. The detailed evolution of this framework, together with its institutional architecture and implementation methodology, is presented separately in **Chapter 2** of this report.

Overall, Phase 1 establishes the governance structures, operational protocols, digital foundations and compliance ecosystem upon which all subsequent infrastructure investments depend. By creating an initial pool of compliant operators and strengthening institutional coordination before major capital expenditure is undertaken, this phase significantly reduces implementation risk.

Phase 2 – Development of Lwakhakha as the Express Border Post

Following establishment of the operational and institutional foundations under Phase 1, the second phase focuses on developing **Lwakhakha Border Post as the first physical infrastructure intervention** under the proposed Kenya-Uganda border upgrade project. The sequencing of this investment is deliberate and forms a critical element of the overall corridor strategy. Rather than immediately expanding Malaba OSBP,

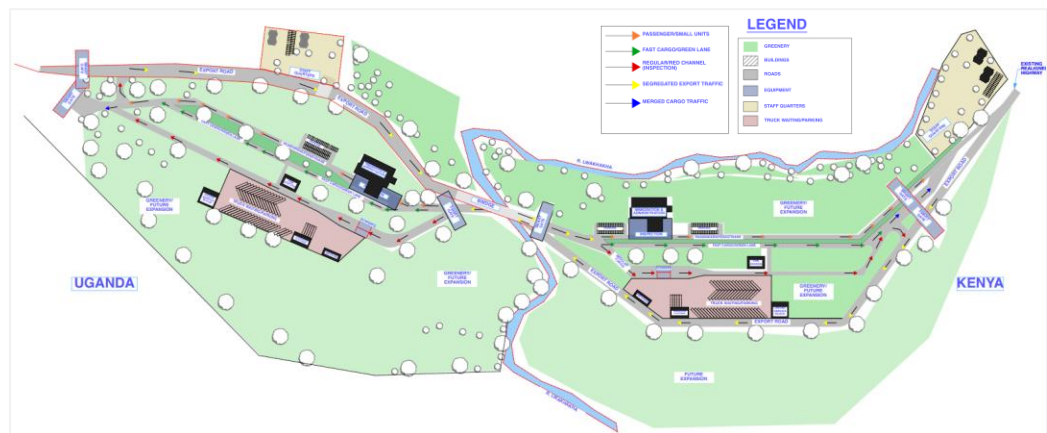
the proposed approach first establishes an alternative processing corridor capable of accommodating dedicated traffic streams and creating operational flexibility across the Northern Corridor.

The pre-feasibility study demonstrated that both **Malaba and Busia are currently operating under significant traffic pressures**, with limited ability to accommodate future growth without substantial intervention. While Malaba continues to function as the primary freight gateway between Kenya and Uganda, its continued operation during construction activities is essential to maintaining uninterrupted regional trade. Major infrastructure works undertaken directly at Malaba without first creating alternative processing capacity would therefore introduce considerable operational disruption, increased congestion and potential impacts on corridor performance.

Lwakhakha was consequently identified as the most suitable location for the first infrastructure investment. Compared to the other border posts, Lwakhakha currently handles relatively lower traffic volumes while offering greater flexibility for phased expansion. Its strategic location, together with planned improvements to the **Kimaeti–Lwakhakha Road on the Kenyan side** and the **Mbale–Lwakhakha Road on the Ugandan side**, provides an opportunity to develop the border as an express border post capable of supporting both dedicated transit traffic and selected local cargo movements. This creates an additional operational corridor before significant interventions are introduced at Malaba.

The primary objective of this phase is to establish **Lwakhakha as a premium, technology-enabled border facility** operating under the Trusted Trader Facilitation Programme for local trucks and as a Zero-stop border post for Transit trucks. The

Figure 5: Lwakhakha OSBP Concept Diagram



facility is intended to demonstrate the practical application of risk-based border management while providing measurable reductions in processing time for compliant users.

Beyond improving operational efficiency, development of Lwakhakha also serves an important corridor management function. By gradually diverting eligible transit cargo and selected local traffic away from Busia and Malaba, the new facility creates additional spare capacity within the existing border network. This redistribution of traffic reduces pressure on the primary border crossings and provides the operational

resilience required to undertake subsequent infrastructure augmentation at Malaba without disrupting trade flows across the Northern Corridor.

Successful implementation of this phase will require close coordination between the Governments of Kenya and Uganda to ensure that supporting infrastructure and operational arrangements are developed simultaneously. In addition to completion of the associated road improvements, implementation will require designation and gazettement of **Lwakhakha as an express OSBP**, establishment of bilateral operational protocols, deployment of digital border processing systems, and integration of smart gate technologies with the Trusted Trader operational framework established during Phase 1. The detailed implementation pathway, including gazettement requirements, bilateral operational protocols, institutional responsibilities and implementation timelines for Lwakhakha border post, will be developed and validated during the feasibility study in consultation with the relevant authorities in Kenya, Uganda and the EAC.

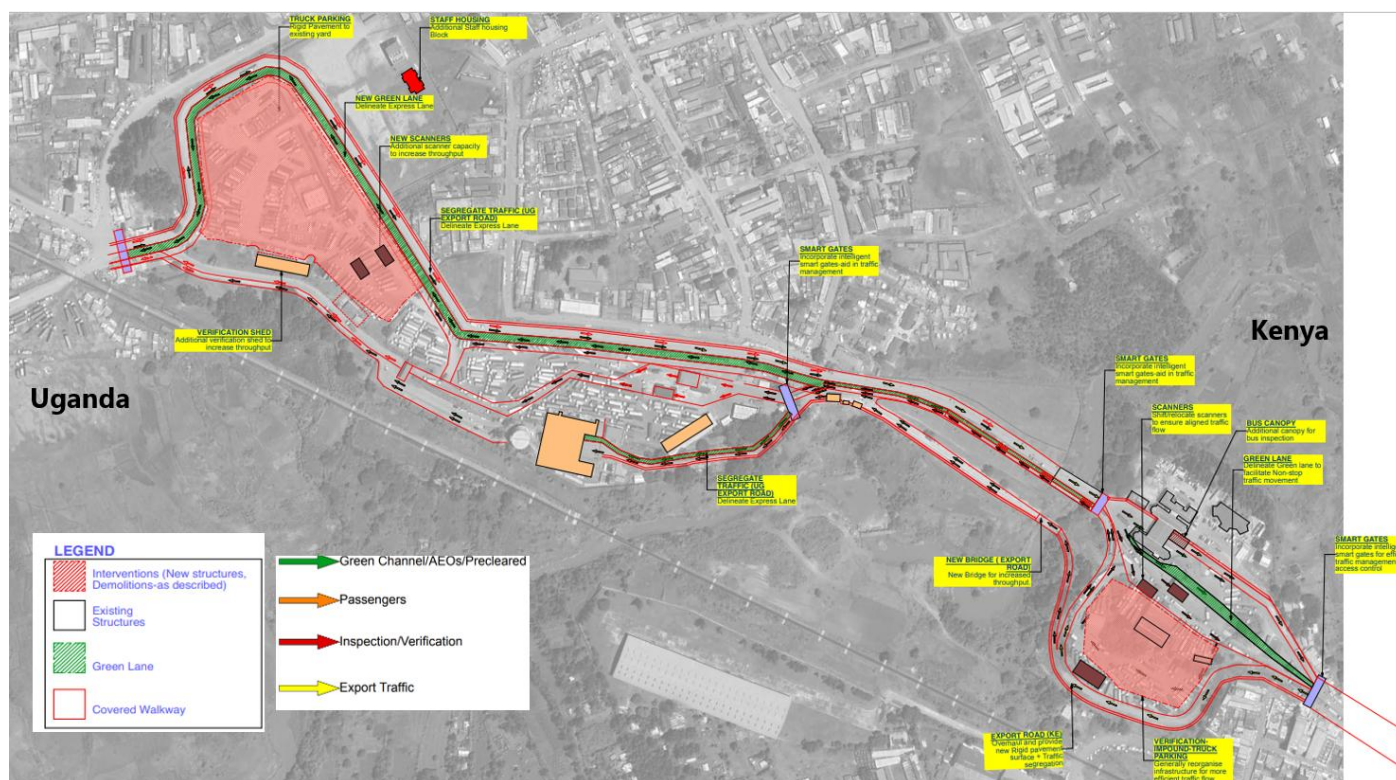
By the conclusion of Phase 2, the project is expected to establish a fully operational alternative border corridor capable of supporting premium border processing, reducing congestion across the corridor, and validating the proposed operational model under real-world conditions. This creates the operational flexibility necessary for implementation of the final phase, during which targeted infrastructure augmentation can be undertaken at Malaba while maintaining uninterrupted movement of regional trade through the Northern Corridor.

Phase 3 – Targeted Infrastructure Augmentation at Malaba OSBP

The final phase of implementation focuses on **targeted infrastructure augmentation at Malaba One Stop Border Post**, building upon the operational, institutional and corridor-level foundations established during the earlier phases. By this stage, the Trusted Trader Facilitation Programme would have matured into an operational risk-based processing framework, while Lwakhakha would be functioning as an alternative express border corridor capable of accommodating transit traffic and eligible compliant operators. Together, these interventions substantially reduce operational pressure on Malaba, creating the conditions necessary to undertake infrastructure development without adversely affecting cross-border trade.

Unlike conventional infrastructure expansion projects, the proposed interventions at Malaba are **highly targeted and operationally driven**, responding directly to the bottlenecks identified during the pre-feasibility assessment. Rather than expanding the entire border post, the proposed works focus on strengthening processing capacity for local cargo while complementing the traffic redistribution strategy established under the earlier phases. The availability of approximately **7 acres of land on the Uganda side**, currently utilized primarily as parking space, provides an opportunity to develop a **co-located Kenya–Uganda inspection and processing facility**, thereby significantly improving inspection efficiency without requiring large-scale redevelopment of the existing border post.

Figure 6: Augmentation of Malaba OSBP



The proposed interventions include development of dedicated inspection and processing facilities for **Trusted Trader vehicles, homogeneous cargo and other low-risk consignments**, together with traffic segregation measures to separate compliant traffic from higher-risk cargo requiring detailed inspections. Supporting infrastructure such as internal circulation roads, OCR-enabled smart gates, smart scheduling systems, digital processing platforms, utilities and associated operational facilities would be integrated with the Trusted Trader ecosystem established during Phase 1, enabling seamless movement between digital risk assessment and physical border operations. The sequencing therefore avoids the operational disruptions that would otherwise arise if major construction activities were undertaken at Malaba while it continued to accommodate the full corridor traffic.

An equally important outcome of this phase is the integration of physical infrastructure with the digital and institutional reforms implemented earlier. Infrastructure investments are therefore not viewed as standalone assets, but as enabling components of a broader intelligent border management system. Successful implementation of Phase 3 is expected to establish Malaba as a modern, technology-enabled border facility capable of supporting projected freight growth while maintaining high standards of security, regulatory compliance and service delivery.

Outcome of the Phased Implementation Strategy

The proposed implementation roadmap demonstrates that the recommended interventions should be viewed as a **progressive transformation programme rather than a conventional infrastructure project**. Each phase establishes the institutional, operational and infrastructure prerequisites for the next, ensuring that investments are introduced only when the supporting governance, digital systems and operational arrangements are in place.

The phased strategy therefore moves systematically from **institutional readiness (Phase 1)** to **corridor-level operational resilience (Phase 2)**, and finally to **targeted infrastructure optimization (Phase 3)**. This sequencing minimizes implementation risk, avoids disruption to regional trade during construction, strengthens stakeholder ownership, and enables the proposed Cost Recovery Mechanism to be implemented in a financially sustainable and operationally efficient manner.

Collectively, the three phases provide a practical pathway for transforming the Kenya–Uganda border corridor from a predominantly inspection-driven system into a **digitally enabled, risk-based and intelligence-led border management framework**, establishing a scalable model that can subsequently be replicated across other strategic border corridors within the East African Community.

Figure 7: Three Phase Implementation Sequencing of Solutions



8 Way Forward

The work undertaken through this report has substantially strengthened the implementation readiness of the proposed Kenya–Uganda OSBP Upgrade Programme by refining the operational framework, validating the proposed financing architecture, aligning the project with recent corridor developments, and reinforcing institutional consensus among regional stakeholders. These engagements have increased confidence in the practicality, sequencing and institutional arrangements required to progress the programme towards detailed feasibility and subsequent implementation.

The next phase of project development should focus on translating the proposed concepts into an integrated implementation programme through **parallel advancement of technical, financial, legal and institutional workstreams**. This will include refinement of engineering concepts, detailed traffic validation, financial due diligence, legal structuring of the Cost Recovery Mechanism, development of the PPP framework, institutional arrangements between Kenya, Uganda and the EAC, and continued stakeholder consultations to strengthen user acceptance and implementation ownership.

A key outcome of this report is the recognition that implementation should follow a **phased and sequenced approach**, allowing operational reforms and institutional strengthening to progressively support physical infrastructure investments. The recommended roadmap therefore commences with implementation of the CTSAP and associated digital systems, enabling risk-based processing, operator onboarding and multi-agency coordination before major infrastructure investments are undertaken. This is followed by development of Lwakhakha as a complementary express border facility to create operational flexibility across the corridor, before targeted infrastructure augmentation at Malaba is implemented once traffic redistribution, institutional coordination and digital processing systems have matured.

