



**ANNUAL STATE OF CROSS-BORDER OPERATIONS
REPORT**

March 2018



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ACRONYMS

Abbreviation	Meaning
AfDB	African Finance Development Bank
ARTIN	African Regional Transport Infrastructure Network
ASCBOR	Annual State of Cross-Border Operations Report
AU	African Union
AUC	African Union Commission
C-BRTA	Cross-Border Road Transport Agency
CCTO	Central Corridor Transport Observatory
CCTTFA	Central Corridor Transit Transport Facilitations Agency
CFTA	Continental Free Trade Area
CMC	Corridor Management Committee
CMI	Corridor Management Institution
COMESA	Common Market for Eastern and Southern Africa
CPI	Corridor Performance Indicator
DBSA	Development Bank Southern Africa
DFI	Development Finance Institutions
DFID	Department for International Development
DMC	Dar es Salaam Management Committee
DoT	Department of Transport
DRC	Democratic Republic of the Congo
EAC	East African Community
ECTS	Electronic Cargo Tracking System
EDI	Electronic Data Interchange
EU	European Union
FTA	Free Trade Area
GDP	Gross Domestic Product
GPS	Global Positioning System
GVM	Gross Vehicle Mass
ICD	Inland Container Depot
ICT	Information and Communications Technology

Abbreviation	Meaning
IFI	International Finance Institutions
ITS	Intelligent Transport System
JICA	Japan International Cooperation Agency
KM	Kilometre
KPA	Kenya Ports Authority
KPDC	Kukuza Project Development Corporation
KPI	Key Performance Indicator
LOA	Length Overall
LPI	Logistics Performance Index
M	Meter
MCBRTA	Multilateral Cross Border Road Transport Agreement
MDC	Maputo Development Corridor
MoU	Memorandum of Understanding
MS	Member State
NA	North America
NCTA	Northern Corridor Transit Agreement
NCTTCA	Northern Corridor Transit and Transport Coordination Authority
NEPAD	New Economic Partnership for Africa's Development
NSC	North South Corridor
NSCMI	North South Corridor Management Institution
NTB	Non-Tariff Barrier
OCAS	Operator Compliance Accreditation Scheme
OECD	Organisation for Economic Cooperation and Development
OSBP	One Stop Border Post
OSIS	One Stop Inspection Stop
PAP	Priority Action Plan
PICI	Presidential Infrastructure Champion Initiative
PIDA	Programme for Infrastructure Development Africa
PISCES	Personal Secure Comparison and Evaluation System
PPDF	Project Preparation Development Facility

Abbreviation	Meaning
PPIU	Project Preparation and Implementation Unit
PPP	Public-Private Partnership
PTCM	Protocol on Transport, Communications and Meteorology
REC	Regional Economic Community
RIDMP	Regional Infrastructure Development Master Plan
SACU	Southern African Customs Union
SADC	South African Development Community
SADCOM	COMESA-SADC Transit Management Information System
SADC-PF	South African Development Community Parliamentary Forum
SMART	Safety Mobility Automated Real-time Traffic Management
SOE	State Owned Enterprise
SP	Service Provider
TEU	Twenty foot Equivalent Unit
TFTA	Tripartite Free Trade Area
TICTS	Tanzania International Container Terminal Services
TKC	Trans Kalahari Corridor
TKCMC	Trans Kalahari Corridor Management Committee
TLS	Traffic Light System
TMEA	Trademark East Africa
TMSA	Trade Mark Southern Africa
TOR	Terms of Reference
TPA	Tanzania Ports Authority
TRA	Tanzania Revenue Authority
TRIPS	Transport Register Information Platform System
TTA	Tripartite Trust Account
TTF	Tripartite Task Force
TTFA	Transit Transport Facilitations Agency
TTTTFP	Tripartite Transport and Transit Facilitation Programme
UN	United Nations
WTO	World Trade Organisation

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EXECUTIVE SUMMARY

The Annual State of Cross-Border Operations Report (ASCBOR or the Report) is compiled on an annual basis with a view to present the current state of the cross-border road transport industry to the Minister(s) of Transport, Department(s) of Transport, fellow industry regulators and other stakeholders who have an interest in cross-border road transport.

This fifth report focuses on the East African Community (EAC), the Common Market for Eastern and Southern Africa (COMESA) and the Southern African Development Community (SADC). These 3 Regional Economic Communities (RECs) are commonly referred to as the EAC-COMESA-SADC Tripartite, or Tripartite.

This ASCBOR is a strategic report that responds to the need for stakeholders in the cross-border value chain to take appropriate actions within their respective environments (e.g. policy, legislative, regulatory and operational) towards:

- Addressing many challenges that affect cross-border road transport system efficiency and also negatively affect cross-border trade;
- Improving the cross-border environment with a view to enhance inter-regional and intra-Africa trade; and
- Enabling the achievement of the strategic goal of linking African countries.

This report provides an update on:

- Progress achieved with respect to the implementation of the interventions (reforms) recommended in the 2016 ASCBOR;
- Current state of prioritised transport corridors in the Tripartite;
- Key trade and transport facilitation initiatives unfolding at Continental, Tripartite and REC level to address corridor constraints;
- Corridor performance indicators used to measure and determine corridor efficiency;
- Identification of reforms (existing and new) to improve corridor efficiency in the Tripartite; and
- Financing options available to Tripartite MS to secure adequate funding for the implementation of existing trade and transport facilitation programmes, as well as the Reforms proposed in this Report.

Unfortunately, all strategic corridors that traverse the Tripartite face a plethora of challenges that require urgent intervention in order to enhance the competitiveness of the region. These challenges include, but are not limited to:

- Inadequate and poorly maintained road networks characterised by missing links along sections of regional road transport corridors;
- Ineffective border management systems coupled with outdated and inappropriate Information and Communications Technology (ICT) for the exchange of information;

- Disjointed regulatory frameworks characterised by variability in regulatory requirements between trading partners;
- Absence of harmonised transport policies, rules and standards;
- Insufficient funds for infrastructure maintenance and expansion;
- Market access restrictions caused by the fact that cross-border road transport operators need to obtain cross-border road transport permits before they can conduct business for reward in fellow African countries;
- An un-level playing field caused by the fact that many cross-border charges are levied on foreign road transport operators only; and
- Various official and unofficial road blocks and inspection points along regional road transport corridors.

These challenges culminate in congestion, long journey and trip turnaround times, reduced safety and high cost of doing business. For this reason, these after-effects are cited as the main reason for the low level of intra-Africa trade (estimated at around 15%) and high transportation costs that constitute approximately 40% of the cost of goods traded between African countries.

In response to the above challenges, various initiatives have been approved at continental, Tripartite and REC level to bring about improvement. Examples of the said initiatives include:

- **At Continental level:** The Programme for Infrastructure Development Africa, Development of Smart Corridors Programme, Presidential Infrastructure Champion Initiative and Move Africa Initiative;
- **At Tripartite level:** The Tripartite Transport and Transit Facilitation Programme, Multilateral Cross-Border Road Transport Agreement, as well as the North-South Corridor Aid-for-Trade Programme; and
- **At REC level:** Establishment of the East African Legislative Assembly and One Stop Border Posts (in the EAC), the Yellow Card Scheme initiative (in the COMESA) and discussions on establishing a SADC Parliament in the SADC.

Despite approval of the above initiatives, most initiatives have not realised much progress to date, owing to a number of reasons discussed in later sections of this report. In order to effectively address existing transport challenges, it is recommended that the Tripartite fully implements the following reforms:

- Establish corridor performance monitoring systems in all Tripartite RECs;
- Implement quality regulation in the Tripartite;
- Implement One Stop Border Posts at all major border posts in the Tripartite;
- Address the skills gaps in both public and private sector institutions and strengthen institutional capacity; and
- Obtain alternative sources of funding for infrastructure development.

This report provides action plans and outlines the steps that should be followed to implement the respective reforms (interventions). However, the first step will be to consult critical stakeholders in the Tripartite with a view to ensure that ardent support is obtained, especially at

political level, for the implementation and operationalisation of each reform. The 2017 ASCBOR will therefore be distributed to relevant stakeholders (e.g. Ministries and Departments of Transport, Regional Secretariats) and presented at relevant workshops, seminars and the next International Road Transport Indaba to gain support for the findings contained in this report.

It is envisaged that the full implementation of the report reforms will go a long way towards closing gaps in current interventions and eradicating longstanding challenges that affect cross-border trade and road transport movements in the Tripartite. It is also envisaged that by closing existing skills gaps and capacitating regulatory authorities, strong institutions that are able to implement strategic transport programmes / projects will be formed. These actions will assist in creating a cross-border road transport industry that supports the achievement of continental and regional strategic objectives.

1. OVERVIEW OF REPORT

1.1 Introduction and Background

This Annual State of Cross-Border Operations Report (ASCBOR) is compiled annually to advise the Minister(s) of Transport, the Department(s) of Transport (DoT), fellow industry regulators and other stakeholders with an interest in cross-border road transport of major challenges and developments that affect cross-border road transport operations and trade. The report seeks to equip stakeholders with valuable information that will enable them to:

- Address transport and trade challenges in their respective spheres (e.g. political, policy, legislative, regulatory and operational) with a view to meet strategic objectives set out in key continental and regional transport agreements, treaties, protocols and programmes;
- Link Africa through the creation of regional road transport corridors, characterised by the seamless movement of cross-border road transport traffic in order to stimulate intra-Africa trade and socio-economic development;
- Reduce tariff and Non-Tariff Barriers (NTBs) and operational constraints faced by transport operators and traders; and
- Enhance the competitiveness of the cross-border road transport environment.

This is the fifth Report after the successful completion of the first Report in 2014, two Reports in 2015 and one Report in 2016. The 2014 and 2015 Reports focused on broad themes including operational challenges faced by cross-border road transport operators along regional road transport corridors, progress made towards integrating the regional road transport sector, status of commercial border posts, road safety and the extent of operator compliance to regulatory requirements in Southern African Development Community (SADC).

The 2016 ASCBOR differed from the 2014 and 2015 reports in that it adopted a corridor approach that assessed trade and traffic flows along three prioritised corridors, namely the North South Corridor (NSC), Maputo Development Corridor (MDC) and Trans-Kalahari Corridor (TKC).

In line with the African Union's (AU) quest to advance regional integration and socio-economic development in Africa the scope of this 2017 ASCBOR extends beyond the borders of SADC to incorporate two other Regional Economic Communities (RECs), namely the Common Market for Eastern and Southern Africa (COMESA) and the East African Community (EAC). These three RECs are commonly referred to as the EAC-COMESA-SADC Tripartite or Tripartite.

The COMESA-EAC-SADC Tripartite comprises 26 countries with a combined population of 632 million and a contribution of 51 percent of the continental Gross Domestic Product (GDP). One of the main objectives of the Tripartite is to strengthen and deepen economic integration, envisaged to be achieved through the harmonisation of policies and programmes across the three RECs in the areas of trade, customs and infrastructure development (<http://www.ictsd.org/bridges-news/bridges-africa/news/the-Tripartite-free-trade-area-agreement-a-milestone-for-africa%E2%80%99s>).

This report seeks to promote the achievement of both continental and Tripartite strategic objectives of linking Africa, enhancing intra-regional trade, socio-economic development and economic integration through the establishment of an efficient, effective and capable cross-border road transport system in the Tripartite. It is foreseen that high transport system performance will culminate in seamless cross-border road transport movements and increase the level of trade and passenger traffic flows among Tripartite RECs and individual Member States (MS).

1.2 Problem Statement

This ASCBOR responds to a number of challenges facing the cross-border road transport environment. The African continent is largely reliant on road transport for the conveyance of goods, passengers and services. Road transport carries over 80% of continental traffic, with the other transport modes - sea, inland waterways, railways and pipelines – carrying the remainder. Despite the significance of road transport industry, the sector still faces a plethora of challenges, which include:

- Inadequate and poorly maintained road networks;
- Inefficient border management systems associated with long and sometimes manual paper-intensive border crossing processes;
- Inadequate interchange facilities and poorly located and maintained public transport infrastructure (e.g. international ranking facilities) for passenger transport;
- Weak institutions tasked with the responsibility of regulating cross-border road transport movements and the implementation of regional trade and transport programmes;
- Disjointed regulatory framework characterised by variability in regulatory requirements between trading partners;
- Market access restrictions caused by the fact that cross-border road transport operators need to obtain cross-border road transport permits before they can conduct business for reward in African countries;
- Adherence to supply-side measures (e.g. issuing of permits) in controlling market access compromise the extent to which road transport supports cross-border trade in the Tripartite;
- Variability in Information Communication Technology (ICT) and customs data systems between border agencies on both sides of the border limit and / or delay the direct exchange of information;
- The application of different third party motor liability insurance schemes along regional road transport corridors increase the cost of doing business in the Tripartite and the rest of Africa;
- The existence of various official and unofficial road blocks and inspection points along strategic regional road transport corridors increase the occurrence of corrupt practices;
- Many tariffs, including cross border charges are levied on foreign road transport operators only, creating an unequal operating environment for operators who conduct business for reward over the same routes.

The challenges listed above materialise in lengthy delays for cross-border road transport operators, longer journey times, unpredictable transit times, high transportation costs, low throughput and poor service delivery.

Road transport impediments in Africa amount to billions of US\$ per annum and are cited as a main reason for Africa's low percentage share of around 2 percent to international trade. (<http://www.ictsd.org/bridges-news/bridges-africa/news/what-is-africa-worth-in-the-international-trading-system>.) Road transport challenges also deter African countries from trading with each other. Intra-African trade amounts to approximately 15 percent of Africa's total exports. This figure compares unfavourably with the 40 and 60 percent levels recorded in North America and Western Europe respectively (<http://www.iol.co.za/business-report/opinion/intra-africa-trade-hurdles-beyond-politics-1741497>).

It is important to note that road transport impediments include both hard and soft infrastructure dimensions. In acknowledging this, investment in road transport infrastructure / systems should not be seen as the sole solution to bring about improvement. Regulatory reforms are equally important in order to reduce red tape and bureaucracy and to harmonise road transport policies and legislation. Additionally, it is imperative that institutions tasked to regulate and implement programmes in the cross-border road transport and trade environments be sufficiently capacitated to execute their roles and functions. Although Tripartite MS have adopted measures aimed at addressing cross-border road transport constraints, the pace at which transport challenges are addressed remains slow.

Against this background, the information contained in this report provides many options that stakeholders can adopt and implement to eliminate hard and soft infrastructure challenges experienced along strategic road transport corridors to bring about improvement.

1.3 Purpose of Report

The purpose of this report is to:

- Provide an update on progress achieved with respect to the implementation of interventions (reforms) recommended in the 2016 ASCBOR;
- Present up to date information on the current state of the cross-border road transport industry in the Tripartite to relevant stakeholders to assist them in determining appropriate interventions;
- Identify and inform relevant stakeholders of initiatives and developments that are unfolding at continental, Tripartite and REC level that have an impact on the cross-border road transport sector;
- Identify and discuss corridor performance indicators (CPI) used by corridor stakeholders in the EAC to measure corridor efficiency and indicate the value that may be generated if other Tripartite RECs adopt the same indicators to measure corridor performance in the COMESA and SADC;
- Propose interventions (reforms) and actions plans that may be considered for implementation by MS in pursuit of addressing cross-border challenges and constraints within the Tripartite; and

- Outline financing options that can be considered by MS towards the implementation of prioritised Tripartite transport programmes / projects and recommended ASCBOR reforms.

It is anticipated that by presenting ASCBOR findings to relevant national and regional stakeholders they will, through adopting a partnership approach, be able to implement some of the study solutions (reforms) thereby improving the performance of the cross-border road transport industry. In doing so, the road transport sector will be geared to play its rightful role towards enhancing the Continental drive to Link African countries, enhancing intra-Africa trade and stimulating economic growth and development in the Tripartite.

1.4 Report Methodology

This report was compiled largely using information that was obtained through qualitative research methods. A literature review of available materials was complemented with information obtained through participation in prioritised workshops and engagements with various national and regional stakeholders (including government departments, regulatory authorities, Secretariats of RECs, road transport associations and alliances, and Corridor Management Committees (CMCs).