Successful implementation of the Kenya–Uganda pilot will extend beyond improvements at Busia, Malaba and Lwakhakha. It will demonstrate the practical application of an integrated corridor management model that combines technology-enabled border management, risk-based inspections, sustainable financing, and coordinated regional governance within a single implementation framework. The experience generated through this pilot will provide valuable lessons for future expansion across other One Stop Border Posts within the East African Community and establish a replicable model for modernizing border infrastructure through commercially sustainable, institutionally coordinated and digitally enabled solutions.

Overall, the pre-feasibility study together with the subsequent strengthening activities documented in this report provide a robust platform for progressing the programme into the feasibility stage. With strong institutional alignment, a phased implementation roadmap, and an increasingly mature operational and financial framework, the proposed Kenya–Uganda OSBP Upgrade Programme is well positioned to transition from concept development towards implementation, while establishing a scalable model for improving cross-border trade facilitation across the East African region.

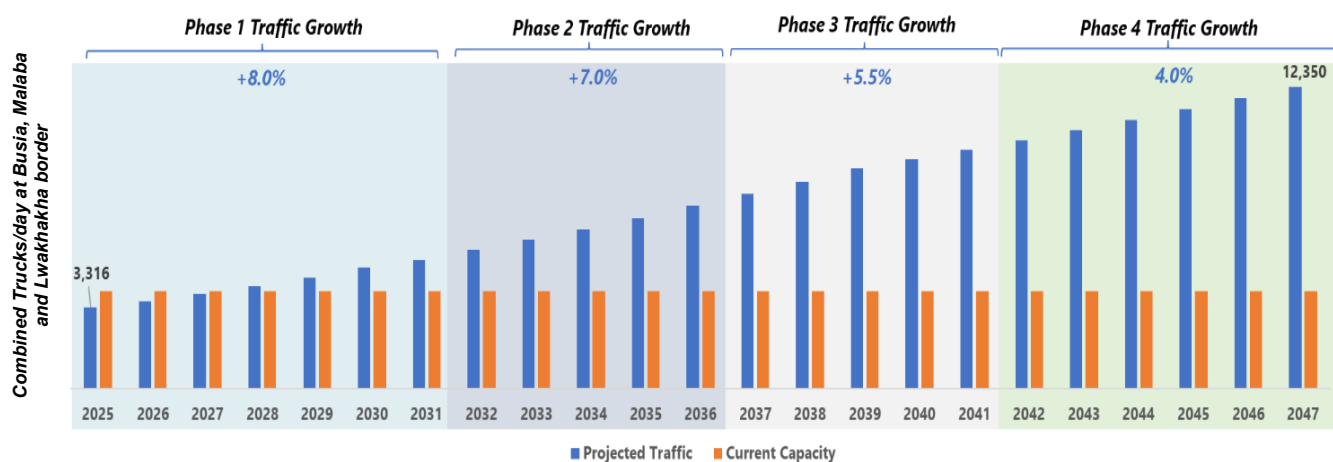
9 Annexures

9.1 Traffic Projections

Cargo traffic growth along the corridor is primarily driven by cargo throughput at the Port of Mombasa, which serves as the principal maritime gateway for the region. The port has recorded sustained growth in containerized and general cargo volumes, with throughput increasing at an average rate of approximately **8–9% per annum between 2022 and 2025** (Kenya Ports Authority). A significant proportion of this cargo is destined for hinterland markets, particularly **Uganda (~70%)**, followed by **South Sudan (~11%) and the Democratic Republic of Congo (~11%)**, reinforcing the corridor's role as a critical regional trade artery (NCTTCA). Road transport continues to dominate freight movement, accounting for **over 90% of cargo flows**, although this share is expected to gradually moderate over time.

Traffic volumes are projected to increase from a baseline of ~3,316 trucks per day in 2025 to ~12,350 vehicles per day by 2047, reflecting sustained demand growth across the corridor. A phase-wise traffic growth framework has been developed to reflect evolving trade patterns, infrastructure investments, and modal shifts across the corridor:

Figure 8: Per-Day Traffic Projections (2025 - 2047)



- **Year (2025 - 2027):** Strong recovery phase driven by post-COVID trade normalization, increasing Mombasa port throughput, and improved border efficiencies under the OSBP framework. Road transport remains the dominant mode, with high traffic growth.
- **Year (2028–2030),** road freight was assumed to remain the dominant mode (**assuming growth rate of ~8%**) while trade and port throughput recover and expand, with the benefits of the major alternative freight investments yet to be fully realized.

- **Year (2031 -2033)**, the forecast deliberately moderates road-traffic growth to ~7.5%, reflecting the expected improvement in SGR operations and MGR connectivity and the resulting gradual diversion of suitable bulk freight from road to rail.
- **Year (2034-2036) & (2037- 2039)**, traffic growth is further moderated to **7%** and **6.5% respectively**, corresponding with the anticipated strengthening of Lake Victoria freight capacity and greater integration of rail-lake multimodal movements between Kenya and Uganda.
- **By (2040–2047)**, the forecast assumes a more mature multimodal corridor in which road, rail and inland-water transport operate in a complementary manner. Accordingly, road-traffic growth stabilizes at ~4%, broadly in line with the long-term economic growth outlook for Kenya and Uganda rather than continuing at the higher rates assumed during the earlier phases.

Macroeconomic fundamentals further support traffic growth assumptions. **Kenya and Uganda have demonstrated strong economic performance**, with recent GDP growth estimated at approximately **5.5% and 6.0%, respectively**, driven by robust consumption and trade activity. Over the long term, growth is expected to stabilize at **4–5% per annum**, which has been adopted as the anchor range for terminal traffic growth in the projections.

While planned infrastructure enhancements are expected to alleviate near-term bottlenecks, traffic demand is likely to outpace capacity additions over the long term, leading to recurring congestion risks. This underscores the need for efficiency-led interventions, including process optimization, digitalization, and coordinated corridor management.

Overall, the projections imply an **average CAGR of ~6.16% over the 22-year period**, consistent with underlying trade and macroeconomic growth trends.

Table 11: Total Trucks crossing (Busia, Malaba & Lwakhakha combined) – 5-year intervals

Year	Annual Growth Rate (%)	Total Trucks	Transit Trucks	Local trucks	Trucks per Day
2025	8.4%	1,210,456	129,222	1,081,234	3,316
2030	8.0%	1,791,756	263,639	1,528,117	4,909
2035	7.0%	2,548,425	458,716	2,089,709	6,982
2040	4.0%	3,425,609	822,146	2,603,463	9,385
2045	4.0%	4,167,777	1,166,978	3,000,799	11,419
2047	4.0%	4,507,868	1,262,203	3,245,665	12,350

9.2 Traffic Forecast Calculations

This annexure presents the technical methodology used to estimate freight traffic along the Northern Corridor. The modelling framework integrates econometric demand estimation, corridor-level calibration, and scenario-based forecasting to ensure that projections are robust, transparent, and aligned with international best practices for transport infrastructure appraisal.

Base Inputs and Assumptions

Initial Conditions: Base Year: 2025 and Base Traffic: $T_{2025} = 3,316$ vehicles/day

Table 12: Phase-wise Traffic Growth Assumptions

Phase	Period	Growth Rate	Duration
1	2025–2027	8.4%	3 years
2	2028–2030	8.0%	3 years
3	2031–2033	7.5%	3 years
4	2034–2036	7.0%	3 years
5	2037–2039	6.5%	3 years
6	2040–2047	4.0%	8 years

Applying these growth rates successively to the 2025 base of 3,316 vehicles/day yields a 2047 forecast of approximately 12,350 vehicles/day, consistent with Table 11.

Table 13: Total Trucks Crossing Kenya - Uganda Borders (Busia, Malaba & Lwakhakha combined)

Year	Annual Growth Rate (%)	Total Trucks	Transit Trucks*	Local trucks	Trucks per Day
2025	8.4%	1,210,456	129,222	1,081,234	3,316
2026	8.4%	1,312,135	144,510	1,167,625	3,595
2027	8.4%	1,422,354	170,682	1,251,672	3,897
2028	8.0%	1,536,142	184,337	1,351,805	4,209
2029	8.0%	1,659,033	199,084	1,459,949	4,545
2030	8.0%	1,791,756	263,639	1,528,117	4,909
2031	7.5%	1,926,138	269,659	1,656,479	5,277
2032	7.5%	2,070,598	331,296	1,739,302	5,673
2033	7.5%	2,225,893	356,143	1,869,750	6,098
2034	7.0%	2,381,706	428,707	1,952,999	6,525
2035	7.0%	2,548,425	458,716	2,089,709	6,982
2036	7.0%	2,726,815	545,363	2,181,452	7,471
2037	6.5%	2,904,058	580,812	2,323,246	7,956
2038	6.5%	3,092,821	680,421	2,412,400	8,473
2039	6.5%	3,293,855	724,648	2,569,207	9,024

Year	Annual Growth Rate (%)	Total Trucks	Transit Trucks*	Local trucks	Trucks per Day
2040	4.0%	3,425,609	822,146	2,603,463	9,385
2041	4.0%	3,562,633	855,032	2,707,601	9,761
2042	4.0%	3,705,139	963,336	2,741,803	10,151
2043	4.0%	3,853,344	1,001,870	2,851,474	10,557
2044	4.0%	4,007,478	1,122,094	2,885,384	10,979
2045	4.0%	4,167,777	1,166,978	3,000,799	11,419
2046	4.0%	4,334,488	1,213,657	3,120,831	11,875
2047	4.0%	4,507,868	1,262,203	3,245,665	12,350

*The approximately 32% year-on-year increase in projected transit truck volumes in 2030 reflects a specific step-change assumption in the forecasting framework rather than an underlying change in the long-term growth rate. The increase reflects the expected expansion of Mombasa Port capacity, with the port currently operating at approximately 2.3 million TEUs, broadly corresponding to its existing capacity, and planned infrastructure additions, including the development of Berths 23/19B, expected to increase capacity to approximately 3.1 million TEUs (growth of 34.7%). [Reference: <https://kpa.co.ke/Ports/PortOfMombasa>]

In parallel, the traffic forecast assumes that the proposed Kenya–Uganda OSBP (Busia, Malaba and Lwakhakha) interventions will be operational by 2030, providing the additional border-handling capacity (growth of 75%) required to accommodate the resulting increase in freight movement. The combination of increased Mombasa port capacity and improved border-processing capacity at Kenya–Uganda corridor, is therefore expected to generate a temporary step-up in corridor freight volumes in 2030, before traffic growth subsequently moderates in line with the phased multimodal development assumptions.

CAGR Validation: To verify long-term growth: $CAGR = [(12,350/3,316)^{(1/22)}] - 1$

CAGR = ~6.16 %

Linkage to Economic Drivers

Further, the above growth assumptions of the traffic forecasting framework were tested under an elasticity-based approach that has been applied to validate and supplement the primary phase-wise projections. This method establishes a quantitative relationship between freight traffic growth and underlying economic activity, ensuring that projections remain anchored in macroeconomic fundamentals. The elasticity-based model is widely used in transport economics and is consistent with methodologies adopted by multilateral development institutions for freight corridor assessment and demand forecasting. The traffic forecasting model follows a hybrid structure, combining Macroeconomic demand drivers (top-down), observed traffic calibration (bottom-up) and modal shift adjustments (structural factors)

Year	GDP	Elasticity	Growth	Total Index	Road Share	Road Traffic
2025	0.05	1.9	0.10	1.00	0.95	3,316.00
2030	0.05	1.7	0.09	1.53	0.92	4,654.48
2035	0.05	1.5	0.08	2.25	0.88	6,564.92
2040	0.05	1.3	0.07	3.14	0.85	8,834.62
2045	0.05	1.1	0.06	4.20	0.81	11,337.35

Year	GDP	Elasticity	Growth	Total Index	Road Share	Road Traffic
2047	0.05	1.0	0.05	4.66	0.80	12,359.73

Growth Function: The model assumes that traffic demand responds proportionally to changes in economic output (GDP) or trade volumes. This relationship is expressed as: $g_t = \epsilon * g_{GDP}$ where:

g_t = annual traffic growth rate in year t

ϵ = elasticity of traffic with respect to GDP

g_{GDP} = GDP growth rate

Elasticity reflects the sensitivity of freight movement to economic growth

$\epsilon = 1.0$ traffic grows in line with GDP

$\epsilon > 1.0$ traffic grows faster than GDP (high trade responsiveness)

$\epsilon < 1.0$ traffic grows slower than GDP (mature or constrained systems)

For trade-oriented corridors such as the Northern Corridor, elasticity is typically observed to be greater than unity in the short term, reflecting strong dependence on external trade flows. Based on literature benchmarks and regional corridor characteristics, the following elasticity trajectory has been adopted:

Period	Elasticity	Rationale
Short-term (Phase 1)	~1.9-1.7	Post-COVID recovery, trade normalization, underutilized capacity, process optimization
Medium-term (Phase 2–3)	~1.6 – 1.5	Stabilizing growth, increasing modal competition
Long-term (Phase 4)	~1.4 – 1.0	Mature corridor conditions, aligned with GDP

This declining elasticity profile reflects the transition from high-growth recovery phase to a stable, mature transport system. *Total Demand Evolution*: $T_t = T_{t-1} * (1 + g_t)$

Where: T_t = projected traffic in year t ; T_{t-1} = base year observed traffic and g_t = traffic growth rate

Modal Allocation: Modal share evolution is incorporated through a time-dependent logistic transition function:

$T_{road,t} = T_t * S_{road,t}$; Where $S_{road,t}$ = share of road transport

Table 14: Modal shift effects are implicitly incorporated through declining growth rates

Phase	Interpretation
Phase 1	Road dominance, no diversion
Phase 2	Initial rail shift
Phase 3	Increased intermodal transport



Phase	Interpretation
Phase 4	Mature multimodal equilibrium

It is estimated that 15% of incremental bulk traffic shifts away from road for the period 2025 to 2047. The model assumes no hard cap on demand. Capacity constraints manifest as congestion, delays, and efficiency losses. Thus, traffic demand is treated as inelastic to capacity constraints in the long term, consistent with strategic freight corridors.

Data Inputs

1. Primary Data

- *Classified traffic counts at key One Stop Border Posts (OSBPs)*
- *Origin-destination patterns (where available)*
- *Border crossing processing times and delays*

2. Secondary Data

- *Port throughput data from Kenya Ports Authority*
- *Trade flow data (UN Comtrade / national statistics)*
- *GDP projections (IMF / World Bank / national sources)*
- *Corridor performance reports (TradeMark Africa, Northern Corridor Transit Authority)*

9.3 Financial Assessment

This section presents the financial feasibility assessment of the proposed corridor-wide border modernization framework for Busia, Malaba, and Lwakhakha OSBPs. The chapter covers the indicative capital and operational costs associated with the proposed infrastructure upgrades, smart systems, Green Lane facilities, inspection infrastructure, digital integration components, and operational interventions envisaged under the study.

The section also presents the willingness-to-pay assessment undertaken with transport operators and corridor stakeholders, which forms the basis for the proposed user fee framework under the Cost Recovery Mechanism (CRM). Since user charges for expedited and enhanced border services are proposed as the primary source of revenue generation, the willingness-to-pay analysis plays a critical role in assessing the long-term sustainability of the proposed framework. The chapter also outlines the key assumptions adopted for development of the financial model and presents the overall financial outcomes, including revenue potential, cost recovery capability, and operational sustainability. In addition, the chapter evaluates the broader economic benefits and net savings to the regional economy arising from reduced border delays, lower logistics costs, improved truck productivity, and enhanced corridor efficiency.

9.3.1 Capital Cost of the proposed solution

The indicative capital expenditure (CAPEX) for the two border posts is estimated as follows:

Table 15: Capital Cost

Malaba OSBP	Lwakhakha Border
Capital Expenditure: ~34.80 million USD	Capital Expenditure: ~49.50 million USD
<i>Preliminaries (@10%): ~3.48 million USD</i>	<i>Preliminaries (@10%): ~4.95 million USD</i>
<i>Contingencies (@10%): ~3.82 million USD</i>	<i>Contingencies (@10%): ~5.44 million USD</i>
<i>VAT (@18%): ~7.57 million USD</i>	<i>VAT (@18%): ~10.78 million USD</i>
Total Capital Expenditure: ~49.69 million USD	Total Capital Expenditure: ~70.67 million USD

The higher base cost for Lwakhakha reflects the fact that the border post requires more comprehensive infrastructure development, including the establishment of new facilities and dedicated transit infrastructure.

9.3.2 Willingness to Pay Assessment

The Willingness to Pay (WTP) assessment formed a critical component of the financial feasibility analysis for the proposed OSBP modernization and CRM framework. Since the proposed solution is anchored on a user-pay model linked to expedited and enhanced border services, the assessment was undertaken to understand stakeholder perspectives, determine the acceptability of potential



user fees, and evaluate whether transport operators and corridor users would be willing to pay for faster, more predictable, and technology-enabled border crossing services.

The assessment was not limited to conventional survey exercise but rather involved a multi-stage and highly consultative process combining border-level consultations, physical site assessments, structured stakeholder interviews and digital survey across for the northern corridor ecosystem. The objective was to ensure that the proposed pricing structure and financial assumptions are grounded in actual user behavior, operational realities, and stakeholder expectations across the Northern Corridor.

A digital WTP survey was disseminated to more than 100 border users and corridor stakeholders, including transport operators, freight forwarders, cargo owners, logistics providers, and trade-related businesses operating across Kenya, Uganda, Rwanda, and Tanzania. The sample was therefore strongly aligned with the operational ecosystem and user base of the major Kenya–Uganda border crossings under consideration, particularly Busia and Malaba.

The findings from the assessment indicated a strong overall willingness among stakeholders to pay for improved border services where measurable efficiency gains and time savings could be demonstrated. The survey findings indicated that stakeholders broadly considered a fee range of ~USD 20–50 per truck to be reasonable for bundled express processing and expedited clearance services, depending on the level of service provided. However, to ensure broader acceptance and inclusiveness, the financial model under the study adopted a significantly more conservative pricing structure, proposing:

- USD 10 per local truck
- USD 20 per transit truck

To assess the statistical reliability of the willingness-to-pay (WTP) estimates, confidence intervals were computed around the mean values derived from the survey. The average WTP was estimated at **USD 21.80 per border user per trip**, with a **95% confidence interval ranging between USD 20.84 and USD 22.75**.

Importantly, the survey findings also demonstrated strong support for the concept of a voluntary premium or “express lane” model rather than mandatory tolling. Stakeholders emphasized that users should retain the flexibility to choose between standard processing lanes and premium expedited services, provided that the quality of service in the conventional free lanes is not deliberately degraded. This finding strongly validated the core design philosophy of the proposed corridor-wide solution framework.

9.3.3 Financial Model Assumptions and Outcomes

The financial model is underpinned by a set of key assumptions derived from consultations with DFIs such as EIB, CDP, AFD, Proparco and national stakeholders such as KRA and URA, ensuring alignment and compliance with market practices and financing expectations. These assumptions form the basis for assessing the project's financial viability and structuring a bankable funding framework. The assumptions primarily relate to cost of capital, debt tenure, grace periods, capital structure, and repayment timelines across different stakeholder groups. Input from DFIs and guarantors were particularly instrumental in calibrating the debt-equity mix, defining acceptable leverage levels, and incorporating appropriate risk mitigation mechanisms.

Key Assumptions

1. Concession Timeline Assumption

The financial model assumes that the project will operate under a 20-year concession period, structured as follows:

- 3 years of construction and implementation
- 17 years of operational period

During the operational phase, project revenues generated through user fees will be used to service debt obligations and recover the initial capital investment.

Table 16: Project Timeline

<i>Concession Period</i>	<i>Years</i>	20
<i>Construction - Duration</i>	<i>Years</i>	03
<i>Operation - Duration</i>	<i>Years</i>	17

2. Total Funding Envelope

As indicated above, the estimated capital cost for the proposed interventions at Malaba and Lwakhakha border posts is **~USD 120 million**, including preliminary costs, taxes, and contingencies. When additional financial elements such as **inflation, loan fees, and financing costs** (interest during construction) **are** incorporated into the financial model, the total funding envelope for the project is estimated at **~USD 142.47 million**.

Table 17: Funding Envelope

Total Funding Envelope	<i>USD Million</i>	142.47
-------------------------------	--------------------	---------------

3. Capital Structure

Discussions held with the DFIs including EIB, CDP, AFD and Proparco indicate that the project's funding structure will be based on a cost-recovery model, combining senior debt, subordinated (sub) debt, and equity structure. The proposed structure is as follows:

- **Total Debt (Senior + Sub Debt):** 70% of total funding Envelope
- **Equity + Grant Support:** 30% of total funding Envelope (with TCA infusing ~USD 5,396,600 and the balance getting infused by co-equity partners and grants through EU Official development assistance (ODA)).

This blended financing structure ensures adequate leverage while maintaining financial sustainability and resilience during the concession period. In addition, TCA's contribution will act as a financial buffer to address cash flow shortfalls, unforeseen operational challenges, or traffic fluctuations during the concession period. At the end of the concession term, the infused equity will be fully transferred (**inflation-indexed**) back to TCA, thereby ensuring transparency, accountability, and prudent financial management throughout the project lifecycle.

Table 18: Project financing structure

Debt (EU DFIs)	Equity (TCA) + Add-on Equity (EU ODA)
<i>In Million USD</i>	
~USD 79.78 (Senior Debt) + ~USD 19.94 (Sub Debt)	~USD 5.39 + ~USD 37.35
~70%	~30%

- ~USD 5.39 million to be contributed directly by TCA as sponsor equity and remaining ~USD 37.35 million is expected to be supported by TCA's co-equity partners and grants through EU ODA, which would be treated as add-on equity attributed to TCA within the project structure.

4. Cost of Debt Assumptions

The debt structuring assumptions, including the terms and conditions of the senior and subordinate debt facilities, have been developed based on consultations held with EIB, CDP, AFD and Proparco supplemented by secondary research and benchmarking with comparable infrastructure projects across Sub-Saharan Africa. The proposed debt repayment parameters are summarized below:

Table 19: Debt Repayment Structure

Particulars	Values
Moratorium (post end of construction)	6 months
Interest rate on senior debt	6%
Interest rate on sub debt	8%

The proposed interest rate of 6% for senior debt reflects the prevailing concessional lending terms typically extended by DFIs such as EIB, CDP, and Proparco for cross-border infrastructure projects in East Africa. These institutions often provide long-tenor financing (up to 20 years) with preferential interest rates in the range of 5%–7%, particularly for projects that demonstrate strong socio-economic impact, regional integration potential, and sustainability objectives. The 6% rate

therefore aligns with the blended concessional finance structure commonly observed in cost-recovery-based PPP or DFI-funded transport corridor projects.

The proposed 8% interest rate for subordinated debt (sub-debt) represents a moderate risk-adjusted premium over the senior debt rate, acknowledging the higher repayment risk borne by lenders providing junior capital. Sub-debt typically carries higher exposure and deferred repayment priority and thus commands a spread of **150–250 basis points above senior debt rates**. The proposed 8% therefore strikes a balance between financial realism and affordability within the project's cost recovery framework.

5. Inflation Rate

A long-term inflation rate of 3.0% has been adopted in the financial model for the escalation of project-related costs, including CAPEX, operating and maintenance costs and other applicable project expenses over the assessment period. The assumption is intended to provide a prudent and consistent long-term basis for the model, considering Kenya's historical inflation trend and the relatively stable inflation environment observed in recent years.

[Kenya's inflation has moderated materially from the elevated levels observed during 2022–23, with annual inflation remaining within the Central Bank of Kenya's target range in recent periods.]

This assumption should be revisited during the feasibility stage based on updated macroeconomic forecasts, country-specific cost indices and the detailed CAPEX and OPEX estimates.

6. Discount Rate

A **3.0% discount rate** has been adopted in the financial model, consistent with the **3.0% long-term inflation assumption** used for the project. The rate reflects a long-term, stable inflation environment and provides a consistent basis for discounting future project cash flows over the assessment period. The assumption has been applied consistently across the different financial scenarios, including the alternative traffic-growth cases and user-fee scenarios presented in **Section 4.1**.

To assess the sensitivity of the project returns to the discounting assumption, the **NPV has additionally been tested at discount rates of 4.0% and 5.0%**. This provides a more conservative view of the project's financial attractiveness and demonstrates the extent to which the NPV changes as the discount rate increases. The corresponding sensitivity results are presented in the **Key Outputs** section below.

Key Outputs

1. Revenue Projections

Based on the proposed operational framework described in **Section 1**, the following user fee structure is envisaged:

Table 20: Proposed User Fees

Truck Category	Proposed User Fee
Transit Trucks	USD 20 per truck
Local Trucks	USD 10 per truck

It is important to note that participation in these premium services is entirely voluntary. Transport operators who do not wish to opt for these services may continue to use the traditional border processing system without paying the user fee.

Therefore, to maintain a conservative approach to revenue projections, the financial model incorporates the following adoption assumptions:

Transit Trucks

- Initial adoption rate: 80%
- Gradual increase to 95% over the 20-year project life

Local Trucks (*Trusted Trader Facilitation Program*)

- Initial adoption rate: 20%
- Gradual increase to 75% over the project life

These assumptions ensure that the revenue model remains realistic and conservative, while also reflecting the expected behavioral shift among operators as the benefits of faster clearance become evident

The revenue projections for the project have been developed considering the key user segments expected to benefit from the proposed solution as indicated in **section 1**, namely, **transit trucks and local trucks**. The projections assume that only those trucks availing of enhanced services will be subject to user charges. The table below presents the projected revenues based on these assumptions.