Valuable information was obtained from delegates from Ministries / Departments of Transport and Trade (and their regulatory entities) from Tripartite countries who attended the Cross-Border Road Transport Indaba hosted by the Cross-Border Road Transport Agency (C-BRTA) in May 2017 in Durban, South Africa and the O. R. Tambo International Road Transport Indaba that was jointly hosted by the Department of Transport (South Africa), SADC Secretariat and the C-BRTA in Pretoria, South Africa in October 2017.

Information gathered through the literature review and stakeholder interactions served as input for the status quo assessment, assessment of progress made towards implementing current reforms, identification of corridor performance indicators and alternative sources of funding for infrastructure development, as well as in identifying suitable reforms that may be considered for implementation in the Tripartite to address the challenges facing the cross-border road transport sector and in shaping the future of the sector.

1.5 Focus of the Report

This Report focuses on the COMESA-EAC-SADC Tripartite. The rationale for focusing on the Tripartite is that cross-border road transport movements are not limited to national boundaries, nor one REC. Experience on the ground also indicates that many South African road transport operators conduct business for reward in the Tripartite.

Clear evidence exists of efforts undertaken by Tripartite countries to improve the facilitation of trade and transport movements in line with the AU's vision. This report emphasises transport reforms unfolding in the Tripartite and proposes interventions aimed at improving the seamless movement of cross-border road transport movements between Tripartite MS.

1.6 Structure of the Report

This ASCBOR is structured as follows:

Chapter 1: provides the introduction and background of the ASCBOR, outlines the problem statement, purpose and the scope of the report and provides an update on progress made towards implementing the reforms put forward in the 2016 ASCBOR.

Chapter 2: provides an overview of road transport movements within the Tripartite with specific focus on the current state of strategic road transport corridors and operational challenges experienced by cross-border road transport operators.

Chapter 3: builds on chapter 2 and provides and assesses progress made to date in implementing strategic trade and transport reforms at continental, Tripartite and REC level. This chapter also identifies impediments that undermine the execution of prioritised reforms.

Chapter 4: discusses CPIs used to measure and determine corridor efficiency. The chapter looks at the performance of the Central Corridor as a case study for the application of CPI.

Chapter 5: discusses interventions (reforms) aimed at improving corridor performance and efficiency within the Tripartite, with a distinction made between current (on-going) and new reforms that are recommended for implementation in the Tripartite. The chapter also provides action plans for proposed reforms.

Chapter 6: provides options that can be pursued by Tripartite countries for financing existing programmes / projects, as well as the new reforms proposed in this report.

1.6 Feedback on the Implementation of 2016 ASCBOR Reforms

Progress with respect to the implementation of the 2016 ASCBOR reforms is summarised in Table 1 hereunder:

Table 1: Feedback on Implementation of 2016 ASCBOR Reforms

Recommendation	Action Plan	Envisaged impact	Responsibility	Progress as at March 2018
<p>Establish an Independent Regional Body tasked to monitor implementation of regional agreements and relevant regional programmes by MS.</p>	<p>MS should establish a Regional Parliament.</p>	<ul style="list-style-type: none"> • Improved delivery of regional agreements, commitments and programmes which will lead to improvement in transport efficiency, trade and regional integration; • Improved governance, transparency and accountability at MS level. 	<ul style="list-style-type: none"> • SADC Member States. 	<ul style="list-style-type: none"> • Discussions on this reform are ongoing. The Cross-Border Road Transport Regulators Forum that was established by the Council of Ministers in November 2017 in Malawi will play a key role towards lobbying for the establishment of a SADC Parliament.
<p>Fast-track the implementation of the Multilateral Cross-Border Road Transport Agreement (MCBRTA).</p>	<p>MS should adopt and implement the MCBRTA.</p>	<p>Implementation of the MCBRTA will lead to:</p> <ul style="list-style-type: none"> • The implementation of quality regulation in the Tripartite; • Improved transport system performance; • Harmonisation of regulatory frameworks; • Creation of a single competitive regional road freight market; • Improved intra-regional trade and transport flows; • Improved decision-making processes due to the availability of real-time data; • Sustained economic growth and development. 	<ul style="list-style-type: none"> • SADC Member States. 	<ul style="list-style-type: none"> • Baseline Surveys have been conducted to determine the status of each country in relation to the MCBRTA requirements and standards. • Country consultations led by the Tripartite Programme Office are currently underway. • The MCBRTA is in a Final Draft format and awaits final approval by the Council of Ministers. • Some MS are already reviewing their domestic transport policies / legislations to align it to the

Recommendation	Action Plan	Envisaged impact	Responsibility	Progress as at March 2018
				MCBRTA and standards.
Transform Prioritised Border Posts into One Stop Border Posts (OSBPs)	Member States should implement prioritised OSBP along major road transport corridors in the region.	<p>The implementation of OSBPs will result in:</p> <ul style="list-style-type: none"> • Improved border post efficiency; • Reduction in time spent at border posts; • Reduction in total travel time and costs; • Reduction in the cost of doing business; • Improvement in transport and trade turnaround times; • Increased economic growth and development in the SADC region. 	<ul style="list-style-type: none"> • SADC Member States • SADC PPDF 	<ul style="list-style-type: none"> • Construction of OSBP facilities is underway at the Kazungula and Kasumbalesa border posts. • Physical facilities have been built at the Lebombo / Ressano Garcia border post. This border will be transformed into an OSBP once the legal frameworks have been signed by the governments of Mozambique and South Africa. • Signing of a MoU by the governments of Botswana and Namibia to establish the Mamuno / Trans-Kalahari OSBP.
Establish Roadside Stations / Truck stops	Corridor Management Committees should lead the implementation of truck stops along regional road transport corridors.	<p>The implementation of strategically located Truck Stops will:</p> <ul style="list-style-type: none"> • Reduce driver fatigue and the risk of accidents; • Improve road safety along regional road transport corridors; • Boost local economies with a continuous stream of travellers passing through; • Improve vehicle and cargo 	<ul style="list-style-type: none"> • Corridor Management Committees • SADC Member States • Private sector 	<ul style="list-style-type: none"> • Feasibility study into the establishment of truck stops along the Trans Kalahari corridor revealed a number of suitable locations for truck stop establishment. • Consultations led by

Recommendation	Action Plan	Envisaged impact	Responsibility	Progress as at March 2018
		<p>security and safety along regional road transport corridors;</p> <ul style="list-style-type: none"> • Reduce the risk of contracting HIV / AIDS and sexually transmitted infections for drivers. 		<p>CMCs with relevant stakeholders are on-going to promote the truck stop initiative.</p>
Establish Corridor Road Transport Observatories.	Corridor Management Committees with support of MS should implement corridor road transport observatories.	<p>The Implementation of observatories will:</p> <ul style="list-style-type: none"> • Enhance the availability of real-time data on traffic flows; • Enable evidence based transport policy making; • Improve decision-making by public sector bodies and corridor users; • improve the facilitation of trade and transport flows along strategic regional road transport corridors; • Improve transport competitiveness. 	<ul style="list-style-type: none"> • Corridor Management Committees; • SADC Member States; • Private sector. 	<ul style="list-style-type: none"> • Road transport observatories have been implemented and are operational along the Northern and Central Transport Corridors in the EAC. • A corridor performance monitoring system is currently being developed to monitor the performance of several corridors in the Eastern and Southern African regions.
Develop Funding Frameworks.	SADC MS should establish and implement appropriate funding frameworks.	<p>The implementation of appropriate funding frameworks will:</p> <ul style="list-style-type: none"> • Improve delivery on regional commitments; • Enable the introduction of private sector technology and innovation through PPPs; • Lead to improve trade and transport flows; • Stimulate economic growth and development. 	<ul style="list-style-type: none"> • Member States; • Private sector 	<p>No information was available with respect to progress at time of completing this Report. Progress will be provided in the 2018 Report.</p>

Source: Table created for study

As indicated, the reforms are not fully implemented as yet. Monitoring and continuous reporting on progress with regards to their implementation will be provided in the 2018 ASCBOR.

1.7 Report Limitations

Whilst every effort was made in compiling this report, the following limitations were encountered during the execution process:

- *Time constraints:* The Report was compiled within the same period the Report provides information on. This might have led to omission of some relevant information which should have been captured in the report;
- *Stakeholder engagements:* Some stakeholders could not be met due to their unavailability and / or tight timelines in which the Report had to be compiled; and
- *Update of progress on implementation of 2016 ASCBOR Action Plans:* Not all feedback was reported in time for consolidation into the 2017 ASCBOR. As part of continuous monitoring, information on new developments will be reported in the 2018 ASCBOR.

2. THE CROSS-BORDER ROAD TRANSPORT INDUSTRY: STATUS AND CHALLENGES IN THE TRIPARTITE

2.1 Introduction

The Tripartite hosts many regional road transport corridors that carry the bulk of regional traffic in the EAC-COMESA-SADC region. It also plays a critical role in linking landlocked countries to major ports. In many cases roads are the only means of access to many areas in the hinterland, including most rural communities.

This chapter looks at the strategic importance of road transport in linking Tripartite MS. An assessment of the current state of the road transport sector focuses on hard and soft infrastructure dimensions and outlines major constraints experienced by road transport operators when conducting business for reward in the Tripartite. Chapter 2 lays the foundation for the identification of interventions (reforms) which aim to address hard and soft infrastructure challenges facing the cross-border road transport sector.

2.2 Inter-relationship between Transport and Trade: A Tripartite Focus

The Tripartite comprises of twenty six countries and several RECs that include the EAC, COMESA, SADC and the Southern African Customs Union (SACU).

In 2012, the AU adopted an Action Plan for boosting intra-Africa trade and the establishment of a Continental Free Trade Area (CFTA) aimed at deepening Africa's market integration, thereby significantly increasing the volume of trade that African countries undertake among themselves. The first milestone towards the establishment of a CFTA was the launch of the Tripartite FTA by the heads of state and governments of COMESA, EAC and SADC who, in June 2015, sought to consolidate trade arrangements of all three RECs into a single trade regime.

The Tripartite RECs contribute a significant share to the continent's Gross Domestic Product (GDP). Table 2 outlines the Tripartite GDP, GDP growth and population per country. The figures used to compile this table were extracted from the World Bank online website and they are for the year 2015.

Table 2: Tripartite GDP and other Relevant Economic Indicators

Country	GDP USD (billion) 2015	GDP Growth 2015	Population (million) 2015
1. Angola	102.63	3.0	25.02
2. Botswana	14.39	-0.3	2.262
3. Burundi	3.097	-3.9	11.18
4. Comoros	0.565	1.0	0.788
5. DRC	35.24	6.9	77.27
6. Djibouti	1.73	6.5	0.887
7. Egypt	330.8	4.2	91.51
8. Eritrea	2.608	8.7	4.790
9. Ethiopia	61.54	9.6	99.39
10. Kenya	63.40	5.6	46.05
11. Lesotho	2.278	1.6	2.135
12. Libya	34.70	-62.1	6.278
13. Madagascar	9.739	3.1	24.24
14. Malawi	6.404	2.8	17.22
15. Mauritius	11.68	3.5	1.263
16. Mozambique	14.81	6.6	27.98
17. Namibia	11.49	5.3	2.459
18. Rwanda	8.096	6.9	11.61
19. Seychelles	1.438	3.5	0.093
20. South Africa	314.6	1.3	55.01
21. Sudan	97.16	4.9	40.23
22. Swaziland	4.118	1.9	1,287
23. Tanzania	45.63	7.0	53.47
24. Uganda	27.53	5.1	39.03
25. Zambia	21.15	2.9	16.21
26. Zimbabwe	14.42	0.5	15.60
Total	1,241.24		673.36

Note: Economic indicators are provided for Sudan as a whole and does not separate South Sudan from Sudan

Source: World Bank, online: <http://www.worldbank.org/en/country>.

As shown in Table 2, the Tripartite has a combined population of just over 673 million consumers and a GDP of US\$ 1,241.24 trillion. It is evident that the region is a potential market for traders of goods and services, as well as for cross-border and global investors. It is also a diverse market, ranging from relatively advanced economies such as Egypt and South Africa accounting for over 50% of the Tripartite GDP, to a number of smaller economies such as Burundi, Eritrea, Lesotho, Burundi, Seychelles and the Comoros.

Meanwhile, the small landlocked countries face special challenges in competing in regional and global markets. In most cases inefficiencies include higher trading costs, mostly due to inefficiencies in domestic business environments and high trading costs of border crossings and infrastructure of neighboring countries.

The findings of the World Bank Logistics Performance Index (LPI) study of 2016 indicated that:

- The implementation of trade and transport reforms is lagging behind in logistically constrained countries that are most in need of support from the international community. Many landlocked developing countries and small island states in the Tripartite fall into this category because their connectivity with global markets is severely challenged by their economic size and geography;
- Zimbabwe and Lesotho made the list of the bottom ten LPI economies, ranking 151 and 154 out of the 160 economies that were assessed (The World Bank. 2016: 8);
- The Comoros reflected the lowest GDP contribution (US\$ 565 million) of all Tripartite countries with a GDP growth of only 1% in 2015; and
- Uganda, Kenya and Rwanda are examples of better performing economies, with growth levels of between five and seven percent during 2015. These three countries are members of the EAC and signatories to the Northern Corridor Transit Agreement. Strong political will displayed amongst these MS led to the implementation of various trade and transport facilitation reforms in recent years, e.g. the introduction of single customs territory clearance procedures and cargo tracking systems.

Since the implementation of reform initiatives, the cost of doing business along the Northern Corridor decreased by about 50 percent (World Bank. 2016). This in turn stimulated intra-regional trade flows that boosted economic growth, as reflected in the satisfactory GDP growth of Uganda, Kenya and Rwanda during 2015. Although Burundi is also a member of the EAC, it reflected a negative growth in 2015. A fragile political environment, characterised by the country's struggle to emerge from a 12-year ethnic-based civil war, is undermining growth and development in Burundi.

The Northern Corridor case study discussed in greater detail in section 2.4.2.1 clearly illustrates the interrelationship between transport and trade. Infrastructure improvements along the Northern Corridor stimulated intra-regional trade and transport flows along this corridor. With the exception of Burundi that is still rebuilding its economy after a prolonged civil war, the economies of the other EAC countries reflected strong economic growth in recent years and is expected to maintain their strong economic performance as various trade and transport initiatives are nearing completion.

2.3 Overlapping REC Memberships: A Deterrent to Development

One of the greatest weaknesses of the Tripartite is that there are several RECs that belong to the Tripartite. The RECs are the building blocks through which continental programmes are implemented. Many Tripartite countries are members of different RECs as illustrated in Table 3 overleaf:

Table 3: Overlapping Memberships

Country	Regional Economic Community to which a country belongs		
	SADC	COMESA	EAC
Angola	√		
Botswana	√		
Burundi		√	√
Comoros		√	
DRC	√	√	
Djibouti		√	
Egypt		√	
Eritrea		√	
Ethiopia		√	
Kenya		√	√
Lesotho	√		
Libya		√	
Madagascar	√	√	
Malawi	√	√	
Mauritius	√	√	
Mozambique	√		
Namibia	√		
Rwanda		√	√
Seychelles	√	√	
South Africa	√		
Swaziland	√	√	
Republic of Sudan		√	
South Sudan		√	√
Tanzania	√		√
Uganda		√	√
Zambia	√	√	
Zimbabwe	√	√	

Source: Table created for study

As shown in Table 3, it is evident that eight SADC countries are also members of COMESA, while one SADC country (Tanzania) is also a member of the EAC. Furthermore, four COMESA countries hold membership with the EAC. Overlapping REC membership is associated with challenges that include the ratification of conflicting regulations, standards, processes and practices. This creates unnecessary administrative and operational constraints for transport operators who have to conform and comply with different requirements as they move across different member states.

A practical example of a country which is caught up in this predicament is Zambia, a member of both SADC and COMESA. Under the SADC Trade Protocol, Zambia agreed to dismantle tariffs for SADC MS to zero. Consequently, since South Africa is a member of SADC, Zambia had agreed to remove tariffs for South African goods to zero. However, as Zambia is a member of the COMESA, it had also agreed to a common external tariff regime for countries that are not members of the COMESA. Since South Africa is not a member of the COMESA, the prior

arrangement did not apply to South Africa. This translated into the fact that Zambia had agreed to reduce tariffs for South Africa, under SADC conditions, but to maintain tariffs for South Africa under the COMESA provisions. This scenario leaves Zambia in a difficult predicament (Mapua, J & Muyengwa-Mapuva, L., 2012).

The overlapping memberships between the 3 RECs create uncertainty as to the tariff rates and rules of origin that apply between Tripartite countries. The differences in tariff structures also pose a challenge to any harmonisation initiative and are argued to increase transaction costs in trade through a web of agreement rules. Furthermore, dual membership puts a financial strain on MS as they have to pay membership fees towards sustaining parallel secretariats and sometimes similar programmes.

In order to alleviate the complexities caused by overlapping memberships the COMESA-EAC-SADC alliance formed an overarching alliance structure. This structure develops programmes that aim to harmonise transport and trade policies and converge initiatives within and between the three RECs. More information on harmonisation initiatives in the Tripartite is presented in Chapter 3 of this report.

2.4 Current State of Road Transport Corridors in the Tripartite

2.4.1 Background

Road transport is a key contributor to economic development. Its flexibility in terms of the offering of door-to-door deliveries and capabilities make it indispensable to development strategies and integration processes. Due to its inherent advantages, road transport has emerged as the dominant land transport mode in Sub Saharan Africa, carrying between 80 and 90% of passenger and freight traffic. (<http://siteresources.worldbank.org/INTFINDINGS/685507-1161268713892/21098570/find32.htm>).

The case is no different in the Tripartite where the road sector accounts for over 75% of all inland freight transport movements in the Eastern and Southern African regions (European Union Development Fund. September 2016: Module 16). Furthermore, transport corridors play an important role in facilitating the movement of goods, people and services in the COMESA-EAC-SADC Tripartite, especially given that there are many countries that are landlocked.

Figure 1 below shows countries that are landlocked in the Tripartite and that heavily rely on major corridors linking the region for international trade:

Figure 1: Landlocked Countries in the Tripartite Region



Source: Bingandadi, L., 2016.

As shown in Figure 1 above, eleven countries in the Tripartite are landlocked with no direct access to sea-borne trade and major foreign markets. These countries rely on the 15 coastal countries for the greater share of their trade, thus making regional road transport corridors important in linking landlocked countries to African and foreign markets via the sea ports in maritime countries.

2.4.2 State of Road Transport Corridors

Various road transport corridors traverse the Tripartite region. Road transport corridors show a regional character as they stretch across national land borders. As a result the majority of corridors originates in one REC and terminates in another. The discussion hereunder outlines strategic road transport corridors that traverse the Tripartite.

2.4.2.1 Transport Corridors: EAC

Most of East Africa's infrastructure development focuses on the region surrounding Lake Victoria and extends into the Great Lakes region. Kenya, Tanzania, Uganda, Rwanda and Burundi are all located in the fertile and mineral-rich area that wraps around the lake. The main purpose for establishing reliable transport infrastructure in the EAC is to strengthen the

connection between inland states, located west of Lake Victoria, to the ports on the East African coast.

There are two main transport corridors that run through the EAC:

- The Central Corridor, which runs south of Lake Victoria through Tanzania, and
- The Northern Corridor, which runs north of Lake Victoria through Kenya.

The current state of the above corridors is discussed below:

a) Central Corridor

Route Description

The Central Corridor connects the port of Dar es Salaam by road, rail and inland waterways to Burundi, Rwanda, Uganda and the eastern part of the Democratic Republic of the Congo (DRC) and all of the central and northern-western Tanzania itself. This corridor forms the backbone of the regional transportation system in East and Eastern Central Africa carrying the imports and exports of five countries with a population of more than 120 million people (<http://en.reingex.com/Central-Corridor-Africa.shtml>).

Its furthest extension into the Democratic Republic of the Congo also taps into the mining zone in the Great Lakes region. The minerals extracted in this region are exported through Africa's eastern ports because geographic constraints and a lack of infrastructure make transport westward through the DRC impracticable. The main focus of the Central Corridor is on Tanzania's economy, due to the limited amount of goods going in and out of Rwanda, Burundi and the DRC.

Infrastructure Touch points and Challenges

Port of Dar es Salaam

The port of Dar es Salaam is the largest seaport in Tanzania. In 2016 this port handled 13.8 million tons of cargo. (<https://www.tralac.org/news/article/11827-new-financing-to-improve-efficiency-and-improve-capacity-at-port-of-dar-es-salaam.html>).

Steady increases in traffic volumes over the past decade gave rise to severe port congestion, which undermines port efficiency. As a result, delays at the port, which is operating near its full capacity, can last an average of three or four days (<https://worldview.stratfor.com/article/east-african-infrastructure-development-part-1-central-corridor>).

Meanwhile, the port lags behind in terms of development. Moreover, the current construction of new facilities limit the port's ability to keep up with traffic. The shortage of deep-water berths is one of the reasons for the port's underdevelopment. Although another berth is being constructed at the port, the area around it is very congested due to its close proximity to the central business district. The unavailability of land behind the berths severely limits the port's future expansion.

According to the findings of a study conducted by the African Finance Development Bank (2014) container vessels were queuing for an average of eleven days in the port of Dar es Salaam in 2012, compared to two days in the port of Mombasa. During this period, port fees on average were 74% higher in Dar es Salaam than in Mombasa. The reason for the variation was that higher wharfage charges (proportional to the merchandise value) were applied in the port of Dar es Salaam, versus the flat fees imposed at the port of Mombasa in Kenya.

Due to port inefficiencies, vessels are subjected to long waiting and turnaround times and lengthy cargo dwell times. In order to bring about improvement, the Tanzania Ports Authority (TPA) approved the implementation of various port construction and expansion programmes which are aligned to the Port Master Plan. This plan, which covers a period of twenty years (2008 to 2028) spells out the road map to transforming Tanzania's ports (Dar es Salaam and Tanga) into world class hubs that provide efficient and cost effective services.

Border Posts

An advantage of the Central Corridor is that it has only one border crossing between each member state. The following One Stop Border Posts (OSBP) are located along the Central Corridor:

- Rusumo (between Burundi and Rwanda);
- Mutukula (between Uganda and Tanzania); and
- Kabanga / Kobera (between Tanzania and Burundi).

The above-mentioned borders operated as OSBPs since 2016. The merging of border post operations at all three borders impacted positively on passenger flows. Customs and immigration officers from neighboring countries clear travellers once, with associated time savings to travellers. Similar benefits are noted for freight movements where trucks are now only stopping on one side of the border for all crossing procedures and operations.

At Rusumo, a 59.4% reduction in border crossing time was observed during 2015-2016 after the OSBP became operational. Over the same period a reduction of 48.1% was observed for Mutukula while at Kabanga a time saving of around 59.8% was observed (Central Corridor Transit and Transport Facilitation Agency. 2017).

Road Infrastructure

The Central Corridor was originally a combination of paved and gravel road links. Infrastructure improvements in recent years which involved rehabilitation, construction and routine maintenance works dramatically improved the condition of the main road network, as highlighted by the following statistics:

- 100% of the road network is paved over the Dar es Salaam to Rusumo – Kigali – Goma - Bukavu section of the Central corridor;
- 90% of the road network is paved along the Dar es Salaam – Kabanga / Kobero - Bujumbura stretch of the Central corridor; and
- 90% of the road network is paved along the Dar es Salaam – Mutukula - Kampala section of the Central corridor (<http://centralcorridor-tfa.org/knowledge-base/faqs/>).

Due to road infrastructure upgrades and given the fact that rail connectivity is limited, the majority of freight movements along the Central Corridor take place along road networks with rail accounting for only 10% of total traffic movements (<http://centralcorridor-ttfa.org/about-us/achievements/>).

Management of the Corridor

The Central Corridor Transit Transport Facilitation Agency (TTFA) is a multilateral agency established on 2 September 2006 and formed by an agreement by the five governments of the republics of Burundi, DRC, Rwanda, Tanzania and Uganda. Through co-operation amongst private and public sector stakeholders, the TTFA is charged with a number of functions, which include:

- Promotion of transport utilisation along the corridor;
- Upgrading, improving and developing infrastructure and supporting service facilities at port, rail, lake, road and border posts to meet user requirements;
- Ensuring open competition; and
- Reducing the costs of transit transport for land-locked MS.

Corridor Achievements and Constraints

Achievements along the Central Corridor include, but are not limited to the following: (<http://centralcorridor-ttfa.org/about-us/achievements/>)

- The existence of an adequate and well maintained road network;
- Reduction in the number of police road blocks from fifty three roadblocks in 2010 to three in 2015 / 6;
- Implementation of the single customs territory along the Central Corridor that allows for the clearance of goods at the first port of entry (Dar es Salaam), in that way saving time that would have been spent on clearing consignments at various border posts;
- The introduction of an electronic cargo tracking system for all types of cargo has led to a reduction in the number of stops for trucks along the corridor;
- The implementation of OSBPs has cut the time spent by trucks at inland borders by more than 50%;
- The launch of the Central Corridor Transport Observatory enables the electronic capturing and processing of corridor data, thus providing a clear picture of the efficiency of the entire supply chain;
- The Central Corridor Transit Transport Facilitation Agency (TTFA) is effectively the Permanent Secretariat that provides technical advice to governing organs (e.g. inter-ministerial council, Executive Board) and collects data on corridor operations;
- Infrastructure improvements at the port of Dar es Salaam led to a reduction in port dwell time from 7.21 days in 2015 to 6.95 days in 2016; and
- VISA fees between Tanzania and Uganda and the DRC have dropped to US\$50 for one month from US\$100 for seven days.

Despite the above accomplishments, the optimal functioning of the Central Corridor is affected by:

- Infrastructure and operational inefficiencies within the port of Dar es Salaam that results in severe congestion at the port. Due to the close proximity of the central business district to the port the potential for further expansion of the Dar es Salaam port is limited;
- A lack of truck stops along the corridor that poses a threat to road safety; and
- Limited inter-modal arrangements.

b) Northern Corridor

Route Description

The Northern Corridor connects the port of Mombasa to markets in Kenya, Uganda, Rwanda and Burundi as well as southern Sudan, Eastern DRC and parts of Northern Tanzania. As such, it connects the entire EAC to Kenya's maritime port of Mombasa.

Although the Northern Corridor artery is served by a combination of transport modes and infrastructure facilities, the road transport sector (that is fully liberalised) accounts for the majority traffic flows. It is estimated that approximately 96% of the goods from the Port of Mombasa are transported by road with the remaining share being transported by the railway mode, inland waterways and pipelines (<http://www.ttcanc.org/page.php?id=26>).

Infrastructure Touch-points and Challenges

Port of Mombasa

The Port of Mombasa is the gateway and exit point for cargo moving to a vast hinterland that includes Kenya, Uganda, Rwanda, Burundi, DRC, Tanzania, South Sudan, Somalia and Ethiopia. The Port of Mombasa is managed by the Kenya Ports Authority (KPA), a parastatal that is fully owned by the Kenyan government.

Economic growth in the Northern Corridor Region contributed significantly to the increased cargo throughput at the Port of Mombasa. In 2016, total cargo throughput recorded was 27.36 million tons against 26.73 million tons registered in 2015, representing a 2.4 percent growth. This achievement was made possible by the introduction of a new container terminal in 2016 with an annual capacity of 550,000 twenty foot equivalent units (TEUs) per year (<http://www.ttcanc.org/page.php?id=27>).

Border Posts

The following border posts are located along the Northern Corridor:

- Malaba / Busia (between Kenya and Uganda);
- Gatuna / Katuna (between Uganda and Rwanda);
- Akinyaru / Kinyaru Haut (between Rwanda and Burundi);
- Gisenyi / Goma (between Rwanda and DRC); and
- Mpondwe / Kasindi (between Uganda and the DRC).

Currently, a number of OSBPs are being introduced along the Northern Corridor borders under the East Africa Trade and Transport Facilitations Project. The regional OSBP legal framework, developed by the EAC with support from Japan International Cooperation Agency (JICA), provides the legal jurisdiction and structure, operating principles and methods of coordination for OSBP operations in the REC.

The Malaba / Busia and Gatuna / Katuna border posts are the busiest border posts along the Northern Corridor in terms of traffic flows. The Malaba border post was transformed into an OSBP in 2016 with approximately 600 trucks crossing this border on a daily basis (http://www.freightintoafrica.com/article/border_crossing_monitoring). Furthermore, construction work at the Gatuna / Katuna border post commenced and is nearing completion. The entire project incorporates the expansion of the road between the Uganda and Rwanda border offices, upgrade of border post scanner(s) and construction of verification storage parking yard and office buildings.

Road Infrastructure

The Northern Corridor road network totals approximately 14,108 km in length. The greater portion of the road runs through the DRC (5,176 km) and Rwanda (3,691 km). Key transit transport routes stretch from Mombasa to Bujumbura and Kisangani respectively. The bulk of imports and exports destined to and from countries along the Northern Corridor are transported through either of these transit routes (<http://www.ttcanc.org/page.php?id=28>).

According to data released by road authorities, only 28.4% of the total road network is in good condition and 63.6% in bad condition. However, the main trunk road which carries over 90% of traffic is in good condition. The Northern Corridor handles a substantial volume of trade, including intra-regional trade that reached over 5.4 million tons in 2014 (<http://www.ttcanc.org/page.php?id=28>).

Management of the Corridor

The Northern Corridor Transit and Transport Coordination Authority (NCTTCA) is responsible for the management of the Northern Corridor. The NCTTCA comprise of three organs, namely:

- Council of Ministers;
- Executive Committee / Board; and
- Executive Secretariat.

The Council of Ministers, comprising of ministers responsible for transportation matters in each of the MS, is the foremost policy organ of the authority. It is the policy-making body of the NCTTCA and its decisions are binding on all contracting parties. The Executive Committee is primarily responsible for introducing general principles and policies governing the NCTTCA, as well as for strategies for transport and trade facilitation, infrastructure development and the harmonisation of national policies.

The Executive Secretariat is the executing organ of the NCTTCA. Based in Mombasa, the Secretariat is responsible for coordinating the implementation of the Northern Corridor Transit Agreement (NCTA) and any other decisions and resolutions made by the Council of Ministers and the Executive Board.

Corridor Achievements and Constraints

The Northern Corridor is not only one of the busiest corridors in Central and Eastern Africa, but also one of the most successful in terms of the positive benefits accrued from the implementation of various trade and transport facilitation reforms. Corridor achievements include, but are not limited to:

- The existence of a strong institutional framework. A dedicated body, the Northern Corridor Transit and Transport Coordination Authority (NCTTCA) and its key organs encourage discussion and cooperation between member countries and oversees the implementation of trade and transport reforms;
- Progress made towards establishing a single customs territory is noted in the abolishment of multiple customs bonds and cargo declarations in favour of single bonds and declarations;
- Real-time data on various indicators is provided by the Northern Corridor transport observatory. This monitoring tool measures 30 indicators on performance and therefore provides a clear picture of the efficiency of the entire transport supply chain; and
- Since the launch of the Northern Corridor transport observatory, transport costs along the corridor decreased dramatically due to early detection and response to corridor constraints, which in turn, improved corridor predictability.

Despite the above successes, a number of corridor constraints hinder the unimpeded flow of traffic along the Northern Corridor. These include the following:

- Space and physical limitations within the port of Mombasa;
- Existence of corruption along the corridor;
- Numerous road blocks and weighbridges along the corridor;
- Border post delays; and
- A lack of intermodal coordination that has culminated in a decline in the demand for rail and inland waterways transport.

2.4.2.2 Transport Corridors: COMESA

A number of transport corridors run through the COMESA, linking landlocked countries in North, East and Southern Africa to continental and global export markets via a number of African ports. Due to overlapping memberships, eight of the nineteen COMESA MS (DRC, Zambia, Madagascar, Malawi, Mauritius, Seychelles, Zimbabwe and Swaziland) are also members of the SADC.

For the purposes of this discussion, the following two corridors are discussed in further detail:

- Beira corridor; and

- Dar es Salaam corridor.

The above corridors are regarded as strategic due to their importance in linking landlocked countries (e.g. Zimbabwe, Zambia, Malawi) to continental seaports, as well as the high traffic volumes carried along the Beira and Dar es Salaam corridors.

a) Beira Corridor

Route Description

The Beira Development Corridor comprises of road and railway networks and a pipeline running through and linking the interior (e.g. Zimbabwe, Zambia, Malawi and DRC) to port of Beira in Mozambique. The overall performance of the Beira corridor has always been linked to the capacity and constraints at the Beira port. Over the past 3 decades donor funding enabled the successful completion of various infrastructure projects along the corridor, including a new container terminal, road upgrading and the dredging of the port and access channels.