Table 21: Revenue Projections

Year	Transit Trucks	Transit Trucks opting for Enhanced Services	Local Trucks	Local Trucks opting for Enhanced Services	Revenue (USD)
2027	170,682	136,546	1,251,671	250,334	-
2028	184,337	147,470	1,351,805	270,361	-
2029	199,084	159,267	1,459,949	291,990	-
2030	265,846	212,677	1,540,910	308,182	7,335,354

Year	Transit Trucks	Transit Trucks opting for Enhanced Services	Local Trucks	Local Trucks opting for Enhanced Services	Revenue (USD)
2031	269,659	215,727	1,656,479	331,296	7,627,506
2032	331,296	265,037	1,739,302	434,826	9,648,988
2033	356,143	288,730	1,869,750	560,925	11,383,853
2034	428,707	352,152	1,952,999	585,900	12,902,039
2035	458,716	381,718	2,089,708	835,883	15,993,187
2036	545,363	459,663	2,181,452	872,581	17,919,068
2037	580,812	495,764	2,323,246	1,045,461	20,369,890
2038	680,421	588,078	2,412,401	1,085,580	22,617,361
2039	724,648	634,067	2,569,207	1,284,603	25,527,375
2040	822,146	728,187	2,603,463	1,301,731	27,581,046
2041	855,032	766,475	2,707,601	1,353,801	28,867,509
2042	963,336	873,883	2,741,803	1,645,082	33,928,485
2043	1,001,870	919,573	2,851,475	1,710,885	35,500,310
2044	1,122,094	1,041,944	2,885,384	2,019,769	41,036,575
2045	1,166,978	1,096,125	3,000,800	2,250,600	44,428,505
2046	1,213,657	1,152,974	3,120,832	2,340,624	46,465,714
Total	12,340,826	10,916,057	44,310,237	20,780,413	409,132,767

2. Operational Cost Assumption

Operating Expenses (OPEX) refer to the ongoing costs required for the day-to-day functioning, maintenance, and management of the One Stop Border Post (OSBP). These expenditures are essential to ensure smooth operations, maintain service efficiency, and provide a safe and reliable working environment for border users and officials.

Based on the operational data obtained from the KRA and URA, OPEX at the **border posts** typically **include**:

- Telephone and communication services
- Solar street lighting maintenance and repairs
- Sanitation and plumbing maintenance
- Routine building and equipment repairs
- Motor running and fuel expenses
- Cleaning and garbage collection services
- Security and surveillance services

These expenditures reflect the multifaceted nature of OSBP operations, encompassing administrative, utility, maintenance, and security-related costs. However, it is important to note that granular, disaggregated, and consistently reported OPEX data for comparable OSBPs was

not readily available (from revenue authorities – KRA and URA). In such cases, it is standard practice at the pre-feasibility stage to adopt a proxy-based estimation approach, wherein operating costs are expressed as a percentage of revenue, drawing on industry benchmarks and comparable infrastructure projects. Accordingly, OPEX has been **conservatively estimated at 15% of annual revenue** during the operational period. This assumption is considered slightly conservative, as actual operating expenses are expected to benefit from efficiency gains arising from modern infrastructure, process automation, and energy-efficient systems.

Figure 9: Operating Cost

Year	Revenue (USD)	Operating Cost (USD)
2030	7,335,354	1,100,303
2031	7,627,506	1,144,126
2032	9,648,988	1,447,348
2033	11,383,853	1,707,578
2034	12,902,039	1,935,306
2035	15,993,187	2,398,978
2036	17,919,068	2,687,860
2037	20,369,890	3,055,484
2038	22,617,361	3,392,604
2039	25,527,375	3,829,106
2040	27,581,046	4,137,157
2041	28,867,509	4,330,126
2042	33,928,485	5,089,273
2043	35,500,310	5,325,047
2044	41,036,575	6,155,486
2045	44,428,505	6,664,276
2046	46,465,714	6,969,857
Total	409,132,767	61,369,915

3. Financial Model Outputs

The financial model has been assessed across **two user-fee scenarios** to evaluate the project's financial performance under different pricing assumptions. The first scenario considers a user fee of **USD 10 per local truck and USD 20 per transit truck**, while the second considers an increased fee of **USD 15 per local truck and USD 30 per transit truck**. For each fee scenario, the model tests three traffic-growth cases: a **Base Case of 6.05%**, a **High Case of 7.05%**, and a **Low Case of 5.05%**, thereby providing a range of potential financial outcomes under different traffic conditions. The corresponding NPVs under the **3.0% discount rate** are presented in **Section 4.1**. To further assess the sensitivity of project returns to the discounting assumption, the NPVs have also been tested using **4.0% and 5.0% discount rates**, with the resulting outputs presented below:

Table 22: Financial Outputs - Case 1

User Fees: Local Trucks (USD 10) & Transit Trucks (USD 20)		
Discount rate: 4%		
Base Case	High Case	Low Case
Traffic Growth (CAGR): 6.05%	Traffic Growth (CAGR): 7.05%	Traffic Growth (CAGR): 5.05%
Free Cash Flow to Firm (NPV): ~USD 135 M	Free Cash Flow to Firm (NPV): ~USD 237 M	Free Cash Flow to Firm (NPV): ~USD 59 M
Free Cash Flow to Equity (NPV): ~USD 167 M	Free Cash Flow to Equity (NPV): ~USD 268 M	Free Cash Flow to Equity (NPV): ~USD 92 M
Discount rate: 5%		
Base Case	High Case	Low Case
Traffic Growth (CAGR): 6.05%	Traffic Growth (CAGR): 7.05%	Traffic Growth (CAGR): 5.05%
Free Cash Flow to Firm (NPV): ~USD 98 M	Free Cash Flow to Firm (NPV): ~USD 185 M	Free Cash Flow to Firm (NPV): ~USD 32 M
Free Cash Flow to Equity (NPV): ~USD 135 M	Free Cash Flow to Equity (NPV): ~USD 221 M	Free Cash Flow to Equity (NPV): ~USD 71 M

Table 23: Financial Outputs - Case 2

User Fees: Local Trucks (USD 15) & Transit Trucks (USD 30)		
Discount rate: 4%		
Base Case	High Case	Low Case
Traffic Growth (CAGR): 6.05%	Traffic Growth (CAGR): 7.05%	Traffic Growth (CAGR): 5.05%
Free Cash Flow to Firm (NPV): ~USD 618 M	Free Cash Flow to Firm (NPV): ~USD 792 M	Free Cash Flow to Firm (NPV): ~USD 470 M
Free Cash Flow to Equity (NPV): ~USD 642 M	Free Cash Flow to Equity (NPV): ~USD 816 M	Free Cash Flow to Equity (NPV): ~USD 495 M
Discount rate: 5%		
Base Case	High Case	Low Case
Traffic Growth (CAGR): 6.05%	Traffic Growth (CAGR): 7.05%	Traffic Growth (CAGR): 5.05%
Free Cash Flow to Firm (NPV): ~USD 512 M	Free Cash Flow to Firm (NPV): ~USD 662 M	Free Cash Flow to Firm (NPV): ~USD 386 M
Free Cash Flow to Equity (NPV): ~USD 542 M	Free Cash Flow to Equity (NPV): ~USD 690 M	Free Cash Flow to Equity (NPV): ~USD 416 M

4. Debt and Equity Repayment Timeline

Based on the fees proposed, cost recovery was projected to be achievable within approximately 16 years, with a three-to-four-year tail in the concession to absorb traffic demand fluctuations:

Table 24: Repayment Timeline

Timeline	Milestone
Year 0 – 3	Construction and implementation period
Year 4 – 15 of concession	Full repayment of senior + sub debt
Year 16 of concession	Full Repayment of equity (inflation-adjusted)

The project is expected to fully recover its capital investment within 16 years of the concession period.

Table 25: Debt and Equity Repayment

Year	Senior Debt O/S	Debt Repayment	Sub Debt O/S	Sub Debt Repayment	Equity O/S	Equity Repayment	Total Repayments
2027	44,072,085	-	11,018,021	-	23,610,046	-	-
2028	61,292,402	-	15,323,101	-	32,835,215	-	-
2029	79,782,860	-	19,945,715	-	42,740,818	-	-
2030	79,930,437	(147,578)	19,945,715	-	42,740,818	-	(147,578)
2031	79,838,541	91,897	19,945,715	-	42,740,818	-	91,897
2032	78,022,871	1,815,670	19,945,715	-	42,740,818	-	1,815,670
2033	74,623,625	3,399,246	19,945,715	-	42,740,818	-	3,399,246
2034	69,729,966	4,893,659	19,945,715	-	42,740,818	-	4,893,659
2035	61,915,212	7,814,754	19,945,715	-	42,740,818	-	7,814,754
2036	51,994,574	9,920,638	19,945,715	-	42,740,818	-	9,920,638
2037	39,395,499	12,599,075	19,945,715	-	42,740,818	-	12,599,075
2038	24,130,129	15,265,370	19,945,715	16,044,388	42,740,818	-	31,309,758
2039	5,475,325	18,654,804	19,945,715	3,901,327	42,740,818	-	22,556,131
2040	-	5,475,325	3,901,327	-	42,740,818	20,323,949	25,799,275
2041	-	-	-	-	22,416,868	22,416,868	22,416,868
2042	-	-	-	-	-	-	-
2043	-	-	-	-	-	-	-
2044	-	-	-	-	-	-	-
2045	-	-	-	-	-	-	-
2046	-	-	-	-	-	-	-
Total	750,203,526	79,782,860	249,645,313	19,945,715	591,751,941	42,740,818	142,469,392

5. Maintenance Reserve for Long-Term Asset Sustainability

After the repayment of both debt and equity obligations, the project will continue to operate for the remaining four years of the concession period. During this period, User fee revenues may also get accumulated within a **Maintenance Reserve Account**

At the end of the concession period, when the project assets are transferred back to the governments, this **accumulated reserve can be used by the governments** to replace or

upgrade infrastructure assets without requiring additional public funding. Since the project costs would already have been recovered by this stage, **user fees are expected to be discontinued**, ensuring that border users are not charged beyond the cost recovery period.

9.3.4 Net Economic Benefit for Border Users

To understand the economic benefits of the proposed intervention framework, it is important to first understand the current border crossing conditions and the expected time savings after implementation of the proposed solution. Currently, trucks crossing through Busia and Malaba experience significant delays due to long queueing time, multiple inspection processes, congestion within the OSBP area, and inefficient traffic management systems. As part of the economic assessment, the study evaluated the existing average crossing time for different truck categories and compared it with the expected crossing time after implementation of the proposed interventions such as Green Lane systems, Trusted Trader Facilitation Program, smart scheduling mechanisms, traffic segregation, and dedicated inspection facilities. The difference between the current crossing time and the projected post-intervention crossing time forms the basis for estimation of time savings and the resulting economic benefits to corridor users.

A Understanding Current Crossing Times by Border Post

Across the three border posts, crossing times vary considerably by location. Malaba records the highest average total crossing time at 5.0 hours, followed by Busia.

The regular peak season running from March to October sees crossing times approximately double relative to the average, while the high season from November to February drives times to approximately three times the average level. This seasonal amplification is driven almost entirely by queuing rather than processing, reflecting structural capacity constraints in the current infrastructure rather than procedural inefficiency alone. Under these peak conditions, crossing times at **Malaba reach up to 15.0 hours and at Busia up to 10.5 hours per truck**.

Table 26: Current average and peak border crossing times

Current Crossing Time – Average Traffic (hours)				2X	Regular – March to October		3X	Season – November to February	
Border Post	Processing Time	Queuing Time	Total Time		Peak Traffic (hours)			Peak Traffic (hours)	
					Total Time*	Total Time*			
Busia	1.5	2.0	3.5		7.0	10.5			
Malaba	1.5	3.5	5.0		10.0	15.0			
Lwakhakha	0.5	0.5	1.0	2.0	3.0				

* Due to increase in queuing time

B Projected Time Benefits for Border Users Following Infrastructure Intervention

The average border crossing time across the selected border posts is estimated at approximately 7 hours per truck, comprising both processing time and queueing time. Under the proposed

intervention framework, significant reductions in crossing time are expected through implementation of Green Lane systems, smart scheduling mechanisms, traffic segregation, dedicated inspection facilities, and the Trusted Trader Facilitation Program. Transit trucks and compliant local trucks operating under the expedited processing framework are expected to experience the highest time savings, with some truck categories potentially moving through the border with minimal or near-zero stoppage. Even trucks requiring inspection are expected to benefit from lower queueing time and more organized inspection systems.

The analysis also recognizes that the benefits of the Trusted Trader Facilitation Program will materialize progressively over time. In the initial years of implementation, only a limited number of operators may enroll under the program, and therefore the overall reduction in delays may appear moderate. However, as more operators gradually move into higher compliance tiers and a larger proportion of trucks qualify for expedited movement, the overall efficiency gains across the corridor are expected to increase significantly. Over the long term, this gradual transition toward risk-based processing and no-stop cargo movement is expected to create substantial operational capacity within the existing border ecosystem without requiring continuous large-scale infrastructure expansion.

Table 27: Projected crossing times by truck category following infrastructure intervention.

Current Crossing Time* – [Transit and Local Trucks]	Processing Time 1.5 Hours	+	Queuing Time 5.5 Hours	=	Total 7.0 Hours
 Intervention Impact	*Crossing time is derived by averaging processing times across different border posts & truck categories				
Transit Trucks	Processing Time 0.0 Hours	+	Queuing Time 0.0 Hours	=	Total 0.0 Hours
No Stop Local Trucks** (under Trusted Trader Program)	Processing Time 0.0 Hours	+	Queuing Time 0.0 Hours	=	Total 0.0 Hours
Inspected Local Trucks**	Processing Time 1.5 Hours	+	Queuing Time 3.0 Hours	=	Total 4.5 Hours


**Maximum
Benefit**

*For local trucks, initial queue time savings are estimated at 3 hours (No-Stop) & 1 hour (Inspected), progressively increasing to 7 hours & 3 hours, respectively, upon full realization of the Trusted Trader Facilitation Program

The current weighted average crossing time across all truck categories and border posts stands at 7.0 hours per truck, comprising 1.5 hours of processing time and 5.5 hours of queuing. This is the baseline against which the intervention's time savings are measured.