Infrastructure Touch-points and Challenges

Port of Beira

The Port of Beira is the second largest port in Mozambique and is located about 1,200 km north of Maputo, midway along the Mozambique coast at the mouth of the Pungwe River and approximately 20 km from the open sea. The port remains directly linked to the hinterland (e.g. Zimbabwe and Zambia) by road and rail networks, and currently by road only to Malawi. This situation is likely to change in the near future as the Sena railway line linking Beira with Malawi and the Tete Province is currently being rehabilitated. Beira Port also has direct sea links to Europe, Asia and the world at large.

Beira port has a total of eleven berths stretching over a total length of 1994 meters, excluding berth number one, which is reserved as a fishing harbour. The port handles a variety of cargo from break-bulk, neo bulk and bulk including petroleum products. However, freight flows through the port are being dominated by coal exports.

Port facilities include a container terminal, a general cargo terminal and a liquid bulk facility. While the capacity of the Beira container terminal has been increased, with throughput exceeding 180 000 TEU's per annum, enough to attract increasing direct vessel calls, the general cargo quays are experiencing congestion because of the demand of coal exports. (Giersing, B & Van Zyl, W. 2013: 6). As a result a number of Zambian importers have switched to Dar es Salaam and Walvis Bay to avoid port congestion. This in turn led to a general decline in freight movements along the Beira corridor, particularly over the Beira-Harare stretch of the road network.

Although the port is open 24 hours a day night navigation is restricted to vessels up to 7m draught and length overall (LOA) of 140m and pilotage and tug assistance is compulsory at all times (<http://ports.co.za/beira.php>). An assessment of traffic flows reveal that over 50% of the throughput at the port of Beira is generated by Mozambican trade, compared to the less than 20% for the years prior to 1995. (Giersing, B & Van Zyl, W: 2013).

Border Posts

A number of border posts link the DRC, Zambia, Zimbabwe and Malawi to the port of Beira. As part of the SADC Presidential Infrastructure Development Agency (PIDA) programme, the following border posts along the Beira corridor have been approved for transformation into OSBPs (<https://www.tralac.org/news/article/9856-launch-of-the-sadc-pida-acceleration-for-the-beira-and-north-south-corridors.html>):

- Forbes / Machipanda border post (between Mozambique and Zimbabwe);
- Plumtree / Ramaakwebama (border post (between Botswana and Zimbabwe);
- Zobue / Mwanza border post (between Malawi and Mozambique); and
- Nyamapanda / Cuchamano border post (between Mozambique and Zimbabwe)

Information on the current status of the above-mentioned border posts is not readily available. From information sources at hand, it seems as if none of these borders have yet been operationalised to function as OSBPs.

Further to the above borders, the Chirundu border post, which links Zimbabwe and Zambia, already functions as an OSBP. Since its transformation into an OSBP border, clearing processes improved tremendously. Although the single windows concept has not yet been fully established at the border (not all importers lodge import declarations electronically) time savings are yielded since cross-border vehicles are only stopped once at the border. All vehicles approaching from Zambia are stopped on the Zimbabwean side of the border, whereas vehicles entering the border from Zimbabwe are subjected to inspections on the Zambian side of the border.

Road Infrastructure

The poor reliability of rail services, coupled with long transit times and higher costs than road, particularly on the Mozambique section of the corridor resulted in a shift of traffic from rail to road. With the exception of granite exports where loads are too heavy for road, the majority of traffic is transported in road vehicles.

Road infrastructure along the Beira corridor is relatively developed and in a reasonable condition. Recent infrastructure upgrades include the rehabilitation of various roads in the Sofala, Manica and Tete provinces of Mozambique. Road access to the port of Maputo is poor. In the absence of a dedicated road serving the port, severe congestion is experienced in the vicinity of the port, resulting in significant time delays for transporters.

Management of the Corridor

The Beira Corridor does not have a dedicated Corridor Management Institution assigned with the responsibility to manage corridor operations and drive the implementation of corridor reforms. The Beira Corridor Group, a successful private and public sponsored company, assigned with the prime objective of facilitating trade movements along the Beira Corridor, operated between 1984 and 2000, but closed due to the declining economy in Zimbabwe. To date this body has not been replaced.

During a meeting of Ministers responsible for the Beira and North South Corridors that took place at the Victoria Falls in June 2016, delegates stressed the importance of establishing corridor management committees (CMC) for both corridors, assigned with sufficient authority to plan, prepare and implement key corridor projects.

Corridor achievements and constraints

Corridor achievements include but are not limited to the following:

- The transformation of the Chirundu border into an OSBP significantly improved border clearing processes and resulted in time savings for cross-border road transport operators;
- Approval granted for the transformation of 4 border posts along the Beira corridor into OSBPs;
- Relatively well-maintained road transport network; and
- Introduction of customs reforms (e.g. single window system) at Mozambique border posts reduced border processing times on the Mozambique side of border posts.

Despite the above accomplishments, the overall efficiency of the Beira corridor is hindered by the following factors:

- Congestion at the Beira port, especially at the approach road to the port and the general cargo berth;
- Absence of seamless rail services to transport heavy commodities (e.g. coal) that are more suitable for conveyance by rail; and
- Absence of a CMC to facilitate stakeholder engagements and manage corridor operations.

b) Dar es Salaam Corridor

The Dar es Salaam Corridor is one of two African corridors prioritised by the PIDA for transformation into SMART corridors. More information on this corridor is presented below:

Route Description

The Dar es Salaam Corridor is a multi-modal transport route comprising of road, railway and inland waterways that stretches from the Port of Dar es Salaam through the landlocked countries of Malawi and Zambia and the southern part of the DRC.

Infrastructure Touch points and Challenges

Port of Dar es Salaam

The port of Dar es Salaam is the largest seaport in Tanzania, accounting for over 13 million tons of cargo per annum. This equates to over 90% of the country's total imports and export volumes (African Finance Development Bank. 2014).

Due to traffic congestion within the vicinity of the port, transit trucks waste a lot of time before getting out of the city. This state of affairs undermines port efficiency. Despite inadequate port infrastructure, strong economic growth in the EAC resulted in a growth in traffic volumes of approximately 10% per annum. As a result, the port infrastructure continues to operate above capacity, creating inefficiencies (African Union Commission. 2017).

The findings of a study undertaken by the African Finance Development Bank (AfDB) reveal that the port of Dar es Salaam compares unfavorably with the port of Mombasa from both a cost and an operational point of view. Higher wharfage charges are imposed by Dar es Salaam, whereas the queuing time for container vessels is also much longer. (AfDB.2014).

In order to prevent a diversion of traffic to other east African sea ports, the TPA approved the implementation of various port construction and expansion programmes to address port operational inefficiencies. Improvement to access roads is currently being planned, whereas a consultancy is underway to redesign port roads. A programme has also been developed for improvement of eight critical intersections in Dar City (construction of interchanges), as well as the construction of the Dar es Salaam - Chalinze express way. (African Union Commission. 2017: 56).

Border Posts

A number of border posts link Tanzania to the landlocked countries of Malawi and Zambia. Two borders have been prioritised for transformation into OSBPs. Their current status is set out below:

- The Tunduma / Nakonde border between Tanzania and Zambia is currently being transformed into an OSBP. Despite the fact that construction work is on-going, both borders have started operating as OSBP, although their operations are hampered by inadequacy of both hard and soft infrastructure; and
- The Kasumulu / Songwe border between Tanzania and Malawi still operates as a traditional two-way border post. Separate feasibility studies have been initiated for converting this border into an OSBP. Ideally, these feasibility studies should have been conducted jointly to align planning processes to each other.

Road Infrastructure

In general, there are no major issues related to the Dar es Salaam road network. Within Tanzania, various projects are underway to rehabilitate and upgrade road sections that are in bad condition, such as the Igawa – Mbeya - Tunduma section of the road that borders Zambia. The last stretch of the road in close proximity to the border is very busy with trucks often parked on the road, which block the road and pose a safety threat.

Within Zambia, the road from Lusaka to Ndola is not in a good condition. There are no climbing lanes and the road crosses many small villages. Traffic is dense along this road with a high percentage of heavy trucks. The road from Lusaka to Chirundu is a new road and is in a fair condition. Within Malawi, the road between Lilongwe – Blantyre - Mwanza is in a fair to good condition. However, the shoulders need some upgrading and rehabilitation. Signage is not properly placed along the road.

The Dar es Salaam corridor does not have driving resting facilities (truck stops). The absence of rest facilities where drivers can refuel vehicles and rest pose a danger to road safety along this corridor.

Management of the Corridor

The Dar es Salaam Corridor Coordinating Committee (DCC) was established by constitution in 2003, under the auspices of the SADC. This management body is a PPP comprising of public and private sector institutions from Tanzania, Zambia, Malawi and the DRC. It actively seeks to facilitate trade and transport movements along the Dar es Salaam Corridor, among others, through reducing total transit time and transport costs along the corridor. The DCC's intervention strategies include:

- Promoting infrastructure development;
- Simplifying and harmonising regulations; and
- Supporting businesses with management processes.

The DCC constitutes of sub-committees, working groups and a Secretariat. The sub-committees and working groups undertake specific functions on behalf of the DCC, whereas the functions of the Secretariat revolve around coordinating and monitoring corridor performance, providing secretariat services to the DCC and its organs and facilitating trade and transport activities / initiatives.

Corridor Achievements and Constraints

Corridor achievements include but are not limited to the following:

- Appropriate corridor coordination and management are in place as noted by the existence of the DCC and the Dar es Salaam Secretariat. The DCC aims to reduce transport costs and transit costs along the corridor, whereas the Secretariat is charged with developing corridor development programmes and facilitating engagements with donor agencies to fund identified projects;
- All customs administrations in Tanzania, Zambia and Malawi use the Single Customs Administrative Document for customs declarations, which has enabled the simplification and streamlining of customs processes and procedures along the Dar es Salaam corridor;
- Planning and / or construction works to transform 2 border posts into OSBPs commenced. Construction work is also underway at the Tunduma / Nakonde border, while feasibility studies have been undertaken at the Kasumulu / Songwe border post; and
- The road network is in a generally accepted condition, although some sections of the road network require upgrading and rehabilitation.

Despite the above successes, a number of impediments undermine the efficiency of the Dar es Salaam Corridor, and they include:

- Severe congestion at the port of Dar es Salaam that results in poor port operational efficiency;
- A lack of truck stops along the corridor that poses a threat to road safety; and
- Inadequate approach road to border posts and space limitations (e.g. limited parking) within border posts.

2.4.2.3 Transport Corridors: SADC

There are eighteen major corridors that transit the SADC, linking the interior to fourteen major sea ports. The SADC Corridor Development Strategy of 2008 categorises regional transport corridors according to high, medium or low priority, based on cross-border traffic volumes and flow dynamics along the corridors. For the purposes of this discussion, one high priority and one medium priority corridor are discussed.

- North South Corridor (high priority); and
- Trans Kalahari Corridor (medium priority).

a) North South Corridor

The NSC is a combined initiative as it extends across the territories of three RECs, namely the COMESA, EAC and SADC. Representing more of a network of corridors than a single corridor, the NSC also connects South Africa to the region via 8,599 kilometers of road linking Durban to the port of Dar es Salaam through Zimbabwe, Botswana and Zambia (Byiers, B & Vanheukelom, J., 2014: 2).

The NSC transits eight countries in Southern and Eastern Africa and interconnects with various corridors such as the MDC and TKC. The NSC road network is the busiest transport network in the Tripartite in terms of both traffic and freight volumes. Literature sources point to the fact that approximately 95% of all freight on this corridor is moved by road, with only 5% by rail (<http://www.trademarksa.org/publications/tmsa-ppiu-update-and-map-north-south-corridor-aid-trade-road-projects>).

Route Description

The NSC road network connects the port of Durban in South Africa to the Copperbelt regions of the DRC and Zambia, with extending links to Dar-es-Salaam and Malawi. From South Africa, cross-border operators can cross the Beitbridge and Chirundu border posts in Zimbabwe and Zambia to reach Dar es Salaam in Tanzania.

There is an alternative route that links South Africa to northern countries, bypassing Zimbabwe. The route exits South Africa via the Martin's Drift / Grobler's Bridge border crossing into Botswana, then exits Botswana via the Kazungula border post into Zambia, from where it then connects into the DRC via the Kasumbalesa border post. However, the route that goes directly via Zimbabwe is shorter by about 150 kilometres, but is often slower due to inefficiencies at the Beitbridge border crossing, where delays with documentation frequently last two or more days (<http://www.transportworldafrica.co.za/2016/01/15/north-south-corridor-africas-main-vein/>).

The core corridor includes a number of branches that provide access to neighbouring countries. In addition to the two main route options for cross-border operators (through Zimbabwe or Botswana), the NSC has two eastward spurs from Zimbabwe, one through Malawi to the port of Nacala in northern Mozambique and a second to the port of Beira in central Mozambique.

Given the vast distance and various route options that cross-border operators use when transporting traffic between South Africa and the DRC, this report limits the NSC route to include

“the road network that runs from Durban port in South Africa to the Beitbridge border post via Johannesburg, through Harare to the Chirundu border post, through Zambia to the Kasumbalesa border post, ending at Kolwezi in the DRC”.

Infrastructure Touch-points and Challenges

Port of Durban

The port of Durban, located on the east coast of South Africa, offers a diverse range of port facilities. Demarcated precincts within the port provide specialised facilities for the handling of break bulk, dry bulk, liquid bulk, motor vehicles and containers.

In recent years, Durban port has witnessed unprecedented growth in cargo volumes moving through the port, with 2,83 million TEUs handled at the port in 2015 (Transnet. 2015). Currently the dry bulk, break bulk and container terminals are operating close to capacity, whereas the liquid bulk and RO-RO (Roll-on Roll-off) terminals are operating above capacity (AUC. 2017).

As a result of capacity constraints, congestion at the port results in the loss of millions of Rands to South African importers and exports. Although the port operates around the clock, 24 hours a day, seven days a week, critical problems are experienced with accessing the harbour. During peak periods, traffic is backed up to such an extent that drivers have to wait for hours, sometimes days, to get into the port.

In view of the foregoing, TRANSNET had begun consultations with various stakeholders about the necessity of port expansion projects. The findings of a study initiated by the African Union Commission (AUC. 2017) states that major expansion problems in the short term would include deepening the North Quay and infill at Pier 1 of the Durban container terminal, berth reconstruction and deepening at Island View and Maydon Wharf, and developing a new dedicated passenger terminal. In the medium term, all port facilities should be expanded since they are running out of operational capacity.

Border Posts

Given the lengthy stretch of the NSC, cross-border road transport operators have to move through various border posts on-route from Durban to the DRC. Heavy congestion is experienced at most border posts as a result of inadequate infrastructure (e.g. narrow access roads and lack of space for parking) and cumbersome and repetitive border management processes.

Although various strategic border posts are located along the NSC, only one border (Chirundu) already functions as an OSBP, whereas six others (Kasumbalesa, Tunduma, Songwe, Kazungula, Mchinji & Beitbridge) has been prioritised at regional (SADC) level as OSBP candidates. Progress towards establishing OSBPs along the NSC is noted in the commencement of construction activities at the Kasumbalesa and Kazungula border posts (C-BRTA: 2017).

Road Infrastructure

Road infrastructure on the NSC is inadequate for the volume of traffic that traverses the corridor. In South Africa, road conditions vary from fair to very good. In Botswana, Zimbabwe, Zambia and Malawi there are some missing links that require upgrading or rehabilitation. These projects are all included in the in the PIDA Acceleration Programme on the NSC which aims to upgrade the road sections along the NSC that are in bad condition and to complete the missing links.

Aside from South Africa, the NSC does not have formal driver resting facilities (truck stops). Given the vast geographical distance of the NSC, the importance of truck stops to combat driver fatigue and road accidents cannot be over-emphasised.

Management of the Corridor

There is no centralised corridor management entity assigned with the responsibility to manage and develop the NSC. This creates a challenge with regard to the coordination of corridor stakeholders and programmes and retards progress with regard to the development of the corridor.

Developments towards establishing a management entity for the NSC is noted in negotiations taking place between the Ministers of Transport in SADC for a Memorandum of Understanding (MoU) to establish a NSC Management Institution (NSCMI). The MoU will serve as the intergovernmental framework for the management of the NSC.