For transit trucks, the intervention delivers the maximum achievable benefit due to zero stop express transit lanes. Under the post-intervention scenario, both processing time and queuing

time are reduced to zero, producing a total crossing time of 0.0 hours. The 7.0 hour saving per truck represents a complete elimination of border dwell time for this category.

For local trucks, the outcome depends on whether the operator qualifies under the Trusted Trader Programme. No Stop local trucks operating under that programme achieve the same maximum benefit as transit trucks, with both processing and queuing times reduced to zero and a total crossing time of 0.0 hours. Inspected local trucks, who undergo physical examination at the border, achieve a more modest but still significant improvement: processing time is held at 1.5 hours while queuing time is reduced from 5.5 hours to 3.0 hours, yielding a total post-intervention crossing time of 4.5 hours and a saving of 2.5 hours per truck.

C Estimating the Financial Cost of Delay

The economic impact of border delays is not a single line item. For freight operators, every hour of unproductive waiting generates loss across four distinct cost categories, each of which accumulates independently and compounds the overall burden on the operator.

- i. Fuel costs arise continuously from trucks idling or maintaining engine operation during queuing periods. This is a direct, unavoidable outlay that produces no freight movement or commercial output.
- ii. Driver wages are compensated on a time basis regardless of whether the vehicle is in transit or stationary, meaning that extended dwell time translate directly into salaried labour costs with no corresponding productivity.
- iii. Vehicle operating costs are a longer-term consequence of prolonged stationery or low speed operation, which accelerates engine wear, increases maintenance frequency, and raises fleet depreciation rates over time.
- iv. Finally, and often most significantly for operators working under freight contracts, delays reduce the number of trips completable within a given period, generating foregone revenue, exposure to contractual penalties, and measurably lower fleet utilisation rates.

Taken together, these four components form the basis of the delay cost benchmark applied throughout this analysis.

During the stakeholder consultations and survey discussions, several operators, logistics companies, and industry associations indicated that the overall economic cost associated with delays at major border posts such as Busia and Malaba can range between ~USD 250–400 per truck per crossing. This range reflects genuine variation across operator size, cargo type, and route frequency. To derive a standardized hourly rate applicable across border posts with different dwell times, the midpoint of this range was normalized against the standard 18 hour daily operating window at these posts:

Midpoint per crossing cost: USD 325 (midpoint of the USD 250 to 400 range)

Effective hourly rate: USD 325 ÷ approximately 18 operating hours ≈ USD 18 per truck per hour.

This benchmark was derived based on detailed consultations, operational observations at the border posts, queueing patterns, truck idle time, and responses received through the willingness-to-pay survey conducted with more than 100 transport and logistics stakeholders across the corridor. This benchmark was subsequently used throughout the economic analysis to estimate the financial value of reducing border crossing and queueing time under the proposed intervention framework.

Using the USD 18 per hour benchmark together with the current truck volumes and average crossing times at Busia and Malaba, the study estimated that the combined annual economic burden caused by border delays at these two border posts is approximately USD 194 million under existing operating conditions. This demonstrates the substantial economic losses currently being incurred across the corridor and strongly reinforces the need for operational reforms and targeted infrastructure interventions aimed at improving border efficiency.

Table 28: Estimated annual cost of delay at Busia and Malaba

Border Post	Daily Trucks	Annual Delay Cost – Average Traffic (USD)	Annual Delay Cost – Peak Traffic (USD)
Busia	~1,100	~USD 25 million	~USD 58 million
Malaba	~1,800	~USD 59 million	~USD 136 million

Economic Evaluation Framework

The economic evaluation under the study is based on a comprehensive framework that considers three key components: **delay cost savings, capital and operating costs, and user fees paid by the benefiting trucks.**

- Delay cost savings represent the economic value generated through reduction in queueing time, faster border crossing, lower truck idle time, and improved operational efficiency after implementation of the proposed solution.
- Capital and operating costs represent the total investment required for development and operation of the proposed infrastructure, smart systems, inspection facilities, Green Lanes, digital platforms, and supporting operational interventions over the project life.
- The user fees is the charge paid by trucks choosing to utilize the expedited processing facilities under the proposed Cost Recovery Mechanism.

After accounting for all project-related investments and user charges and comparing them against the total delay cost savings generated through the intervention, the study arrives at the overall net economic benefit to the economy over the life of the project.

- i. **Delay Cost Savings:** As indicated above, the delay cost savings have been estimated by applying the benchmark delay cost of ~USD 18 per truck per hour to the reduction in border crossing and queueing time expected after implementation of the proposed solution. Even under conservative assumptions for time savings per truck, the reduction in queueing time and faster border crossing generates significant economic savings at corridor scale due to the large volume of daily truck movement. Based on the projected traffic volumes and adoption of the proposed solution over 20-year project period, the total estimated Net Present Value (NPV) of delay cost savings is approximately USD 1.33 billion.
- ii. **Capital and Operating Costs:** The project requires a capital investment of ~USD 142 million for infrastructure development, alongside recurring operating and maintenance expenditure of ~USD 61 million, bringing the total capital cost USD 203 Million over the project life. These figures do not include land acquisition costs or Rehabilitation and Resettlement costs, which are subject to separate assessment processes. The NPV of capital and operating for estimating net economic benefits to the economy over the project life of 20 years is estimated at ~USD 182 million.
- iii. **User Fees Paid by Benefiting Trucks:** User charges are levied only on trucks that choose to utilize the expedited clearance facilities, maintaining a voluntary participation model. Transit trucks are charged USD 20 per crossing and local trucks USD 10 per crossing. The NPV of User fees paid by benefiting trucks (Local + transit) over the project life of 20 years is estimated at ~USD 277 million. These fees represent a cost to operators and are treated as a deduction in the net benefit calculation. The net economic benefit from the proposed solution at the selected border posts is presented as the NPV of all costs and benefits over the 20-year project life at an assumed 3% discount rate.

Table 29: NPV summary of costs and benefits over 20-year project life

Delay Cost Savings (+)	Total Capital & Operating Cost (-)	User Fees Paid by Transit & Local Trucks (-)	Net Economic Benefit (=)
USD ~1333 million	USD ~182 million	USD ~277 million	USD ~874 million

Note: Figures exclude land acquisition and Rehabilitation and Resettlement costs

The project generates a Net Economic Benefit of **USD 874 Million** (NPV), representing the net financial value delivered directly to truck operators utilizing the upgraded and expedited facilities over the project life. This figure is not a return to the project proponents rather it is the economic gain that accrues to the end users of the border infrastructure.

[3% discount rate reflects a conservative long-term macroeconomic assumption for the Kenya–Uganda corridor. This assumption is consistent with methodologies commonly applied to multi-country infrastructure projects and represents a base-case scenario in which inflation is expected to remain low and stable across both economies. The analysis assumes medium-term core inflation of 4% to 5% in Uganda, while Kenya's inflation target is maintained within a 3% to 5% range, with a ± 1.5 percentage point tolerance band based on historical trends.]

As a sensitivity check, the NPV of the estimated savings remains substantial even under higher discount-rate assumptions. At a **4% discount rate, the NPV is ~USD 807 million**, while at a more conservative **5% discount rate, the NPV remains ~USD 747 million**. This demonstrates that the overall economic case remains robust even when applying a higher discount rate than the 3% base-case assumption.

9.4 Minutes of the Meeting

1. Minutes of the meeting with JICA Delegation on 17th April 2026

Topic	To discuss the outcomes of the pre-feasibility study for implementing a cost recovery mechanism at One-Stop Border Posts (OSBPs)
Day, date/time	Friday, 17 April 2026. 14:00 to 15:30 IST
Place	Online via Microsoft Teams
Participant	JICA Delegation – Joanina Mutwiri, Satoshi Hamano, Maona Yui Trade Catalyst Africa (TCA) – Antoinette Tesha, Kevin Karanja Project team – Roshan Kumar Yadav, Ashutosh Gupta, Tarun Sonthalia

Introduction and Opening Remarks

- It was noted that the meeting was convened to brief the JICA Kenya Office and JICA Headquarters colleagues on the findings of the Pre-Feasibility Study conducted by TradeMark Africa concerning the selected border posts and the northern corridor border infrastructure.
- It was mentioned by Joanina Mutwiri that she serves as Programme Officer in charge of Regional Integration at the JICA Kenya Office, and that the current focus of the office is on the Malaba West Border Post.



- It was clarified by the project team that the overarching objective of this pre-feasibility study is to develop a replicable model that can be duplicated for the development of other borders in the future.

Background and Problem Statement

Project Scope and Corridor Focus

- The project team stated that the study focuses on the Northern Corridor (the Mombasa–Kisangani Corridor), a trade route of critical economic importance for East Africa.
- It was highlighted that over the past ten years, trade volumes along the corridor have more than doubled, yet the full potential of the corridor remains constrained by missing enabling facilities at borders, lagging multimodal infrastructure, and systemic inefficiencies.
- It was emphasized that the northern corridor connects 13 key border posts, out of which the project team undertook assessments at four border posts Busia, Malaba, Lwakhakha, and Katuna/Gatuna. However, the presentation focused primarily on the Kenya–Uganda border crossings, as traffic volumes at Katuna/Gatuna were low, making the Cost Recovery Mechanism less suitable for that location.
- It was emphasized that the three border posts under focus collectively handle ~3,300 trucks per day, broken down as follows:
 - Malaba: ~2,000 trucks per day
 - Busia: ~1,000 trucks per day
 - Lwakhakha: ~300 trucks per day
- It was explained that the project was structured around three broad work streams: technical solutions (infrastructure and process), a sustainable financing model (cost recovery), and legal and institutional enablers (regulatory and framework changes).
- It was noted that the project has been conducted in close collaboration with a wide range of stakeholders since July, including KRA, URA, Rwanda Revenue Authority, South Sudan Revenue Authority, Tanzania Revenue Authority, EAC, NCTTCA, Kenya Ports Authority, the Ministry of Trade (Uganda), the PPP Centre, approximately 20 associations, and multiple DFIs such as EIB, CDP, AFD, Proparco.
- It was highlighted that a willingness-to-pay survey was conducted reaching ~100 private operators and associations, and that risk assessments were carried out with guarantors and insurers such as ATIDI and DAMANA on the cost recovery concept.
- The proposed Kenya-Uganda OSBP upgrade program has focused to bring synergies from similar contributing projects and initiatives not only within TMA, the revenue authorities of KRA and URA and also at the regional level by the EAC and NCTTCA.

Root Causes of Border Inefficiencies

- It was presented that the average truck processing time at Busia, Malaba, and Lwakhakha ranges from 3 to 5 hours under normal conditions, doubling during peak periods and reaching 10 to 15 hours (including queuing) during peak seasons.
- It was highlighted that logistics costs currently represent 30–40% of cargo value, a figure that is directly eroding the economic competitiveness of goods traded along the corridor.
- It was estimated through the willingness-to-pay survey and internal validation that every hour a truck spends at the border costs the operator approximately USD 18. At peak traffic levels, this translates to an estimated annual loss of approximately USD 200 million annually at the congested border posts.
- It was projected that with current truck volume growth at an estimated compound annual growth rate (CAGR) of 6.16%, the number of trucks at the three focus border posts will increase from the current 3,316 trucks per day to ~12,350 trucks per day within the next 22 years.
- It was stressed that if no action is taken, the equivalent of approximately four additional border posts with the capacity of Malaba would be required to handle this volume, a capital-intensive approach that would not be financially or operationally sustainable.
- It was identified that the key challenges at the border posts fall into three broad categories:
 - **Systems:** Disparate customs data systems that are not integrated with each other, and lack of real-time data sharing and interoperability across agencies.
 - **Infrastructure and Process:** Critical facilities such as scanning equipment and approach roads are insufficient to handle current traffic volumes; circular road configurations at existing OSBPs contribute to congestion.
 - **Human and Capital Resources:** The continual need to deploy additional human resources to manage growing trade volumes is not a sustainable or scalable solution. Difficulties in mobilizing adequate capital for fulfilling border infrastructure needs is also contributing to trade inefficiencies.