Corridor Achievements and Constraints

A bird's eye view of the NSC points out more constraints than achievements. On the positive side, the following successes are noteworthy:

- Some road sections of the NSC (e.g. N3 and N1 highways in South Africa) are adequately maintained and in a good condition; and
- The transformation of the Chirundu border post into an OSBP has resulted in significant time and money savings for cross-border operators passing through this border post.

Corridor constraints include, but are not limited to:

- Capacity constraints at the port of Durban that results in port delays and congestion;
- High congestion is experienced at most border post along the NSC. Due to extreme delays, operators often spend several days waiting in line to cross NSC borders. In the absence of overnight facilities drivers are forced to sleep inside their vehicles;

- Poorly maintained roads and missing road links in Botswana, Zimbabwe, Zambia and Malawi add to the high cost of transportation along the NSC;
- In the absence of a centralised corridor management entity, information dissemination with respect to corridor developments and constraints is either slow, or non-existent;
- The NSC runs through a fragmented regulatory environment of three RECs that poses a challenge to harmonising and coordinating developments across the entire corridor;
- There is a general lack of management and governance skills on the NSC; and
- Corruption and bribery is rife on the NSC. Corrupt activities partly contribute to accidents, the importation of counterfeit goods and human trafficking.

b) Trans Kalahari Corridor

The TKC is a joint corridor initiative between the governments of South Africa, Namibia and Botswana. Its existence was solidified by the signing of a Tripartite agreement by the governments of the three countries. This corridor is known for providing a short transport link across the entire breadth of the Southern Africa sub-continent.

The TKC was specifically developed to facilitate the seamless flow of cross-border road transport movements, to enhance trade flows and to increase throughput at the port of Walvis Bay inter alia, through improving cargo-handling facilities and initiating various infrastructure development programmes along the corridor.

Route Description

The TKC route is 1900 km long and forms part of the larger Walvis Bay corridor, which consists of the following four trade routes:

- TKC;
- Walvis Bay - Ndola - Lubumbashi Development corridor (previously known as the Trans-Caprivi Corridor);
- Trans - Cunene Corridor;
- Trans - Oranje Corridor.

The TKC route starts in Walvis Bay and passes through two main border crossings en route to South Africa and connects with the Maputo corridor in Pretoria.

Infrastructure Touch-points and Challenges

Port of Walvis Bay

The port of Walvis Bay in Namibia is a deep-water harbour offering larger ships access to docking facilities. This port is ideally positioned as the preferred route to emerging markets in Botswana, Zambia, Zimbabwe, Angola, Malawi and the DRC.

The SADC gateway terminal project seeks to extend the port of Walvis Bay to accommodate the building of a new container terminal between Walvis Bay and Swakopmund. Upon completion, the SADC Gateway Terminal will cover a total for 1,330 hectares of port land with 10 000 meters of quay walls and jetties providing at least 30 large berths. The new port will feature

world class ship and rig repair yards, oil and gas supply base, an undercover dry bulk terminal, a car import terminal and a passenger terminal (Massive SADC Gateway port for Namibia. Assessed electronically at <http://mpoverello.com/2014/01/17/massive-sadc-gateway-port-for-namibia/>).

The SADC Gateway terminal project is still in the early phases of the project life cycle. Although this development was considered as a long-term plan for the port of Walvis Bay's expansion, plans have been brought forward, mainly due to the construction of the Trans-Kalahari railway project that will export coal from Botswana to the port of Walvis Bay.

The infrastructural upgrades and expansion occurring at the port of Walvis Bay are being supplemented with the maintenance and development of four transport corridors that link the Namibian ports of Walvis Bay and Lüderitz to strategic points throughout Southern Africa by road and rail. These corridors, collectively referred to as the Walvis Bay Corridor Group (WBCG), have the potential to provide the shortest possible route for SADC to markets in Europe and the Americas.

Border Posts

The TKC connects three countries in the region, Namibia, Botswana and South Africa. The following border posts are located along the 1900 kilometer stretch of the TKC:

- Buitepos / Mamuno (Namibia / Botswana); and
- Pioneer Gate / Skilpadshek (Botswana / South Africa).

Of the two border posts along the TKC, the Buitepos / Mamuno border post is earmarked for transformation into an OSBP, while the other (Pioneer Gate / Skilpadshek) will remain a conventional two-stop facility.

Road Infrastructure

The TKC comprises a surfaced road that links the Port of Walvis Bay in Namibia with Botswana and the industrial powerhouse of South Africa, Gauteng. The road is in a good condition, although narrow on the Namibian side. Traffic volumes are not as high as on the other Walvis Bay corridors and capacity is still available, although the Walvis Bay corridor volumes have increased in recent years.

A lack of road signage in Botswana and Namibia and the absence of properly designed truck stops along this corridor pose a safety threat. In the absence of rest facilities, drivers normally sleep in their trucks and stop at multiple locations to rest, eat or access health facilities.

Management of the Corridor

The Trans Kalahari Corridor Management Committee (TKCMC) is the Executive Body of the TKC, assigned with the responsibility to manage corridor operations. The TKCMC comprises of public and private sector stakeholders - a Public-Private Partnership (PPP) which serves as the transmission belt for the regulation and oversight of the development and implementation of various trade and transport facilitation initiatives.

Corridor Achievements and Constraints

Over the years the TKC has established itself as an efficient transport corridor. Corridor successes, include, but are not limited to the following:

- The road network is generally in a good condition, although narrow in Namibia; and
- Progress towards transforming the Buitepos / Mamuno border post is noted in the completion of a feasibility study for OSBP establishment and the enactment of laws in Botswana and Namibia to establish OSBPs.

Despite the above accomplishments, a number of challenges undermine the seamless flow of traffic along the TKC. Examples of constraints include the following:

- Currently, the port of Walvis Bay has limited freight loading / unloading capacity, as well as limited storage facilities;
- Border posts along the TKC still act as two-stop borders and are not operational 24 hours daily;
- There is a general lack of safety along the TKC; and
- The absence of truck stops imposes a danger to drivers along the TKC.

2.5 Soft Infrastructure Barriers to Corridor Efficiency in the Tripartite

The previous section focused predominantly on the existence of hard infrastructure challenges that undermine the seamless movement of traffic along focus corridors in the Tripartite. Soft infrastructure impediments are equally, if not more important than hard infrastructure challenges given the fact that most delays along transport corridors are caused by soft issues that directly impact on service delivery. Examples include:

- Fragmented regulatory frameworks;
- Cross-border road transport permits;
- Variation in cross border charges;
- Different third party motor liability insurance schemes;
- Regional customs bond;
- Immigration procedures;
- Inefficient border posts;
- Road blocks and inspection points; and
- Corrupt practices.

2.5.1 Fragmented Regulatory Frameworks

Each of the Tripartite MS has its own regulatory mechanism that determines market access and operating requirements which must be adhered to by cross-border road transport operators. As a result, cross-border road transport operators have to comply with different rules and standards that are not harmonised and which are enforced by different MS.

Currently, cross-border road transport regulation in the region is done through bilateral and multilateral cross-border road transport agreements that were concluded by and between the

respective MS. These agreements primarily focus on controlling the supply of transport services in the market which is done through the issuance of cross-border road permits to transport operators. The current approach is characterised by fragmentation of the legislative and regulatory frameworks between MS. At country level integration is equally limited as reflected in duplication and overlaps in terms of roles and responsibilities.

2.5.2 Cross-Border Road Transport Permits

The basic requirement for public transport operators carrying goods and passengers for reward is to obtain a cross-border road transport permit for the vehicle(s) that will convey the traffic. Vehicles should meet a number of requirements and should obtain the necessary documents (e.g. certificate of fitness and roadworthiness certificate) before a cross-border permit will be issued.

Cross-border road transport permits are issued in the country of operator registration or, in some cases, at the border of the destination country. (DRC). This variation is a matter of concern, because there is no harmonisation of operating conditions, implying that road transport operators are subjected to different conditions in various member states. Furthermore, the price of cross-border permits varies between Tripartite countries, creating an unlevel playing field for cross-border operators.

2.5.3 Variation in Cross Border Charges

A uniform cross border road user charges system has not yet been developed for the Tripartite. In the absence of a uniform system, the onus vests on member countries to decide which charges will be imposed on foreign road transport operators. This state of affairs results in disparities and inconsistencies in cross border charges levied upon cross-border road transport operators when traversing through the Tripartite

Efforts are underway to harmonise cross-border road user charges in the Eastern and Southern African regions. COMESA and the EAC are reviewing the 2007 SADC Road User Charges study findings and recommendations with a view of examining whether study recommendations could be extended to cover all Tripartite countries.

2.5.4 Different Third Party Liability Insurance Schemes

The Tripartite region has three different third party vehicle liability insurance schemes namely:

- Cash payments;
- Fuel levy system; and
- COMESA yellow card.

As a result of different systems being used, cross-border operators are exposed to various payments when transiting between the three Tripartite RECs. This constraint leads to unnecessary complexities and requirements imposed on cross-border operators that, in most cases, culminate in delays and additional transport costs. Work is currently underway at Tripartite level to harmonise third party liability insurance systems.

2.5.5 Regional Customs Bond

At present, transporters in the Tripartite transiting through one country into another are required to take out a customs bond at least equal to the duty that would be payable on their cargo. Once they can prove that the cargo has left that customs territory, the bond is released. The process of releasing bonds takes time and therefore large amounts of money are tied up in the system of national bonds. As a result, transportation costs are higher than what they would be under a regional bond system.

Both the SADC and COMESA have designed and piloted regional customs bond guarantee systems that allow transporters to take out a single bond covering the entire trip. There are both slight and fundamental differences between the two systems and the challenge is to implement a harmonised system that would bring about a single regional system. If one country along a transport corridor operates a different bond guarantee to that operated by its neighbours, the benefits of the regional customs bond system would be greatly reduced.

2.5.6 Immigration Procedures

Countries in the Tripartite differ greatly with regard to their computerised immigration systems. Some have sophisticated, integrated systems while others have a partially computerised system, making it difficult for systems to communicate with each other. While the immigration headquarters may have a computerised system, it may not cover all immigration activities or borders.

For example, a country may operate the Personal Identification Secure Comparison and Evaluation System (PISCES) at its airports, primarily to monitor travellers who may be considered a security risk. Although this system could be seen as part of the global “war on terror” it is not always linked to the headquarters database containing the information on what type of authority the traveller has to enter the country, e.g. whether the traveller is a resident, tourist or temporary resident in possession of a work permit.

Over the last couple of years the COMESA and SADC have been developing a transit management system called COMESA - SADC Transit Management Information System (SADCOM) for piloting along the NSC.

2.5.7 Inefficient Border Posts

Over the years, border posts have emerged as the greatest stumbling block to intra-regional trade and travel. Multiple stakeholders are gathered on both sides of the border, conducting inspections independently from each other. In most cases ICT systems are obsolete and customs and immigration systems are not integrated. Since many border processes are conducted manually, they are not tamperproof and are therefore vulnerable to manipulation.

Progress towards improving border post efficiency in the Tripartite is noted in member countries embracing the OSBP concept and agreement to convert a number of border posts into OSBP. Under this system, vehicles only stop once at a border, therefore exiting one country and entering another at the same time. More information on OSBP reforms in the Tripartite is presented in Chapter 4 of this report.

2.5.8 Road blocks and inspection points

Law enforcement operations along focus corridors in the Tripartite are conducted by various stakeholders. These parties rarely coordinate operations and it is not surprising to find operations being conducted in close proximity to each other by different stakeholders. Currently vehicles are stopped at various inter and intra country road blocks, a practice that act as serious detriment to the unimpeded flow of traffic.

2.5.9 Corrupt Practices

While many law enforcement operations and checkpoints along focus corridors are legal, some of them are not. There are many checkpoints where drivers are subjected to harassment, corruption and extortions. Corruption does not only take place at traffic inspection points, but also at border posts and literally everywhere where enforcement and compliance are checked. Corruption does not only compromise road safety but also national security and it is a threat to legitimate cross-border trade in the Tripartite.

2.5.10 Overloading

Overloading is a major concern in the Tripartite. Estimates reveal that the cost of overloading in the East and Southern African regions amount to approximately US\$ 4 billion per annum. (Pearson, M & Chaitezvi, C. 2012: 23). This figure exceeds the amounts being spent on road rehabilitation and is partly to blame for the poor condition of certain roads in the Tripartite. Unless this problem is addressed in an urgent fashion, it will negate the expected benefits from the huge amounts of resources and member countries and donors are investing into improved road infrastructure across the African continent.

Although the costs associated with vehicle overloading can be avoided through effective control measures, the challenge is to harmonize control measures throughout the Tripartite. Currently different regulations on axle load limits, axle combinations, Gross Vehicle Mass (GVM) and vehicle dimensions apply. These adversely affect the costs of regional transport and so the cost of doing business. Although the COMEA, EAC and SADC have similar regulations on axle loads, GVM and vehicle dimensions, some countries in the Tripartite have either adjusted their rules and regulations since they do not conform to the recommendations of RECs, or their rules and regulations have never been aligned with regional norms.

2.6 Conclusion

Various road transport corridors traverse through the EAC, COMESA and SADC RECs. Despite their strategic role in promoting regional trade, all the focus corridors are plagued by various hard and soft infrastructure challenges that undermine their operational efficiency. Further to hard infrastructure inefficiencies, various soft infrastructure impediments undermine the seamless movement of traffic within the Tripartite resulting in length delays and additional costs for cross-border road transport operators.

In response to infrastructure challenges, a number of transport reforms have been approved for implementation at Continental, Tripartite and REC level to bring about improvement. More information on strategic transport initiatives is presented in Chapter 3.

3. ACTIONS TAKEN AND PROGRESS MADE TOWARDS IMPROVING CROSS-BORDER ROAD TRANSPORT IN THE TRIPARTITE

3.1 Introduction

This chapter provides a high-level overview of selected transport and trade facilitation initiatives, approved for implementation by various structures (e.g. African Union, REC Secretariats and MS governments) at continental, regional and member state level to improve trade and transport efficiency along regional and continental road transport corridors.

Given the vast number of reforms that were approved for implementation, and acknowledging the fact that information on the implementation status and impact of reforms is not yet readily available, this chapter does not dwell on all reforms. Instead, the discussions that follow are limited to strategic initiatives that have the potential to change the trade and transport landscape in Africa, upon implementation. The reforms are classified into three main groups as outlined below:

a) Continental Level Initiatives:

- Programme for Infrastructure Development Africa (PIDA);
- Development of Smart Corridors Programme;
- Presidential Infrastructure Champion Initiative; and
- Move Africa Initiative.

b) Tripartite Level Initiatives:

- Tripartite Transport and Transit Facilitation Programme;
- Multilateral Cross-Border Road Transport Initiative; and
- North South Corridor Aid for Trade Programme.

c) REC level Initiatives:

- EAC: East African Legislative Assembly and OSBPs;
- COMESA: COMESA Yellow Card Scheme and COMESA Data Portal; and
- SADC: Implementation status of Road and Border Post Projects set out in the SADC Regional Infrastructure Development Master Plan and SADC Parliament.

The above initiatives are discussed in greater detail in the sections below.

3.2 Continental Reforms

3.2.1 Programme for Infrastructure Development Africa

Africa is the poorest and least connected continent. Progress on improving connectivity, via improved regional infrastructure has been and continues to be grossly inadequate. Building on several past and on-going initiatives, the African Union Commission (AUC), New Economic Partnership for Africa's Development (NEPAD) Secretariat and the AfDB jointly launched the

PIDA, which aims to establish an integrated continent where transport infrastructure supports the free movement of goods and people.

This continental initiative, based on regional programmes and projects, seeks to address the infrastructure deficit that severely hampers Africa’s competitiveness in world markets. The key output of PIDA is called the Priority Action Plan (PAP), which includes a list of 51 immediately actionable projects across four key infrastructure sectors between the years 2012 – 2020. Table 4 below summarises the four key infrastructure sectors, their focus area and estimated costs of implementation:

Table 4: PAP Focus Areas

Infrastructure Sectors	Programmes and Focus area	Estimated Cost
Energy	Fifteen projects have been prioritised, all of which focus on hydropower, interconnections and pipelines.	\$40 billion
Transport	Twenty-four projects have been approved which focus on improving corridor connectivity/modernisation and ports, railways and air transport modernisation.	\$25 billion
Water	Nine projects have been prioritised targeting multipurpose dams, capacity building of lake and river basin organisations and water transfer	\$2 billion
ICT	Three projects focusing on capacity building, land interconnection infrastructure and internet exchange points	\$10.5 billion

Source: World Bank. 2014

According to the findings of a World Bank Report (2014), the PIDA differs from other similar efforts in that it has true African ownership. From the outset, the PIDA was formulated with very close consultation from key stakeholders including sector ministers, RECs, water-focused organisations and others. Strong political commitment is noted in the approval of PIDA programmes by the AU Heads of States in January 2012.

3.2.1.1 Status of PIDA

Despite the building of trust amongst key role-players and political agreement towards implementing PAP projects, limited progress has been made to date with respect to implementing prioritised projects. The following factors are cited as the main reasons for inadequate progress made towards project implementation:

- Inadequate discussions of Public-Private-Partnerships (PPPs) and private investment options;
- Insufficient funds for project preparation;
- Lack of clarity on the institutional architecture for implementing the PAP. This includes major confusion over how the projects would be prepared, who would do what and the role of RECs; and
- Inadequate dissemination of information on PIDA, including a lack of user-friendly summaries of projects

Furthermore, a lack of resolution of the above problems is cited as a main constraint on moving faster on implementing the PAP. There is also a call for the assessment of the current status of individual programmes and projects listed under the PAP. Such an assessment would be useful to monitor actual developments in each priority area, to identify specific constraints that hinder project implementation.

3.2.2 Development of SMART Corridors Programme

According to the PIDA the economic cost of infrastructure inefficiencies along the African Regional Transport Infrastructure Network (ARTIN) amount to \$172 billion, which reduces African countries' intra-regional and international competitiveness. In order to bring about improvement, PIDA recommends that all African transport corridors be converted into 'SMART' corridors.

The SMART Corridor is a new concept of developing and operating corridors. The abbreviation "SMART" stands for Safety, Mobility, Automated, Real-time Traffic Management. The objectives of Smart Corridors are to:

- Increase the use of real time traffic data and statistical information to optimise the use of corridor resources and infrastructure;
- Enhance trade and transport facilitation by simplifying and harmonising cross-border administrative procedures and documentation and implementing paperless automated administrative procedures;
- Reduce cargo transportation time and costs;
- Increase safety and security of transport corridors;
- Simplify trade while increasing customs and other authorities control efficiency;
- Ease the opening-up of landlocked countries for intra-regional and international trade; and
- Enhance corridor countries competitiveness.

In addition to the above objectives, there are a number of characteristics that make a corridor *smart* and they include the following:

a) Implementation of Cross-border Intelligent Transport Systems

It is envisaged that implementation of Intelligent Transport Systems (ITS) will improve corridor efficiency. ITS systems simplify the administrative procedures and logistics processes, monitor traffic movements along the corridor and provide real-time information to stakeholders that enable them to manage processes. A SMART corridor's key ITS components are computerised networks infrastructures, Electronic Data Interchange (EDI) and software.

Some stakeholders including the trucking industry, customs administrations and others, have already implemented information systems to satisfy their own specific needs. All these individual systems should be connected to one central ITS system which allows all the stakeholders to have access to a given set of specified data while ensuring confidentiality of information. In practical terms this implies that corridor countries must issue appropriate legislation to recognise the use of electronic documents in their legal system for the ITS system to operate legally.

b) Implementation of World Trade Organisation Trade Facilitation Tools

The World Trade Organisation (WTO) published an agreement on trade facilitation in 2013 which presents a set of tools to be introduced in each country's regulation to improve trade facilitation. The following tools are of importance and MS are encouraged to implement these tools:

- National Single Windows;
- Coordinated Border Management;
- One Stop Border Posts;
- Common Customs Declaration form;
- Modernisation and streamlining of customs procedures; and
- Risk management based procedures for physical customs inspections.

c) Implementation of REC agreed trade facilitation policies, laws, regulations, procedures and safety measures

It is envisaged that smart corridor countries will implement agreed measures that include:

- Authorised size vehicle axle loads;
- Liberalisation of the trucking industry;
- Vehicle and freight insurance laws and regulations;
- Regional Customs Transit Bond Guarantees regulation;
- Selection and control of vehicles authorised to operate along corridors;
- Electronic Certificate of Rules of Origin; and
- Standardisation and harmonisation of processes, procedures, fees and taxes.

d) Implementation of quality transport infrastructures

MS are required to take appropriate measures in order to ensure the quality of the design and layout of transport infrastructure:

- **For road:** looking at size of the road lanes, bypass of key cities and villages, third climbing lane when the road rises by more than 3% gradient, stop facilities such as provision of Road Side Stations/Truck Stops or One Stop Inspections Centres mainly by the private sector;
- **For rail:** looking at railway gauges, size of crossing, private siding, rail capacity, quality of rail rolling stock (locomotives & wagons); and
- **For port:** looking at capacity and equipment for short dwell time, loading and unloading container facilities, inland container depots (ICDs).

In delivering the above considerations should be given to the contribution of the private sector through PPPs and creation of enabling financing mechanisms for the maintenance and modernisation of the transport infrastructure, amongst others.

3.2.2.1 Status of Smart Corridors

The SMART corridor definition and its characteristics was presented to and adopted by AUC stakeholders at a Validation Committee meeting held in Addis Ababa, Ethiopia on 23-24 February 2016. A second validation workshop was held on 21-22 September 2016 during which the findings of a corridor assessment exercise were presented to delegates. This culminated in the selection of the NSC and Dar es Salaam Corridors as pilot SMART corridors.

Since the September 2016 workshop, the following actions have been carried out:

- Determining the requirements and cost associated with converting the NSC and Dar es Salaam corridors into pilot SMART Corridors;
- Drafting of Terms of Reference (TOR) for SMART corridor implementation;
- Finalisation of a Memorandum of Understanding (MoU) for Smart corridors in Africa; and
- Preparation of technical notes on ITS concepts and Gap Analysis methodology for SMART Corridors.

It is envisaged that the SMART corridor concept when fully implemented will lead to improvement in cross-border road transport movements and trade facilitation on the continent.

3.2.3 The Presidential Infrastructure Champion Initiative

The Presidential Infrastructure Champion Initiative (PICI) was born out of a proposal by South African President, Jacob Zuma, with a view to accelerate regional infrastructure development through political championing of projects.

A number of projects were identified, to be championed by the head of state and governments of various countries. The projects cover transport, energy, ICT and trans-boundary water services. South Africa has been selected as the chair of the PICI, under the leadership of President Zuma. Table 5 sets-out PICA projects and Champions.

Table 5: PICI Projects and Champions

PICI project	Country	Political Champion
Missing links to the Trans-Saharan highway and the optic fibre project	Algeria	President Adellaziz Bouteflika
Dakar-Ndjamena-Djibouti Road / Rail	Senegal	President Macky Sall
Nigeria-Algeria Gas Pipeline	Nigeria	President Nuhammadu Buhari
Kinshasa-Brazzaville Bridge, Rail / Road	Republic of the Congo	President Denis Sassou Nguesso
Navigational line between Lake Victoria and the Mediterranean Sea	Egypt	President Abdel Fattah El-Sisi
Unblocking of political bottlenecks for ICT broad-band and optic fibre: Smart Africa project	Rwanda	President Paul Kagame
LAPSSET project	Kenya	President Uhuru Kenyatta
North-South Corridor Road / Rail project	South Africa	President Jacob Zuma

Source: NEPAD. 2016

The PICI was tasked with ensuring that projects are implemented within 5 years between 2010 and 2015. In this context, implementation meant progression of the project from pre-feasibility to feasibility phase, or from feasibility to construction, or that demonstrated evidence of progress is available.

The PICI model also includes an effective reporting system where progress of individual projects is reported on a 6 month basis during the bi-annual meetings by the respective champions. A comprehensive project status report is also presented by the chair during the AU Assembly.

3.2.3.1 Status of PICI Projects

According to Dr John Tambi, the PICI coordinator, significant progress has been made towards implementing PICI projects across Africa, with the partnership of country leaders driving long-standing infrastructure projects. Towards the end of 2017 during a meeting of political champions, representatives once again committed their support towards seeking alternative funding sources to enable project implementation.

Progress is noted in the construction of missing links along the Trans-Sahara highway. Furthermore, Rwanda has completed and interconnected all EAC countries to the submarine cables at Mombasa and Dar es Salaam, with the focus of the project shifting to a SMART Africa

initiative. This is to ensure the benefits of information and communication technology are expanded to all EAC MS.

The construction of the Dakar – Ndjamená - Djibouti road / rail and the Kinshasa - Brazzaville Bridge road / rail projects are on the cards for 2018, subjected to the ability of political champions to secure adequate funding for project implementation. (<http://www.engineeringnews.co.za/print-version/infrastructure-initiative-garners-support-from-nine-african-presidents-2017-09-01>).

3.2.4 Move Africa Initiative

In May 2016, the New Partnership for Africa's Development (NEPAD) an agency of the AU that implements high-impact development projects on the continent, has launched an initiative named 'Move Africa' that aims to address policy hurdles to trade across the continent in an attempt to enhance intra-Africa trade through comprehensive corridor development.

Comprehensive corridor development requires the provision of adequate regional transport infrastructure, which consist of "hard infrastructure" (e.g. ports, railways and highways), as well as "soft infrastructure" (e.g. transport laws and regulations, organisational systems and resources) for smoothly operating and maintaining the hard infrastructure.

PIDA articulates prioritised programmes for hard transport infrastructure. However, prior to the launch of Move Africa there was no guiding programme to unite and address soft infrastructure issues across different transport modes at continental level. The Move Africa initiative intends to address this gap through providing a package of solutions to soft infrastructure issues in an attempt to reduce transportation costs along corridors and promote a multi-sectoral and comprehensive approach for corridor development.

In addition to soft infrastructure solutions, the Move Africa initiative also incorporates the Traffic Light System (TLS), a tool which monitors and evaluates the performance of transport corridors, inter alia, through assessing the performance of OSBPs.

3.2.4.1 Status of Move Africa Initiative

The Move Africa initiative was officially launched on the side-lines of the on-going World Economic Forum for Africa in May 2016 in Kigali, Rwanda. Since its launch, the NEPAD Agency convened a number of high-level dialogue sessions at continental and international level to attract development community and private sector support for the implementation of prioritised projects. NEPAD has also partnered with JICA to reduce processing inefficiencies and delays at inland borders through the implementation of OSBPs, which will be monitored in its TLS.

The SADC Committee of Ministers of Transport has endorsed Beitbridge, Kazungula, Kasumbalesa and Chirundu One-Stop Border Posts for piloting of the TLS, as well as the roadmap for implementing the TLS on selected pilot border posts. The design of the Traffic Light System was scheduled for completion by the end of November 2017 with the piloting to commence during the early months of 2018.

3.3 Tripartite Reforms

In addition to continental programmes and projects, a number of trade and transport facilitation reforms were approved by the EAC-COMESA-SADC Tripartite, aimed to improve traffic movements amongst MS. Below is a discussion of strategic initiatives unfolding in the Tripartite.

3.3.1 Tripartite Transport and Transit Facilitation Programme

The economic integration agenda being implemented at the level of the Tripartite prioritise programmes that aim to address the challenges facing trade and transport with the aim of reducing the cost of doing business and by doing so improving the competitiveness of products from the region. In order to fulfil this aim, a number of programmes were approved, which revolve around:

- Regulatory and policy reforms;
- Adoption of international instruments and best practices;
- National and regional capacity-building programmes aimed at facilitating cross-border movements and improvements to infrastructure facilities at border posts; and
- National and regional programmes aimed at expediting seamless cross-border movements.

With respect to implementation, all three RECs experienced limited progress in terms of the implementation of various programmes aimed at addressing each of the areas indicated above. In order to bring about improvement, Tripartite MS approved and launched the Tripartite Trade and Transport Facilitation Programme (TTTFP), which seeks to facilitate the development of a more competitive, integrated and liberalised regional road transport market in the Tripartite region through:

- Increasing trade and promoting economic growth in the Eastern and Southern African regions;
- Reducing the high cost of trade in the Tripartite and assisting national governments to address trade barriers;
- Reducing transit times and transaction costs along strategic corridors in the Eastern and Southern African regions through improved infrastructure, faster border crossings and harmonised trade and transit regulations; and
- Improving the effectiveness of aid by coordinating donor funding for priority Aid-for-Trade programmes.

The TTTFP combines a series of initiatives of all three REC into a single trade facilitation programme that provides for:

- A mechanism for reporting, monitoring and eliminating NTBs;
- Border and customs procedures for OSPBs, coordinated border management, regional customs bonds and transit information management systems;
- Immigration procedures; and

- Transport procedures (regional third-party insurance, vehicle standards and regulation, self-regulation of transporters, overload control, harmonised road user charges and regional corridor management systems).

3.3.1.1 Status of the Tripartite Transport and Transit Facilitations Programme

The expected key results of the TTTFP are categorised as follows:

- Result 1: Implementation of the Tripartite vehicle load management strategy;
- Result 2: Operationalisation of the Tripartite Transport Registers and Information Platform;
- Result 3: Implementation of harmonised Tripartite vehicle regulations and standards; and
- Result 4: Improved efficiency of regional transport corridors.

Progress is noted in the development and validation of the following documents by the Tripartite:

- Vehicle Load Management Strategy and Implementation Plan for the Tripartite region;
- Drafting of an MoU on Vehicle Load Management that awaits signage at ministerial level in the COMESA, EAC and the SADC RECs;
- Regional Weighbridge Location Plan;
- Regional Standards for the Transportation of Abnormal loads and dangerous goods;
- Harmonised vehicle dimensions and regulations;
- Regional standards for road transport management scheme and agreement on a pilot project on the North South Corridor;
- Conceptualisation and design of the Tripartite Transport Register and Information Platform and System; and
- Harmonised Cross Border Third Party Motor Vehicle Insurance Schemes.

Despite the validation of the above documents, ultimate success depends on the will of Tripartite countries to fully implement the TTTFP at MS level. This underlines the importance of obtaining political, administrative and technical commitment from all MS. Furthermore, additional sources of funding should be sought to enable MS to implement the various initiatives (programmes) that make up the TTTFP.

3.3.2 Multilateral Cross-Border Road Transport Agreement

In line with international best practice that has shifted from quantity regulation to quality regulation, the Tripartite is currently pursuing a reform that entails implementing a single Multilateral Cross-Border Road Transport Agreement (MCBRTA) within the Tripartite which will require signatory states to introduce quality regulation in their respective territories.

The MCBRTA is currently in draft format and, once MS sign-off the MCBRTA, individual countries will pursue the process of repealing bilateral cross-border road transport agreements and cross-border permits. The MCBRTA also provides for the establishment of a common cross-border road transport operator registration system (for both freight and passenger), titled

Transport Register and Information Platform System (TRIPS) that will capture information on cross-border operators, drivers and fleet amongst others.

It is envisaged that the operationalisation of TRIPS will enable regulators to improve their monitoring and enforcement functions via accessing real-time information on registered operators and vehicles, and through monitoring how operators conduct business in the Tripartite. Operator misconduct will be identified through operator profiling, audits and random inspections and will be registered against the operator's profile.

3.3.2.1 Status of the Multilateral Cross-Border Road Transport Agreement

Progress is noted in the conceptualisation and design of TRIPS and its validation by the Tripartite. Validation workshops are currently being conducted to validate draft standards, where after the Council of Ministers of Transport from all signatory countries will be requested to sign off the MCBRTA, at which stage countries will initiate the process of reviewing their respective domestic transport policies, legislations and regulatory frameworks.

According to planning estimates, this reform will be operationalised between 2017 and 2022, with signatory countries migrating to quality regulation by 2022.

3.3.3 North-South Corridor Aid-for-Trade Programme

In 2009, the Tripartite RECs launched a pilot transport corridor programme, the North-South Corridor Aid-for-Trade Programme, which spans eight countries, three RECs and a total of 10,647 kilometres of road. The NSC Aid-for-Trade road network includes the road corridors defined by the SADC as the NSC, the Dar es Salaam Corridor and segments of the Trans-Kalahari and Nacala Corridors. This road network is the busiest transport network in the Tripartite region in terms of both traffic and freight volumes (<http://www.transportworldafrica.co.za/tag/north-south-corridor-aid-for-trade-programme/>).

This North-South Corridor Aid-for-Trade Programme, championed by South Africa, is unique in that it presents a regional approach to the development and rehabilitation of surface transport infrastructure along transport corridors. It therefore promotes a holistic approach to transport infrastructure planning and maintenance across national boundaries.