Proposed Solutions

- It was presented that the study focuses on corridor-wide, integrated approach rather than treating each border post in isolation, looking at Busia, Malaba, and Lwakhakha together as an interconnected system.
- It was explained that the overall traffic was analysed and categorised into two primary segments:
 - Transit trucks (approximately 10% of total traffic): trucks originating from the Port of Mombasa that are not bound for Kenya or Uganda but are transiting to other partner states.
 - Local trucks (approximately 85% of total traffic): trucks carrying imports or exports for consumption in Kenya or Uganda,
 - Passenger vehicles (approximately 5% of total traffic)

Solution of Transit Trucks

- Lwakhakha border post is proposed to be developed as a dedicated express border post offering a paid zero-stop green lane exclusively for transit traffic, with an estimated throughput capacity of 1,500 transit trucks and 1500 local trucks per day.
[It was emphasized that the proposed mechanism is not compulsory for transit trucks but is designed as an optional, paid service. Transit Trucks who choose not to opt for it will continue to have access to the existing free services available across all three border posts – Busia, Malaba and Lwakhakha].
- It was noted that transit trucks do not require inspection stops in either Kenya or Uganda and are currently being unnecessarily trapped within the congestion at the two major border posts i.e. Busia and Malaba.
- It was explained that Lwakhakha was selected as the preferred location due to the following enabling factors:
 - Uganda has already developed infrastructure on its side and has plans for improvement of the expressway from Mbale to Lwakhakha.
 - Kenya has a proposed expressway from Kimaeti connecting to Lwakhakha, planned by KeNHA.
- It was noted that an alternative node, Buteba, has also been proposed due to its strategic location between Malaba and Busia. This location was found to currently lack the road and allied facilities necessary to divert traffic, leading to its de-prioritization.
- It was stated that the final determination of the preferred location remains a decision point to be deliberated and validated by the meeting, and that this is not a closed decision.
- It was presented that the design of the new green express border post at Lwakhakha was informed by a review of modern border posts globally, including facilities in India/Nepal, India/Bangladesh, the US/Mexico border, and the Singapore/Malaysia border, several of which handle 8,000–10,000 vehicles per day

Solution of Local Trucks

- It was highlighted that, following the development of solutions for transit trucks at Lwakhakha, a more impactful and scalable intervention was required for local trucks, which constitute nearly 85% of the total traffic across Busia, Malaba, and Lwakhakha, and therefore represent the primary source of congestion and inefficiencies along the corridor.
- In this context, a detailed assessment of Busia OSBP was undertaken. It was observed that the border post is significantly constrained in terms of available land, with limited scope for horizontal expansion, and that the current congestion layout restricts the addition of new lanes. It was further noted that any meaningful infrastructure augmentation at Busia would require extensive demolition and reconstruction, making it unsuitable for immediate large-scale capacity enhancement.
- Subsequently, Malaba OSBP was reviewed and identified as a more suitable location for intervention. It was highlighted that approximately 7 acres of land are available on the Uganda

side, currently underutilized as parking space, which provides a strong opportunity for reconfiguration and development of additional processing infrastructure, including the possibility of establishing a co-located joint Kenya–Uganda facility.

- Building on the comparative assessment of border posts, it was emphasized that relying solely on infrastructure expansion to address rising traffic demand would not be sustainable. With projections indicating a potential threefold increase in daily truck volumes by 2047, it was noted that capacity additions alone would be continuously outpaced by growth, leading to recurring congestion and repeated capital investments.
- In light of these constraints, a shift in approach was proposed, focusing on improving operational efficiency rather than only expanding physical infrastructure. This led to the introduction of the Trusted Trader Facilitation Program as a transformational solution aimed at addressing the root causes of delays at the border.
- It was explained that under the proposed program, transport operators would voluntarily enrol by submitting advance electronic documentation, including cargo details, driver and vehicle information, and compliance records. This would enable border agencies to adopt a risk-based inspection regime, reducing the need for blanket inspections and allowing faster clearance for compliant operators.
- The program would operate through a tiered compliance framework comprising Bronze, Silver, Gold, and Platinum categories, with inspection rates progressively decreasing as operators demonstrate sustained compliance over defined evaluation periods. Non-compliance would result in downgrade or suspension, thereby maintaining system integrity while incentivizing good behaviour.
- To further enhance efficiency, the Trusted Trader framework would be supported by a Smart Caller Scheduling System, which would require mandatory pre-booking of arrival time slots, enable real-time integration with customs systems, and use predictive analytics to manage truck inflows and identify potential risks before arrival at the border.
- It was further highlighted that a separate paid express facility for local trucks also be established at Lwakhakha along with Malaba, with an estimated throughput capacity of 1,500 local trucks per day, creating a total daily capacity of approximately 3,000 trucks at Lwakhakha

Combined Capacity and Time Savings

- It was stated that the combined capacity of the three border posts currently stood at approximately 4,000 trucks per day. With the proposed interventions operational by 2030, total capacity was projected to rise to approximately 7,000 trucks per day.
- It was highlighted that under an assumed ~6% (CAGR) annual traffic growth rate, surplus capacity would remain available until approximately 2038 as a large number of local trucks are expected to move to the no-stop inspection category.

- It was projected that the proportion of trucks in the no-stop inspection category has been assumed pessimistically to initially reach 20% in 2030 and would cover 75% of local trucks over the 20-year project horizon.
- It was noted that transit trucks that move to Lwakhakha would now have zero hours of queuing and processing time, as they would not be stopped.
- Local non-stop trucks (AEOs and homogeneous cargo) would similarly benefit. For all other trucks, time at the border was projected to reduce by approximately three hours due to decongestion externalities.
- It was highlighted that the willingness-to-pay survey had validated a user fee model: if time savings of two to three hours could be delivered, operators indicated willingness to pay upwards of USD 20 to 50 per truck per trip

Financial Model and Cost Recovery Mechanism

Capital Expenditure Estimates

- It was presented that the estimated broad capital cost for Malaba interventions was approximately USD 51 million (including contingencies and preliminaries), and for Lwakhakha approximately USD 72 million, bringing the total estimated capital expenditure to approximately USD 123 million.
- It was clarified that detailed engineering designs will be undertaken at feasibility stage and currently broad concepts for architecture and preliminary costings had been produced as part of the pre-feasibility. These will be firmed up, with confirmation on approach and available financing.
- It was noted that the capital investment could be phased, and that the Lwakhakha design in particular had been developed to allow modular deployment, meaning full disbursement would not be required upfront.
- It was emphasized that Malaba should not be modified until an alternative border post (such as, Lwakhakha) was operational and available, as any disruption to Malaba in isolation would severely disrupt trade traffic

User Fee and Willingness to Pay

- It was proposed that a comprehensive WTP survey has been completed with responses from ~100+ participants including truck operators, trade agencies, manufacturers, associations/federations, logistics companies, freight forwarders.
- Based on the survey, WTP was found to be between USD 20 to 50 for premium services if resulting in time savings of 3-4 hours.
- For financial modelling – a bare minimum user fee was considered to test viability i.e. USD 10 per local truck per trip and USD 20 per transit truck per trip

Net Economic Benefit

- It was presented that the financial model had been built on a concession tenor of 20 years and a total funding envelope of approximately USD 140 million (including financing costs).
- Based on the fees proposed, cost recovery was projected to be achievable within approximately 15 years, with a four-to-five-year tail in the concession to absorb traffic demand fluctuations.
- It was highlighted that project is highly viable from a private sector perspective, IRR sensitivities upwards of 15% is achievable – with a change in User Fee assumptions i.e., considering USD 15 for Local trucks and USD 25 for Transit Trucks per trip with same conditions.
- It was noted that truck operators currently estimated losses of USD 200 to USD 500 per crossing due to delays, equivalent to approximately USD 18 per truck per hour. The proposed solution was projected to save operators approximately USD 1.2 billion in cost of delays over 20 years.
- It was highlighted that the total user fees projected to be collected amounted to a net present value approximately USD 193 million against total capital and operating costs of approximately USD 145 million, confirming the project's financial sustainability.
- It was presented that the net economic benefit to end users was estimated the net present value at approximately USD 875 million over the 20-year period.

Proposed Blended Financing Structure

- It was presented that the financing package comprises three main sources: debt (from DFIs), equity (from TCA and other investors), and EU grants (ODA via TMA to TCA).
- It was explained that the proposed structure involves a 'fund pool' that consolidates the diverse types of financing arranged by TCA, feeding into two national-level SPVs one per country which manages the project on either side of the border.
- It was highlighted that the SPVs would procure contractors, collect user fees, and pass revenues through to the fund pool to repay the DFI loans.
- It was noted that consultations had been held with CDP, AFD, Proparco, EIB, and various guarantee institutions.
- It was observed that EIB appeared to be the most flexible among these institutions.
- It was also mentioned that AFD indicated it could not provide ODA grants directly to a private entity and would need to go through government, while most DFIs showed limited appetite for equity given the political risk profile and the absence of a government guarantee.
- It was discussed that Proparco could potentially provide a small equity contribution, and that EIB had expressed some interest in the equity side as well. Political risk may be mitigated through a guarantee from ATIDI.
- It was noted that given each DFI's minimum ticket size of around \$30-50 million, the \$140 million envelopes could accommodate approximately three DFI participants.
- It was noted that an in-depth legal assessment was also conducted as part of the pre-feasibility study, confirming that the cost recovery model is legally feasible and identifying specific regulatory amendments required to implement user fees within the existing OSBP management framework.

Questions and Discussion

Coordination with other projects

- The JICA team asked about the coordination between this project and the African Development Bank (AfDB) express project, which is also planned for the same three border posts.
- It was explained that TradeMark Africa is coordinating closely with the AfDB project through the East African Community (EAC), which is leading the implementation of the AfDB initiative.
- Discussions with the EAC have already taken place and will continue during the feasibility stage to ensure alignment between both projects, especially regarding feeder road infrastructure.
- It was also noted that this coordination influenced the decision to keep interventions at Lwakhakha border relatively limited, as the proposed expressways are expected to increase future traffic volumes significantly. Therefore, the trusted trader facilitation program and the transit truck no stop green lane must be designed to handle this anticipated growth effectively.

Risk Based Inspections

- The JICA representative asked why revenue authorities such as Kenya Revenue Authority (KRA) would be willing to participate in the Trusted Trader Programme, especially when reduced inspections could raise concerns about potential customs revenue loss.
- In response, it was explained that revenue authorities are currently using excessive resources to inspect nearly all cargo, while the quality of scanning systems remains inadequate.
- Authorities themselves have raised concerns about repeated inspections, where cargo is scanned multiple times, including at Mombasa and again near the border.
- It was highlighted that agencies have already expressed support for a more risk-based and efficient inspection system. During stakeholder workshops, authorities acknowledged that low-risk cargo such as clinker, steel, cement, and oil transported by established operators should pass without routine inspections.
- It was emphasized that the Trusted Trader Programme will only move forward if revenue authorities are confident that overall risk levels will not increase.
- Advanced technologies such as improved scanners, AI-based risk analytics, pre-clearance systems, and smart gate infrastructure are expected to help authorities focus inspections only on genuinely high-risk cargo.
- It was further noted that the programme would require participation from all operators, not only those using the express facilities, thereby improving overall data availability, monitoring, and compliance visibility.

Project Sequencing

- It was discussed that the project is heading towards the close of the pre-feasibility stage and commencement of the feasibility stage.

- It was acknowledged that revenue authorities require practical short-term solutions and cannot wait only for long-term interventions. Therefore, the immediate priority is to fast-track the development of the Lwakhakha express border post to help relieve current traffic congestion.
- At the same time, work on the Trusted Trader Programme will be progressing in parallel, as it involves significant reforms to systems, operational processes, and institutional arrangements.
- The objective is to complete the feasibility study, including a clear implementation pathway for the Trusted Trader Programme, within approximately one to one-and-a-half years.
- During the feasibility stage, efforts to secure the required legislative and regulatory approvals, including provisions related to the implementation of user fees and cost recovery mechanisms at the border posts, would also be undertaken in parallel to support timely project implementation.

JICA Grant Aid and Potential Collaboration

- The representative from Japan International Cooperation Agency (JICA) stated that the project presents a strong opportunity for collaboration and support through grant funding.
- It was noted that JICA is currently formulating a grant-funded project for the Malaba border, primarily focusing on infrastructure components such as bridges, roads, and related facilities.
- TradeMark Africa (TMA) welcomed the possibility of such grant support, particularly for infrastructure components that constitute a significant share of the overall CAPEX and may be difficult to finance commercially.
- It was highlighted that grant contributions towards roads, bridges, and associated infrastructure would significantly enhance the financial viability and bankability of the overall project. It was also noted that EU development financing partners would also welcome such support.
- JICA further clarified that the proposed grant assistance would likely be implemented through government agencies such as KRA or KHA, with project execution undertaken through contractors procured under the relevant government framework.
- It was also discussed that JICA's budget allocation is generally country-specific, which creates certain challenges for projects spanning both Kenya and Uganda. However, JICA indicated that efforts are underway to explore funding support for the Uganda side as well, with the objective of developing a coordinated two-country grant initiative, subject to internal approvals and further discussions.
- Finally, TradeMark Africa offered support in facilitating coordination and stakeholder engagement on the Uganda side, while emphasizing the importance of balanced infrastructure development at both sides of the border to avoid operational bottlenecks and inefficiencies in cross-border trade movement.

Next Steps and Agreed Actions

- It was agreed that TradeMark Africa would share the final report of the pre-feasibility study with the JICA team.

- It was confirmed that a JICA team visit to Kenya and Uganda is planned for May or June, during which a technical discussion with TradeMark Africa would be arranged.
- The TCA team stated that the feasibility study stage will dive deeper into all the aspects of the pre-feasibility assessment and align fully with the NEPAD, AfDB, EAC and national highways agencies on the Kenyan and Ugandan sides.
- It was confirmed that TradeMark Africa is available to support JICA at any point, including providing introductions to relevant counterparts in Uganda.

Closing Remarks

- The JICA team acknowledged that the presentation was very comprehensive and that the project represents a highly integrated next-generation trade facilitation corridor wide solution.
- It was agreed by all parties that continued engagement and information sharing between TradeMark Africa and JICA would be essential to ensure well-coordinated and complementary interventions at the Malaba border.