3.3.3.1 Status of the North-South Corridor Aid-for-Trade Programme

Progress towards implementing the North-South Corridor Aid-for-Trade Programme is noted in the adoption of mechanisms to improve donor coordination and cooperation through the establishment of the Tripartite Trust Account and the Friends of the Tripartite. This is a forum of donors and international cooperating partners, which meets regularly under the leadership of the Department of International Development (DFID).

Furthermore, a pipeline of priority projects has been developed and resources, including technical assistance, have been made available to accelerate project preparation. The Tripartite has also established a dedicated Project Preparation and Implementation Unit to oversee this work.

South Africa as the project champion of the NSC Aid-for-Trade programme has taken the lead in establishing working relationships with various role-players. The signing of the NSC MoU by SADC Transport Ministers in July 2017, which serves as an intergovernmental framework for the management of the NSC and the delivery of cross-boundary infrastructure, represents a big step to ensuring this project moves forward (http://m.engineeringnews.co.za/article/dbsa-committed-to-funding-infrastructure-projects-throughout-sadc-2017-08-01/rep_id:4433).

3.4 Regional Economic Community Reforms

In addition to Continental and Tripartite reforms, a number of trade and transport initiatives were approved at REC level. All programmes are aimed at improving traffic flows along road transport corridors in the east and southern African regions.

Given the vast majority of trade and transport facilitation programmes / projects that were approved for implementation by each of the three Tripartite RECs, it is not possible to focus on all reforms. Therefore, the discussion below outlines two strategic reforms unfolding in each REC:

3.4.1 East African Community

3.4.1.1 Establishment of the East African Legislative Assembly

The East African Legislative Assembly (Parliament) is an organ of the EAC established with the core mandate to legislate on all matters relating to the operationalisation of the Treaty for the establishment of the EAC and the vision to be an effective and independent Parliament.

The Parliament is fully and legally mandated to hold MS accountable for the implementation of agreed trade and transport facilitation initiatives within the EAC. MS are therefore required to domesticate agreed reforms once the Parliament has ratified them. The existence of a legal framework and an independent regional legislative authority (Parliament) is cited as a reason for the high implementation rate of various trade and transport facilitation reforms, including the development of transport observatories along the Northern and Central transport corridors, completion of various OSBP projects and adoption of a single cargo declaration.

Neither the COMESA nor SADC have a regional legislature (Parliament) to provide oversight and to enforce the implementation of regional decisions (initiatives) at MS level. As a result, the implementation of regional commitments depends on the willingness and political will of MS governments to carry out regional decisions at member state level. This state of affairs points to a need to fundamentally restructure the governance paradigm within the COMESA and SADC regions.

Status: The East African Legislative Assembly was established and has been operational since 2001.

3.4.1.2 Establishment of One Stop Border Posts

A number of Tripartite countries have fully embraced the OSBP concept and aim to convert most, if not all, of their border posts to OSBP. Trade Mark East Africa (TMEA) is financing the construction of thirteen OSBP projects in East Africa that will enable goods and passenger vehicles to only stop once at the border, thereby reducing the time spent at and costs involved in border crossings (<https://www.trademarkea.com/impact-stories/one-stop-border-posts-contributing-to-the-ease-of-doing-business-in-east-africa/>).

In its Annual Report for 2015-16, TradeMark East Africa (2016:32) reports on the completion of 10 OSBPs. To date the following borders have been operationalised and function as OSBPs:

- Holili / Taveta;
- Kobera / Kabanga; and
- Mirama / Kagitimba.

Since OSBP operations commenced cross-border operators witnessed significant time savings at the above borders brought on by the simplification of processes and procedures that resulted in quicker cargo clearance processes.

Status: The transformation of traditional two-way borders into OSBPs is on-going. Construction work to 10 of the 13 OSBP projects financed by Trade Mark has been completed. To date, three borders have been operationalised and function as fully-fledged OSBPs within the EAC while other borders operate as OSBPs using bilateral agreements.

3.4.2 Common Market for Eastern and Southern Africa

The COMESA has one of the most extensive programmes aimed at facilitating trade and transport movements between MS. The following are of specific importance:

3.4.2.1 COMESA Yellow Card Scheme

COMESA implemented a third party insurance scheme called the Yellow Card System in 1985 as a third-party insurance system for motor vehicles after noting problems with the cash payment system then in use by MS. The scheme is administered by a network of national bureaus, one in each country. Each bureau is responsible for issuing Yellow Cards, handling settlement claims arising from accidents involving foreign vehicles issued under the scheme and reimbursing claims paid on its behalf by other national bureaus.

In acknowledging the fact that different third-party vehicle liability insurance schemes are used in the Tripartite (cash payments, fuel levy system and COMESA Yellow Card System), a task team was appointed to investigate and make recommendations on the harmonisation of third-party vehicle insurance schemes. The task team resolved that the Yellow Card system would offer a sound basis for an effective instrument to facilitate the cross-border movement of vehicles, goods and persons, and that it would enhance the development of trade and transport in the Tripartite.

Further to the above, the Task Team recommended that existing systems are interfaced as follows:

- Countries using the fuel levy system should issue Yellow Cards to motorists travelling to non-fuel levy countries;
- Foreign motorists travelling from non-fuel levy countries to fuel levy countries should be excluded from the fuel levy system and instead carry yellow cards; and
- Current operations of the Yellow card system should be reviewed to respond to issues raised by COMESA countries at national workshops.

Status: The recommendations of the Task team to implement regional harmonised arrangements for third-party vehicle insurance has not been fully embraced by all Tripartite countries. Currently, the Tripartite Task Force (TTF) is implementing a work plan to interface the three systems through the development of:

- A framework for harmonising third-party insurance, including the legal and institutional reforms necessary for implementing regionally harmonised arrangements for motor vehicle third-party liability insurance;
- A system for interfacing the existing motor vehicle third-party liability insurance system and the Yellow Card System; and
- An implementation plan for a harmonised framework clearly showing the responsibilities of all parties and timeframes.

3.4.2.2 COMESA Data Portal

The COMESA successfully launched an online data portal, titled COMSTAT, in 2006. The COMSTAT acts as a central repository of all statistical data at the Secretariat and disseminates statistics of various statistics domains and resources, including:

- International merchandise trade statistics;
- Statistics on international trade in services;
- Foreign direct investment statistics;
- Harmonised consumer price Indices;
- Infrastructure indicators: energy, transport and ICT;
- Country trade profiles;
- International trade statistics bulletins;
- COMESA investment reports; and
- Infrastructure statistical bulletins.

The data base was initially created with only international merchandise trade statistics and has over the past years been enhanced and augmented with other statistical indicators and related statistical information pertaining to COMESA MS.

Status: The COMSTAT data portal was established and has been operational since 2006 and can be accessed at <http://comstat.comesa.int/>. Although trade statistics are relatively up to date and display figures up to the years 2014 and 2015, transport indicators do not include traffic volumes along COMESA road and rail networks or at border posts and are relatively out-dated (the latest statistics are for the year 2010).

3.4.3 Southern African Development Community

Various key transport and trade facilitation initiatives have been approved and are currently being implemented in the SADC. The following reforms are noteworthy since they aim to reduce hard and soft infrastructure constraints for cross-border operators conducting operations on SADC road transport corridors.

3.4.3.1 Implementation of Road Transport and Border Post projects set out in the SADC Regional Infrastructure Development Master Plan

Since the adoption of the SADC Regional Infrastructure Development Master Plan (RIDMP), showcasing of infrastructure projects has been vigorously pursued in various regional and international platforms. In order to assist MS in obtaining funds for project execution, the SADC has created the PPDF to facilitate the successful development of bankable projects for market presentation.

The PPDF was launched in November 2013. Furthermore, the Development Bank of Southern Africa (DBSA) was appointed by the SADC Secretariat as the implementation agent and fund manager for the PPDF.

Road transport projects:

- The SADC RIDMP prioritises 73 road transport projects and 18 OSBP for implementation over a time interval of fifteen years;
- The majority of road transport projects are focused on hard infrastructure improvements in the western and central parts of the SADC; and
- For Angola alone, 18 projects are identified. These projects all revolve around road rehabilitation / maintenance and bridge construction.

Status: Information on the status of prioritised road transport projects is not readily available. However, according to the SADC Regional Infrastructure Development Master Plan Implementation Status Report (2015) various sections on the NSC are undergoing project preparation and procurement under the coordination of the Tripartite PPIU. Many projects are still in the planning phase and their execution depends on the ability of MS to secure sufficient funds to continue with project implementation.

Border post projects

Currently only the Chirundu border post functions as an OSBP in the SADC. Other developments towards OSBP establishment are noted in:

- Building of physical infrastructure at the Lebombo / Ressano Garcia border post (e.g. the establishment of a commercial freight clearance facility away from the border, opening of a freight by-pass road and construction of separate passenger clearance facilities);
- Completion of construction work on the Zambian side of the Kasumbalesa border (e.g. access road, parking and office facilities) and on-going construction on the DRC side of the same border; and
- Enactment of laws in Botswana and Namibia to enable the establishment of the Mamuno / Trans Kalahari OSBP.

It is important to note that the successful implementation of OSBPs include adherence to the following four core elements:

- Establishment of legal frameworks at MS level;
- Design of procedures and traffic flows for the entire common control zone;
- Establishment of relevant ICT; and
- Design of common integrated physical facilities by the two countries.

Status: When assessing the current status of OSBP developments in the SADC, and acknowledging the fact that the operationalisation of OSBP should involve the integration of all of the above elements, it is evident that limited progress was made in the region towards transforming traditional border posts into OSBP. While construction activities have commenced at some borders (e.g. Kazungula, Kasumbalesa) and completed in others (e.g. Lebombo), the building of physical facilities (hard infrastructure) is only one pre-requisite to the establishment of OSBPs.

In the case of the Lebombo / Ressano Garcia border physical facilities have been constructed, traffic flows have been attended to and ICT connectivity has been established. However, customs authorities of South Africa and Mozambique still use different software packages that hinder the sharing of customs data. Furthermore, legal frameworks, although developed are awaiting ratification by the governments of South Africa and Mozambique before the border post can be operationalised as a fully-fledged OSBP.

3.4.3.2 Establishment a SADC Parliament

In line with the provisions of the Protocol on Transport Communications and Meteorology (PTCM) a number of Corridor Management Committees (CMC) were established to manage traffic flows along regional road transport corridors in the SADC. Furthermore, a PPDF was established at regional level to assist MS in packaging projects for private sector funding.

Despite the support provided by CMCs and the PPDF, the SADC does not have a parliamentary body like the EAC, tasked with the responsibility to provide oversight and to enforce the implementation of regional decisions (initiatives) at MS level. As a result, the implementation of regional commitments depends on the willingness and political will of MS governments to implement regional decisions at MS level.

Currently, the SADC Parliamentary Forum (SADC-PF), composed of Members of Parliament from national parliaments in MS, provides a framework for dialogue on issues of regional interest and concern. Although the Parliamentary Forum has some authority, it is generally limited, as evident in the fact that although it has the right to scrutinise the budget and make recommendations, none of its recommendations have to be taken into account and addressed.

The establishment of a regional parliament is a reform measure that is currently being interrogated at regional level where growing recognition exists for the need to complement the regional executive and tribunal with a regional legislature (Parliament). A regional parliament will encourage good governance, transparency and accountability and given its autonomous legal

character will be in a position to enforce the implementation of regional decisions (reforms) and impose sanctions upon defaulting MS.

Status: High-level strategic engagements are currently being conducted at regional level to gain support for the establishment of a regional Parliament and development of a draft protocol that will define the powers, functions and relational linkages among the proposed parliamentary body, National Parliaments and other organs of the SADC.

3.5 Gaps and Challenges

Although a number of transport and trade initiatives are being implemented at continental, Tripartite and REC level evidence of the impact of such initiatives remains limited, outside of a few specific examples. This is due to a number of constraints, which include, but are not limited to the following:

3.5.1 Poor Level of Implementation

Although a number of trade and transport facilitation agreements have been approved at continental, REC and MS level, the timeous implementation of these agreements remain a problem. Even though African countries have signed and ratified various continental and regional agreements, their domestication remains a challenge that needs to be addressed.

An example is found in the PIDA. Although it is widely acknowledged that his continental initiative enjoys true African ownership insofar as extensive stakeholder engagements have been conducted and are still on-going, poor progress has been made towards implementing the 51 prioritised PIDA projects. Various reasons are cited for the poor implementation of PIDA reforms, notably a lack of understanding into the collective benefits of such reforms, funding constraints and institutional weaknesses.

3.5.2 Non-Alignment of National Legislative Frameworks to Regional and Continental Initiatives

The majority of continental and regional trade and transport initiatives (e.g. OSBP reforms) require that MS review their respective transport policies, laws and regulations to align these to regional and continental initiatives. MS therefore have to create a legislative and regulatory environment that supports the implementation of regional initiatives, which they often fail to do.

3.5.3 Multiple Memberships to Different RECs

Another impediment to the timeous implementation of trade and transport initiatives is the co-membership of many African countries to various RECs. The multiple membership features is counter-productive and often results in the inability of African countries to implement certain initiatives (e.g. Yellow Card System) system since they have already adopted transit instruments with other RECs.

3.5.4. Funding Constraints

The complexity of transport initiatives makes them costly and time-consuming to prepare. Experience has shown that in order to scale up the implementation of transport infrastructure projects, it is necessary to develop a pipeline of bankable projects. Projects will only be funded if they are financially viable and sustainable. Limited financial resources at MS level are cited as a

reason for the poor implementation status of trade and transport facilitation initiatives. This constraint underpins the importance of adopting a public-private partnership (PPP) approach towards the funding of regional and continental infrastructure projects.

3.5.5 Skills Shortage

In addition to funding constraints, African countries often lack technical expertise to drive the implementation of trade and transport facilitation initiatives. This tendency is partly to blame for the slow pace of implementing regional and continental commitments. It also illustrates the need to secure adequate funding to improve resource mobilisation at MS level so as to fast-track the implementation of strategic trade and transport initiatives.

3.5.6 Absence of Regional Parliaments

Eight RECs are recognised by the AU. However, not all of them have a regional legislative assembly (Parliament) that holds MS accountable for the implementation of continental and regional decisions. RECs with a functioning independent legislative authority, like the EAC has witnessed a high implementation rate of trade and transport reforms in recent years. Given its independent character, the EAC Parliament can enforce the implementation of regional decisions and impose sanctions upon defaulting MS.

Both SADC and the COMESA have experienced less success in terms of the implementation of regional reforms. Neither of the two RECs has a regional parliament in place to oversee and enforce MS to implement regional approved projects / programmes. This gap underlines the importance of establishing autonomous institutions at REC level across the continent, to influence MS to implement regional decisions and to impose penalties upon defaulting countries.

3.6 Conclusion

There are many trade and transport initiatives that are currently being implemented across the African continent, and they are all at different levels of progress. However, documented information on the impact of trade and transport initiatives implemented so far is not readily available. This is partly due to the fact that many initiatives are still in the early stages of the project life cycle and their impact will only be visible once they have been fully implemented.

Unfortunately, experience reveals that African countries have a poor track record when it comes to the implementation of continental, regional and national commitments. Various reasons are cited for this, e.g. a lack of political will, funding constraints, memberships to different RECs and the absence of Regional Parliaments to implement change. These constraints should be addressed before it is possible to accurately measure the impact of trade and transport facilitation initiatives on the cross-border road transport industry.

4. CORRIDOR PERFORMANCE MEASUREMENT

4.1 Introduction

Developing landlocked countries face many challenges to compete effectively in world markets. They experience high trade costs, with logistics representing a significant proportion of their GDP, which at times can be more than double that of other emerging economies or treble that of developed countries.

Earlier chapters of this report identified a number of infrastructure inefficiencies along transport corridors in the Tripartite that undermine corridor performance and which discourage MS from trading with each other. In order to address infrastructure impediments, MS must measure corridor performance and, at the same time, understand the nature and extent of the problem that hinders optimal corridor performance. Thus, measuring corridor performance is a pre-requisite to improving corridor efficiency.

Within the Tripartite, the EAC has taken the lead in developing and launching transport observatories along the central and northern transport corridors that monitor corridor performance along both corridors. The launch of the central and northern corridor transport observatories yielded a number of results, including time-savings for cross-border operators who are in a position to respond to traffic conditions along both corridors through adjusting their routes if necessary.