2. Minutes of the meeting with East African Community (EAC), Authorities of Kenya Revenue Authority (KRA) and Uganda Revenue Authority (URA) on 25th May 2026

Topic	Discussion on pre-feasibility findings and deliberation on the way forward
Day, date, time	Monday, 25 th May 2026, 09:00 to 14:00 EAT
Place	EAC HQ Office – Arusha, Tanzania + (Online via MS teams)
Participants	EAC – Flavia Busingye (Chair), Eng Suleman Athumani (deputy Chair), Eng. Godfrey Enzama, Eng. Evarist Munyampundu, Eng. Masatomo Toyoda, Takashi Matsumoto, Monica Mihigo, and Prisca Mbaga KRA – Kellen Njeru, Tina Mueni, Wanjiku Ngure URA – Fiona Akullo and James Bob Barungi TradeMark Africa (TMA) – Bendict Musengele, Zuhura Mbaga, and Martin Kaboine, Trade Catalyst Africa (TCA) – Antoinette Tesha Crisil (Consultant team) – Roshan Kumar Yadav, Ashutosh Gupta, Tarun Sonthalia, Prof. Albert Mumma, Fred Waix and Michael Ojatum

Arrival & Opening Formalities

- It was noted that the meeting was convened by the EAC Secretariat to present the findings of the prefeasibility study on the OSBP Cost Recovery Model project, jointly implemented by TradeMark Africa and Trade Catalyst Africa with the support of Crisil Limited as consultants.
- It was noted that the partner states were represented by the Kenya Revenue Authority and the Uganda Revenue Authority, alongside EAC Secretariat officials drawn from the Customs and Trade Directorate

- The EAC Secretariat welcomed the delegation and outlined the agenda.
- It was explained that the presentation would be delivered in three components, namely infrastructure and systems, the policy and financing aspects framed around cost recovery, and the legal aspects together with the points for guidance on modalities going forward.

Objectives of the Meeting

- It was recalled that the project commenced approximately 9 months ago and is anchored through assistance by the European Union under its Global Gateway Programme.
- It was stated that the purpose of the meeting was to brief the Secretariat and technical teams, obtain guidance, and agree on the most effective way of working together as the project moves from pre-feasibility towards full feasibility, after which the findings would be reported back to the European Union.
- It was explained that the project initially examined the entire Northern Corridor from Mombasa onwards to Kisangani. From the initial plan to review 12 Border posts, the project has evaluated 4 border posts, and the current solution has been shortlisted and considered across 3 border posts in Kenya and Uganda.
- It was noted that the project had faced challenges, with on-boarding Tanzania due to the elections last year and similarly for South Sudan due to the prevailing situation at the border which was earmarked by the pre-feasibility study. Therefore, site visits and traffic studies at those borders, were not conducted and the project has then proceeded with Kenya, Uganda, and Rwanda only.
- It was highlighted that grants for border infrastructure development have been declining since the year 2020. Also, previously border infrastructure has often been deployed partially i.e. one side of a border or a single component rather than targeting the complete facility development requirements.
- It was emphasised that the central objective of the project is to develop a financing package that not only addresses the complete investments but also ensures sustainability through a cost recovery mechanism, whereby the users who benefit from the improvements contribute to their cost.
- It was clarified that the project accordingly sought to establish what needs to be financed, who would finance it, and the implications for the user fee at the border.
- It was noted that the legal dimension is significant, because unlike the energy and roads sectors, there is currently no established framework for developing border infrastructure on a cost recovery basis. The project aims to pilot such a model and, if successful, create a replicable approach for the region.

Presentation on the Pre-Feasibility Study Findings

Background and Rationale

- The project team stated that the study focuses on the Northern Corridor (the Mombasa–Kisangani Corridor), a trade route of critical economic importance for East Africa.
- It was highlighted that over the past ten years, trade volumes along the corridor have more than doubled, yet the full potential of the corridor remains constrained due to absence/gaps in enabling facilities at borders, road infrastructure linkages, and system and process inefficiencies.
- It was emphasized that the Northern Corridor connects 13 key border posts, out of which the project team undertook assessments at four border posts Busia, Malaba, Lwakhakha, and Katuna/Gatuna. The study on these four border crossings based on stakeholder on-boarding and alignment. However, out of these, traffic volumes at Katuna/Gatuna were low, making the Cost Recovery Mechanism less suitable for that location.
- It was emphasized that the three border posts under focus collectively handle ~3,300 trucks per day, broken down as follows:
 - Malaba: ~2,000 trucks per day
 - Busia: ~1,000 trucks per day
 - Lwakhakha: ~300 trucks per day

The Scale of the Problem

- It was presented that the average truck processing time at Busia, Malaba, and Lwakhakha ranges from 3 to 5 hours under normal conditions, doubling during peak periods and reaching 10 to 15 hours (including queuing) during peak seasons.
- It was highlighted that logistics costs currently represent 30–40% of cargo value, a figure that is directly eroding the economic competitiveness of goods traded along the corridor.
- It was estimated through the willingness-to-pay survey and internal validation that for every hour a truck spends at the border, the operator bears a cost of approximately USD 18. At peak traffic levels, this translates to an estimated annual loss of approximately USD 200 million annually at the congested border posts.
- It was projected that with current truck volume growth at an estimated compound annual growth rate (CAGR) of approximately 6.16%, the number of trucks at the three focus border posts will increase from the current ~3,316 trucks per day to ~12,350 trucks per day within the next 22 years.
- It was stressed that if no action is taken, the equivalent of approximately four additional border posts with the capacity of Malaba would be required to handle this volume, a capital-intensive approach that would not be financially or operationally sustainable.

Core Challenges Identified

- It was identified that the key challenges at the border posts fall into three broad categories:
 - Systems: Disparate customs data systems that are not integrated with each other, and lack of real-time data sharing and interoperability across agencies.

- Infrastructure and Process: Critical facilities such as scanning equipment and approach roads are insufficient to handle current traffic volumes; circular road configurations at existing OSBPs contribute to congestion.
- Human and Capital Resources: The continual need to deploy additional human resources to manage growing trade volumes is not a sustainable or scalable solution. Difficulties in mobilizing adequate capital for fulfilling border infrastructure needs is also contributing to trade inefficiencies.

Project Scope and Approach

- It was explained that the project was structured around three broad work streams: technical solutions (infrastructure and process), a sustainable financing model (cost recovery), and legal and institutional enablers (regulatory and framework changes).
- It was noted that the project has been conducted in close collaboration with a wide range of stakeholders since July, including KRA, URA, Rwanda Revenue Authority, South Sudan Revenue Authority, Tanzania Revenue Authority, EAC, NCTTCA, Kenya Ports Authority, the Ministry of Trade (Uganda), the PPP Centre, approximately 20 associations, and multiple DFIs such as EIB, CDP, AFD, Proparco.
- It was highlighted that a willingness-to-pay survey was conducted reaching ~100 private operators and associations, and that risk assessments were carried out with guarantors and insurers such as ATIDI and DAMANA on the cost recovery concept.
- It was highlighted that two major existing TMA projects, the SITA project (supported by Denmark) and the EU Corridor 8 project (Netherlands), are already building the digital backbone required for the proposed project's successful implementation.
- The proposed Kenya-Uganda OSBP upgrade program has focused on bringing synergies from similar contributing projects and initiatives not only within TMA, the revenue authorities of KRA and URA and also at the regional level by the EAC and NCTTCA.

Proposed Solutions: Corridor-Wide Approach

- It was presented that the study focuses on corridor-wide, integrated approach rather than treating each border post in isolation, looking at Busia, Malaba, and Lwakhakha together as an interconnected system.
- It was explained that the overall traffic was analysed and categorised into two primary segments:
 - Transit trucks (approximately 10% of total traffic): trucks originating from the Port of Mombasa that are not bound for Kenya or Uganda but are transiting to other partner states.
 - Local trucks (approximately 85% of total traffic): trucks carrying imports or exports for consumption in Kenya or Uganda,
 - Passenger vehicles (approximately 5% of total traffic)

Solution for Transit Trucks

- It was proposed that the 10% of transit trucks currently contributing to congestion at Malaba and Busia be redirected to Lwakhakha, which is to be developed as a dedicated express border post offering a paid zero-stop green lane exclusively for transit traffic, with an estimated throughput capacity of 1,500 local trucks per day.
- *It was emphasized that the proposed mechanism is not compulsory for transit trucks but is designed as an optional, paid service. Transit Trucks who choose not to opt for it will continue to have access to the existing free services available across all three border posts – Busia, Malaba and Lwakhakha.*
- It was noted that transit trucks do not require inspection stops in either Kenya or Uganda and are currently being unnecessarily trapped within the congestion at the two major border posts i.e. Busia and Malaba.
- It was explained that Lwakhakha was selected as the preferred location due to the following enabling factors:
 - Uganda has already developed infrastructure on its side and has plans for improvement of the expressway from Mbale to Lwakhakha.
 - Kenya has a proposed expressway from Kimaeti connecting to Lwakhakha, planned by KeNHA.
 - It was stated that the final determination of the preferred location remains a decision point to be deliberated and validated by the meeting.

New Green Border Post Design Principles

- It was presented that the design of the new express border post at Lwakhakha was informed by a review of modern border posts globally, including facilities in India/Nepal, India/Bangladesh, the US/Mexico border, and the Singapore/Malaysia border, several of which handle 8,000–10,000 vehicles per day.
- It was highlighted that four key design principles were drawn from these international benchmarks and applied to the proposed Lwakhakha concept:
 - Technology-embedded validation: Smart gates and Optical Character Recognition (OCR) readers identify vehicles and determine eligibility for express movement without manual stoppage.
 - Clear traffic segregation: Separate lanes for passengers, local trucks, transit trucks, and express-paying vehicles to eliminate bottlenecks caused by mixed traffic.
 - Linear road configuration: Movement through the border post is designed to be as direct and linear as possible, minimizing curves and unnecessary stops that reduce throughput speed.
 - Modular, scalable capacity: The border post is designed in phases, with green spaces reserved for future expansion as traffic volumes increase, avoiding the need for large upfront capital outlay.

Solution for Local Trucks

- It was highlighted that, following the development of solutions for transit trucks at Lwakhakha, a more impactful and scalable intervention was required for local trucks, which constitute nearly 85% of the total traffic across Busia, Malaba, and Lwakhakha, and therefore represent the primary source of congestion and inefficiencies along the corridor.
- In this context, a detailed assessment of Busia OSBP was undertaken. It was observed that the border post is significantly constrained in terms of available land, with limited scope for horizontal expansion, and that the current congestion layout restricts the addition of new lanes. It was further noted that any meaningful infrastructure augmentation in Busia would require extensive demolition and reconstruction, making it unsuitable for immediate large-scale capacity enhancement.
- Subsequently, Malaba OSBP was reviewed and identified as a more suitable location for intervention. It was highlighted that approximately 7 acres of land are available on the Uganda side, currently underutilized as parking space, which provides a strong opportunity for reconfiguration and development of additional processing infrastructure, including the possibility of establishing a co-located joint Kenya–Uganda facility.
- Building on the comparative assessment of border posts, it was emphasized that relying solely on infrastructure expansion to address rising traffic demand would not be sustainable. With projections indicating a potential threefold increase in daily truck volumes by 2047, it was noted that capacity additions alone would be continuously outpaced by growth, leading to recurring congestion and repeated capital investments.
- In light of these constraints, a shift in approach was proposed, focusing on improving operational efficiency rather than only expanding physical infrastructure. This led to the introduction of the Trusted Trader Facilitation Program as a transformational solution aimed at addressing the root causes of delays at the border.
- It was explained that under the proposed program, transport operators would voluntarily enrol by submitting advance electronic documentation, including cargo details, driver and vehicle information, and compliance records. This would enable border agencies to adopt a risk-based inspection regime, reducing the need for blanket inspections and allowing faster clearance for compliant operators.
- The program would operate through a tiered compliance framework comprising Bronze, Silver, Gold, and Platinum categories, with inspection rates progressively decreasing as operators demonstrate sustained compliance over defined evaluation periods. Non-compliance would result in downgrade or suspension, thereby maintaining system integrity while incentivizing good behaviour.
- To further enhance efficiency, the Trusted Trader framework would be supported by a Smart Caller Scheduling System, which would require mandatory pre-booking of arrival time slots, enable real-

time integration with customs systems, and use predictive analytics to manage truck inflows and identify potential risks before arrival at the border.

- It was further highlighted that a separate paid express facility for local trucks also be established at Lwakhakha along with Malaba, with an estimated throughput capacity of 1,500 local trucks per day, creating a total daily capacity of approximately 3,000 trucks at Lwakhakha.

Capacity and Time-Saving Projections

- It was stated that the combined capacity of the three border posts was at approximately 4,000 trucks per day. With the proposed interventions operational by 2030, total capacity was projected to rise to approximately 7,000 trucks per day.
- It was highlighted that under an assumed ~6% (CAGR) annual traffic growth rate, surplus capacity would remain available until approximately 2038 as a large number of local trucks are expected to move to the no-stop inspection category.
- It was projected that the proportion of trucks in the no-stop inspection category has been assumed pessimistically to initially reach 20% in 2030 and would cover 75% of local trucks over the 20-year project horizon.
- It was noted that transit trucks that move to Lwakhakha would now have zero hours of queuing and processing time, as they would not be stopped.
- Local non-stop trucks (AEOs and homogeneous cargo) would similarly benefit. For all other trucks, time at the border was projected to reduce by approximately three hours due to decongestion externalities.
- It was highlighted that the willingness-to-pay survey had validated a user fee model: if time savings of two to three hours could be delivered, operators indicated willingness to pay upwards of USD 20 to 50 per truck per trip.

Capital Cost Estimates

- It was presented that the estimated broad capital cost for Malaba interventions was approximately USD 51 million (including contingencies and preliminaries), and for Lwakhakha approximately USD 72 million, bringing the total estimated capital expenditure to approximately USD 123 million.
- It was clarified that detailed engineering designs will be undertaken at feasibility stage and currently broad concepts for architecture and preliminary costings had been produced as part of the pre-feasibility. These will be firmed up, with confirmation on approach and available financing.
- It was noted that the capital investment could be phased, and that the Lwakhakha design in particular had been developed to allow modular deployment, meaning full disbursement would not be required upfront.
- It was emphasized that Malaba should not be modified until an alternative border post (such as, Lwakhakha) was operational and available, as any disruption to Malaba in isolation would severely disrupt trade traffic.

Willingness to Pay

- It was proposed that a comprehensive WTP survey has been completed with responses from ~100+ participants including truck operators, trade agencies, manufacturers, associations/federations, logistics companies, freight forwarders.
- Based on the survey, WTP was found to be between USD 20 to 50 for premium services if resulting in time savings of 3-4 hours.
- For financial modelling – a bare minimum user fee was considered to test viability i.e. USD 10 per local truck per trip and USD 20 per transit truck per trip.

Financial Model and Economic Viability

- It was presented that the financial model had been built on a concession tenor of 20 years and a total funding envelope of approximately USD 140 million (including financing costs).
- Based on the fees proposed, cost recovery was projected to be achievable within approximately 15 years, with a four-to-five-year tail in the concession to absorb traffic demand fluctuations.
- It was highlighted that project is highly viable from a private sector perspective, IRR sensitivities upwards of 15% is achievable – with a change in User Fee assumptions i.e., considering USD 15 for Local trucks and USD 25 for Transit Trucks per trip with same conditions.

Net Economic Benefit for Border Users

- It was noted that truck operators currently estimated losses of USD 200 to USD 500 per crossing due to delays, equivalent to approximately USD 18 per truck per hour. The proposed solution was projected to save operators approximately USD 1.2 billion in cost of delays over 20 years.
- It was highlighted that the total user fees projected to be collected amounted to a net present value approximately USD 193 million against total capital and operating costs of approximately USD 145 million, confirming the project's financial sustainability.
- It was presented that the net economic benefit to end users was estimated the net present value at approximately USD 875 million over the 20-year period.

Key Enablers for Successful Implementation of the Proposition

- It was highlighted that the successful implementation of the proposed solutions will be anchored on four key enablers, namely
a robust financing framework,
an enabling legal and regulatory framework,
supported and allied infrastructure, and
strong multi-agency alignment along with stakeholder and community engagement.
- It was highlighted that a robust financing framework is being developed, with considerable progress being made towards establishing a blended financing structure. The proposed structure

includes a mix of grants, concessional and commercial debt, and equity participation through TCA. Also, TCA will act as a PPP partner and mobilize and manage the investments.

- It was confirmed that preliminary reviews of the legal and regulatory frameworks in Kenya and Uganda indicate that the proposed financing and cost recovery model is feasible within existing PPP, public finance management, and border management frameworks, based on consultations with key institutions including URA, KRA, and relevant government stakeholders.
- It was highlighted that the implementation of the proposed solutions will be supported by several ongoing and planned road infrastructure projects on both sides of the Kenya–Uganda border. Key projects such as the Kimaeti–Lwakhakha Road, Mbale–Lwakhakha Road, Kakira–Malaba Road, and the Kisumu–Kisian Road and Airport Link are expected to enhance connectivity and improve overall corridor efficiency, with some projects already under development and others at planning stages.
- It was emphasized that strong multi-agency alignment will be critical for successful implementation, requiring effective coordination among customs, standards, health, and security agencies, supported by integrated digital systems and clearly defined institutional mechanisms.
- It was further highlighted that continuous stakeholder and community engagement will be essential to ensure smooth implementation, including regular consultations with transporters, traders, and border communities, along with targeted awareness and sensitization initiatives to build acceptance and support for the proposed interventions.

Policy, Regional Coordination and Cross Cutting Concerns

- It was noted that whilst welcome, the project does introduce a level of complexity with the approach of introducing a user fee and trying to introduce risk-based inspections at borders where security concerns and national needs tend to be prioritized. Therefore, careful consideration of all stakeholders, including regional actors will be required.
- It was raised that, given ongoing discussions on the eventual collapse of internal EAC borders, projections should consider this possibility before committing significant investment to fees that may not be required in the future.
- It was noted that, under World Trade Organization rules, fees should not be levied on transit, and that the EAC should examine the relevant article in light of the proposed charges.
- It was raised that immigration must be engaged early, since an express border at which no one stops still involves immigration processes governing entry and exit, with reference made to Kenya's Electronic Travel Authorisation (ETA) and the prospect of extending such facilitation to truck drivers.
- It was noted that Kenya has brought its border agencies together under a Border Control and Operations Coordination Committee, which could be used to advance some of the work.
- It was acknowledged by partner state representatives that the proposed additional fee was a key concern, that no clear provision for it had been identified in the existing instruments, and that

there was a need to consult the relevant EAC organs and find a way forward that balances facilitation against cost to traders.

- It was observed that a demonstrated willingness to pay signals an efficiency gap, and that addressing that inefficiency, alongside the related policy issues, would maximise the utility of the facilities.

Legal and Institutional Framework

- It was explained that the EAC has an existing regional OSBP Sustainability Strategy that was developed and adopted by Council, in 2021 and that Council directives and decisions form part of the EAC legal framework and are legally binding under the Treaty of Establishment.
- It was outlined that the OSBP Act, its regulations and the cost recovery procedure manual already provide governance structures, including joint border committees, national steering committees, and the regional steering committee, through which the project should be managed, with each partner state operating through a designated lead agency.
- It was posed as a key decision for the meeting whether a new working group should be established, as requested in the Trade Catalyst Africa letter, or whether the existing structures, such as the regional OSBP committee and the technical working groups feeding the sectoral councils, should be used.
- It was noted that the Secretariat must provide a formal response to TCA's letter, but must first brief its wider management, including the Secretary General, in sufficient detail.
- It was explained that all inputs progress through the technical working group to the sectoral councils, and that for adoption, the matter must reach the Council of Ministers, whose directions are legally binding.
- It was clarified that the regional coordination will be facilitated through dedicated working committees, each organised around a specific thematic track, responsible for driving project preparation and structuring activities, including feasibility assessments, detailed design development, and financial backing, while actual implementation rests with the partner states through their respective lead agencies, supported by market sounding exercises and investor roadshows to mobilise private sector participation.
- It was emphasised that, for any outcome to pass through the policy organs on a regional basis, the EAC must convene the meetings and issue the invitations, since engagements convened by others would risk participants attending only as visitors and the outcomes not finding their way through the policy organs.
- It was distinguished that meetings are more binding than workshops, and that the decisions of EAC convened meetings would proceed through the policy organs.

Pilot Approach and Carrying Partner States Along

- It was acknowledged that the project was always envisaged as regional to cover the wider EAC, and that although there was room to include other partner states, the decision was taken to begin with Kenya and Uganda given their buy in and the pressing, present day nature of the congestion problem.
- It was emphasised that speed is important, that the prefeasibility took longer than desired, and that the feasibility should avoid extending over several years so that the problem does not advance further before construction begins.
- It was agreed that a clear roadmap should be developed, for example beginning with Uganda and Kenya, followed by Uganda and Rwanda, then Tanzania and Rwanda, to give the other partner states comfort that the initiative is regional and that their turn will come.
- It was noted that successful implementation depends on the success of the pilot, which places responsibility on Uganda and Kenya to demonstrate that the model works.
- It was highlighted that carrying partner states along supports knowledge transfer on PPP frameworks, user fee adoption, and community engagement, and that institutional knowledge should be embedded to ensure the long-term sustainability of both the infrastructure and the people.
- It was observed that borders will remain in place owing to security considerations, but that full integration of technology and adoption of the customs union and common market protocol would make cross border movement faster and more open, while reducing the footprint of hard infrastructure required.
- The EAC Secretariate enquired that the partner states representatives on the maturity level of their institutions regarding risk-based inspection and what steps they have taken or envisage, noting current work on the interface for sharing scanning images, and stressing that the project must move beyond image sharing towards genuine risk and trust between agencies.

Regional Mandate and Required Legal Amendments

- It was emphasised that the initiative is a regional strategy rather than a bilateral arrangement between Uganda and Kenya, given that the strategy is being implemented across the region.
- It was noted by the Corridor Development Advisor that the regional steering committee had approved a similar concept as a strategy for developing OSBPs in future, but that the current OSBP framework does not permit user charges across all countries, the only existing charges included are related to rent collection from tenants who provide services at the OSBPs, such as banks, agents and other service providers.
- It was proposed that the OSBP Act be amended, with the study providing the technical basis and rationale for adopting a user pays principle, and that the East African Legislative Assembly would carry out the required public consultations across the partner states for the fee to be accepted.



- It was further noted that the PPP Acts in the partner states cover only roads within the transport sector and may need amendment to cover the OSBP user pay principle, since implementation would be difficult without the supporting legal frameworks in place.
- It was recommended that stakeholder engagement be treated as a key activity going forward, particularly in view of the prevailing geopolitical situation and fuel-related sensitivities. Furthermore, it was noted that border communities have increasing political influence and considering 2027 is an election year in Kenya, should be treated with caution. The same was reflected by the Ugandan delegation who advised that border users could disrupt the project if not properly consulted in the feasibility stage.
- Uganda representatives asked, whether the two countries require EAC approval to proceed, or whether they may proceed with the pilot while the EAC organs subsequently take note and scale it up. It was clarified that the two processes must run concurrently.

Closing Remarks and Way forward

- The EAC Secretariat would brief its wider management, including the Secretary General, and provide a formal response to TCA's letter.
- The EAC Secretariat and TCA/TMA will collectively take a decision on whether to establish a new working group or to use the existing OSBP and technical working group structures.
- The Consultant's final report on the pre-feasibility findings along with recommendations of the EUD to be shared with EAC Secretariat.
- TMA was directed to move forward to full feasibility for the pilot in Kenya and Uganda. However, they should also prepare a phased roadmap for engaging border pairs in other EAC countries to ensure agreement among all the parties.
- The EAC Secretariat to initiate the process of amending the OSBP Act as required, drawing on the study for the technical basis, with a parallel review of the PPP Acts to accommodate the user pay principle by the partner state representatives (KRA and URA).
- The EAC Secretariat to examine the relevant World Trade Organization article on transit fees for consistency with the proposed charges.
- The EAC Secretariat and partner states to engage Immigration authorities for including exploration of extending electronic travel authorisation to truck drivers.
- Partner state agencies, including Kenya's Border Control and Operations Coordination Committee, and the private sector to be engaged through market sounding and roadshows.
- Partner states to indicate the maturity level and the intended roadmap for risk-based inspection and image and data sharing.
- The EAC to convene all future meetings and issue invitations to ensure that outcomes pass through the policy organs



9.5 Foundational References for CTSAP

1. *World Customs Organization (WCO) SAFE Framework of Standards to Secure and Facilitate Global Trade*
2. *World Customs Organization (WCO) Authorised Economic Operator (AEO) Programme*
3. *World Bank - Doing Business Case Study – Implementing a Trade Single Window*
4. *UNECE - Single Window Repository*
5. *WTO - Trade Facilitation Agreement (TFA)*
6. *OECD – Trade Facilitation Indicators*
7. *UNESCAP Framework Agreement on Cross-border Paperless Trade*
8. *TradeMark Africa publications on coordinated border management, OSBPs and digital trade*
9. *East African Community Customs Management Act (EACCMA) and regional customs protocols.*

About Crisil Intelligence (formerly Market Intelligence & Analytics)

Crisil Intelligence is a leading provider of research, consulting, risk solutions and advanced data analytics, serving clients across government, private and public enterprises. We leverage our expertise in data-driven insights and strong benchmarking capabilities to help clients navigate complex external ecosystems, identify opportunities and mitigate risks. By combining cutting-edge analytics, machine learning and AI capabilities with deep industry knowledge, we empower our clients to make informed decisions, drive business growth and build resilient capacities.

For more information, visit Intelligence.Crisil.com

About Crisil

Crisil is a global, insights-driven analytics company. Our extraordinary domain expertise and analytical rigor help clients make mission-critical decisions with confidence.

Large and highly respected firms partner with us for the most reliable opinions on risk in India, and for uncovering powerful insights and turning risks into opportunities globally. We are integral to multiplying their opportunities and success.

Headquartered in India, Crisil is majority owned by S&P Global.

Founded in 1987 as India's first credit rating agency, our expertise today extends across businesses: Crisil Ratings, Crisil Intelligence, Crisil Coalition Greenwich and Crisil Integral IQ.

Our globally diverse workforce operates in the Americas, Asia-Pacific, Europe, Australia and the Middle East, setting the standards by which industries are measured.

For more information, visit www.Crisil.com

Connect with us: [LinkedIn](#) | [Twitter](#)