COMESA has an online data portal (COMSTAT) that acts as a central repository of statistical data and disseminates statistics of various statistics domains (e.g. international trade statistics, country trade profiles, infrastructure indicators for transport) to registered users. This platform however does not provide a detailed list of transport indicators and is not used as a tool to measure corridor performance in the COMESA. Currently, the SADC does not employ an online data portal to measure corridor performance.

Meanwhile, there is a new initiative unfolding in the Tripartite, noted in the development of a web-based corridor performance monitoring system that measure border crossing and route trucking time according to various indicators for several corridors in the eastern and southern regions.

This chapter covers key themes on corridor performance, including:

- Corridor components and relevant indicators used to assess corridor performance;
- Review the performance of the Central Corridor according to a list of corridor indicators provided by the Central Corridor Transport Observatory; and
- Report on new developments in the Tripartite that represent a step towards harmonising corridor performance indicators in the EAC-COMESA-SADC region.

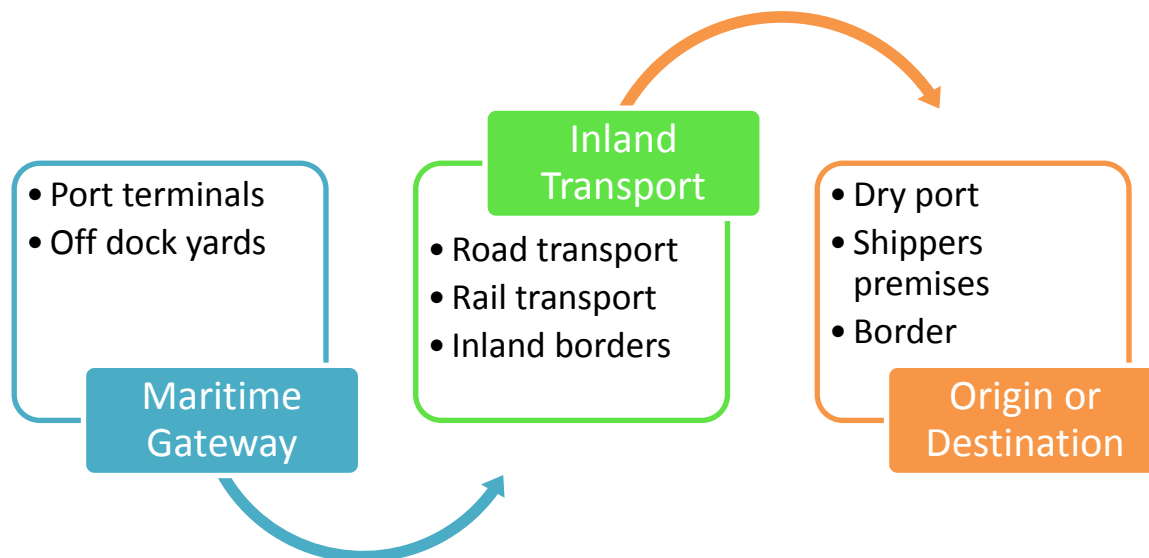
4.2.1 Corridor Components

According to Hartmann (2013:7), a typical transport corridor consists of three functional components, namely the maritime gateway, the inland transport and the destination (or origin).

Each of the corridor components in turn is a complex entity combining multiple interventions by logistics operators and control agencies across several locations:

- The maritime gateway can include off-dock yards to alleviate congestion within the port;
- The inland transport segments can be segmented into different modes and include one or more border crossings; and
- The origin and/or destination can be a dry port close to the consumption area, the shipper's premises, or simply the border.

Figure 2: Corridor Components



Source: Hartman.2013, as amended.

4.2.2 Corridor Categories and Indicators

To determine if the level of performance of a corridor is satisfactory it is imperative to have a reference for comparison, and also to compare measures which are comparable. In this respect corridor performance is normally measured according to the following categories, or dimensions:

- Cost / Prices;
- Time;
- Volumes; and
- Efficiency.

In addition to the above, it is important to note that an indicator is a summary of a number of observations. Table 6 below lists the corridor indicators and provides examples of indicators associated with each category.

Table 6: Corridor Categories

Category	Description	Indicators
Cost / Prices	Includes prices for the trader and the cost factors for logistics service providers and control agencies entering into the composition of that price across the main corridor components.	<ul style="list-style-type: none"> ✓ Port charges; ✓ Charges by customs and transit agencies; ✓ Cost of road transport; ✓ Road maintenance cost.
Time	Time associated with individual processes, the idle time between successive processes and the variation of times resulting in the uncertainties of delays for port dwell time, transport time and final clearance.	<ul style="list-style-type: none"> ✓ Stoppage time at weighbridges; ✓ Stoppage time at police checks; ✓ Stoppage time at border posts; ✓ Transit time to destination; ✓ Average number of stops per truck per country.
Volumes	Volumes by corridor routes and components (modes and nodes) and by nature (intra-regional, transit, international).	<ul style="list-style-type: none"> ✓ Overall cargo traffic at sea port; ✓ Volume of imports by country; ✓ Volume of exports by country; ✓ Ratio of trucks per country.
Efficiency	Efficiency of transport infrastructure and services in terms of design capacity and efficiency for each of the main corridor modes and nodes.	<ul style="list-style-type: none"> ✓ Dwell time; ✓ Customs release time; ✓ Ship turnaround time; ✓ Truck turnaround time.

Source: Hartman.2013 & Central Corridor Transit Transport Facilitations Agency 2017, as amended.

Corridor performance indicators are important, not just in regard to measuring performance, but also in determining the drivers of inefficiencies, which is key in determining the areas in which interventions are required and the nature of interventions needed.

4.3 Case Study Review: Performance of the Central Corridor

In recent years the EAC launched two projects that aim to identify bottlenecks and their causes along key transport corridors through the creation of evidence-based regional platforms. Both projects materialised in the launch of transport observatories known as the Central and Northern corridor transport observatories. These measured corridor performance along the Central and Northern corridors through a series of indicators. Since the launch of the online monitoring tools, transport costs along both corridors have decreased, since corridor role-players are in a position to detect and respond to corridor problems quickly.

Section 4.3 discusses the performance of different corridor categories and indicators for the Central Corridor, monitored by the Central Corridor Monitoring Observatory (CCTO).

4.3.1 Methodology and Analysis

One of the mandates of the Central Corridor Transit Transport Facilitation Agency (CCTTA) is to monitor the performance of the Central Corridor through the collection, processing and dissemination of transport data that supports planning activities and operations of EAC MS.

The Transport Observatory is the performance monitoring tool used by the Trade and Transport Facilitations Agency (TTFA) that measures corridor performance according to a list of corridor indicators for each category. The methodology involves data collection, data processing and analysis, reporting and dissemination of real-time data to influence policy-decision makers to enable reforms in areas that are in need of improvement.

Data collection involves a combination of methods and sources. The main source(s) of data is obtained from:

- Computerised systems from different stakeholders (e.g. port authorities, revenue authorities, transporters and clearing and forwarding agents);
- Questionnaires, completed by cross-border operators;
- Route surveys, completed by field operators to validate electronic reports; and
- Global Positioning System (GPS) kits issued to road transport operators.

GPS kits capture locations and time stamps for all the stops along the corridor in addition to transit time and delays at the various nodes. Initial preparations for route surveys involve geo zoning to map suitable stop locations and areas of interests such as weighbridges and border posts. The questionnaire is administered alongside the kits for drivers to capture qualitative information such as reasons for stopping, fees and other charges paid by transporters along the Central Corridor.

4.3.2 Overview of Indicators Monitored by the Transport Observatory

Indicators monitored by the CCTO are grouped into 4 categories, which collectively monitor 28 indicators:

- Transit time and delays;
- Transport costs and rates;
- Cargo volumes; and
- Efficiency and productivity.

The following discussion outlines the performance of the Central Corridor. For most indicators corridor performance was measured on a monthly basis (between January and December) for the year 2016. For some indicators however, performance was measured over a two year or longer period.

All information was extracted from the Central Corridor Performance Monitoring Report 2016. For more information on the Central Corridor Transport Observatory, the reader is advised to access the online portal at <http://observatory.centralcorridor-ttfa.org>

4.3.2.1 Transit Time and Delays

Information for this category was obtained from the Electronic Cargo Tracking System (ECTS), the Tanzania Revenue Authority (TRA) and the GPS survey results. Corridor monitoring starts from the time when cargo arrive at Dar es Salaam port until they reach their final destination. Transit time has been broken down in the following indicators:

- Weighbridge crossing time;
- Police and other checkpoints;
- Transit time per border;
- Border post crossing time; and
- Average stops per truck.

Each of the above indicators is discussed in greater detail below.

a) Weighbridge Crossing Time

Weighbridge crossing time is calculated by sub-tracing the arrival time of the truck at the weighbridge from its departure time at the weighbridge, based on GPS survey data. Live GPS devices are installed on trucks when the journey starts and monitored throughout the route to capture transit time and delays.

Table 7 below captures the average weighbridge crossing time in minutes at the various weighbridges in Tanzania and Uganda for the period January to December 2016. Lukaya weighbridge is located in Uganda while the other weighbridges are all located in Tanzania. Other Central Corridor MS (Rwanda, Burundi and DRC) do not have weighbridges.

Table 7: Weighbridge Crossing Time (minutes)

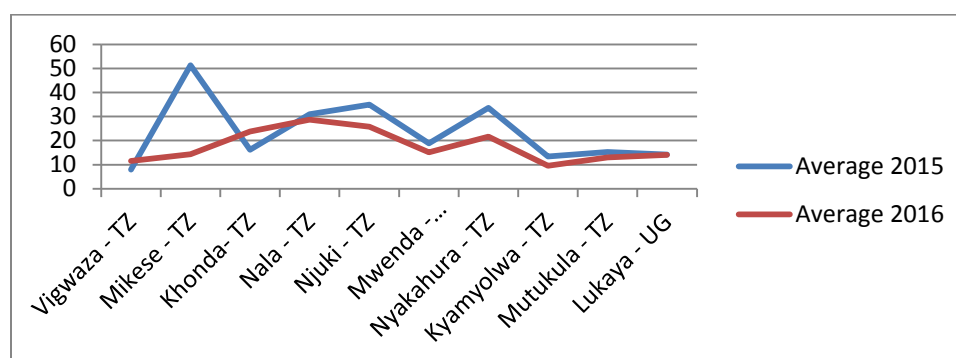
Weighbridge	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVRG 2016
Vigwaza - TZ	10	12	9	11	13	10	14	10	17	14	10	9	11.58
Mikese - TZ	0	0	18	21	19	14	11	15	13	12	12	8	14.3
Khonda - TZ	43	59	57	17	17	11	16	9	11	13	16	16	23.75
Nala - TZ	12	58	52	25	26	23	22	27	26	24	24	25	28.67
Njuki - TZ	25	53	28	16	27	28	21	32	16	19	23	21	25.75
Mwenda - kulma - TZ	32	14	33	16	5	9	13	12	17	13	10	8	15.17
Nyakahura - TZ	29	27	32	19	17	15	27	19	18	16	20	20	21.58
Kyamyolwa - TZ	8	12	14	11	10	10	9	10	7	8	8	8	9.58
Mutukula - TZ	16	19	13	19	12	11	9	12	11	12	12	10	13
Lukaya - UG	9	17	18	13	11	12	14	10	18	18	16	12	14

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

From the information displayed in Table 7, it is evident that operators have spent the least time at the Kyamyolwa weighbridge (9.58 minutes), followed by Vigwaza (11.58 minutes) and Mikese (14.3 minutes). The installation of weigh in motion scales at Mikese has led to a significant reduction in weighbridge crossing time since trucks are weighed while moving. Furthermore, the removal of police checkpoints at Mikese has also helped to reduce the stoppage time.

Figure 3 indicates the average crossing time in minutes at the various weighbridges along the Central Corridor.

Figure 3: Average Weighbridge Crossing Time (minutes)



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

In order to reduce NTB along the Central Corridor, the government of the United Republic of Tanzania announced in April 2016 that all transit trucks will only stop at three weighbridges (Vigwaza, Njuki and Nyakahura) while awaiting the completion of three One Stop Inspection Stops (OSIS) at Vigwaza, Manyoni and Nyakanazi. This reduced over 70% of the total time wasted at weighbridge stops. The ministry issues stickers that differentiate transit trucks from local ones. Since April 2016, trucks with stickers were only weighed at the three prioritised weighbridges.

b) Police and Other Checkpoints

All police checkpoints for transit trucks have been moved to the three prioritised weighbridge stops at Vigwaza, Njuki and Nyakahura where transit trucks are inspected, either at the time they approach, or when they queue to be weighed. However, despite the time savings accrued through moving police checkpoints to the three weighbridge stops, there are still a number of other police checkpoints along the Central Corridor, especially between the Kahama, Shinyanga and the Kagera regions. On completion of the OSIS all inspections, including other control services, will be conducted at the OSIS.

c) Transit time to Border

Transit time to border refers to the time taken by the transit truck from the Port of Dar es Salaam to the respective borders between Central Corridor MS and Tanzania. The borders are located between Tanzania and Rwanda, Tanzania and Burundi and Tanzania and Uganda. Transit time at each border is presented in tables 8 – 10 below:

❖ *Transit time to Rusumo Border post*

Transit time from the port of Dar es Salaam to the Rusumo border post (Tanzania – Rwanda) is presented in table 8 below.

Table 8: Transit Time to Rusumo Border (days)

BORDER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVRG
2015	2.53	2.72	2.65	3.39	3.41	3.32	3.49	3.52	3.5	3.4	3.38	3.39	3.23
2016	3.37	3.43	3.43	3.43	3.45	3.45	3.47	3.47	3.46	3.45	3.47	3.47	3.45

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

From the data displayed in Table 8, it is evident that the average transit time from Dar es Salaam port to Rusumo border has increased slightly (by 6,8%) from 3.23 days in 2015 to 3.45 days in 2016.

❖ *Transit time to Kabanga Border post*

Transit time from the port of Dar es Salaam to the Kabanba border post (Tanzania – Burundi) is presented in Table 9 below.

Table 9: Transit Time to Kabanga Border (days)

BORDER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVRG
2015	3.14	3.39	2.14	3.4	3.44	3.33	3.56	3.52	3.57	3.6	3.6	3.7	3.37
2016	4.26	4.12	4.07	4.06	4.02	4.02	4	3.97	3.94	3.92	3.89	3.88	4.01

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

The average transit time from the port of Dar es Salaam to the Kabanga border post has increased from 3.37 days in 2015 to 4.01 days in 2016. This presents a 19% increase in transit time.

❖ *Transit time to Mutukula Border post*

Transit time from the port of Dar es Salaam to the Mutukula border post (Tanzania – Uganda) is captured in Table 10 below:

Table 10: Transit time to Mutukula Border (days)

BORDER	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVRG
2015				3.25	3.58	3.3	3.81	3.77	3.65	3.68	3.69	3.71	3.6
2016	3.7	3.67	3.71	3.67	3.65	3.68	3.68	3.67	3.68	3.7	3.7	3.7	3.68

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Table 10 illustrates that the average transit time from Dar es Salaam port to Mutukula border increased by 2.2% between 2015 and 2016.

Based in the data displayed in Tables 8, 9 and 10 it is clear that the average transit time keeps fluctuating and has in all three cases increased over the period under review. The average transit time remains higher than the government target of 2.5 days. The reason for the variance is attributed to speed limit regulations of 66 km per hour in Tanzania and long and regular personal stops by drivers along the Central Corridor.

d) **Border Post Crossing time**

This indicator is measured from the time difference in hours between truck arrival and departure time at the borders based on road / GPS data.

Table 11 illustrates the average time it takes for a truck to cross the Kobero, Mutukula and Rusumo border posts in order to allow cross-border movements between Tanzania, Burundi, Uganda and Rwanda. These borders are functioning OSBP and trucks are only subjected to one stop. Border crossing time is also indicated for the Rusizi / Ruzizi and the Rubavu / Goma borders between Rwanda and the Eastern DRC. Since these borders still act as traditional two way borders trucks are subjected to two stops on both sides of the border for entry and exit clearance procedures. Trucks that arrive at the mentioned borders after hours were not considered during the analysis since they had to spend the entire night at the border posts.

Table 11: Border Post Crossing time (hours)

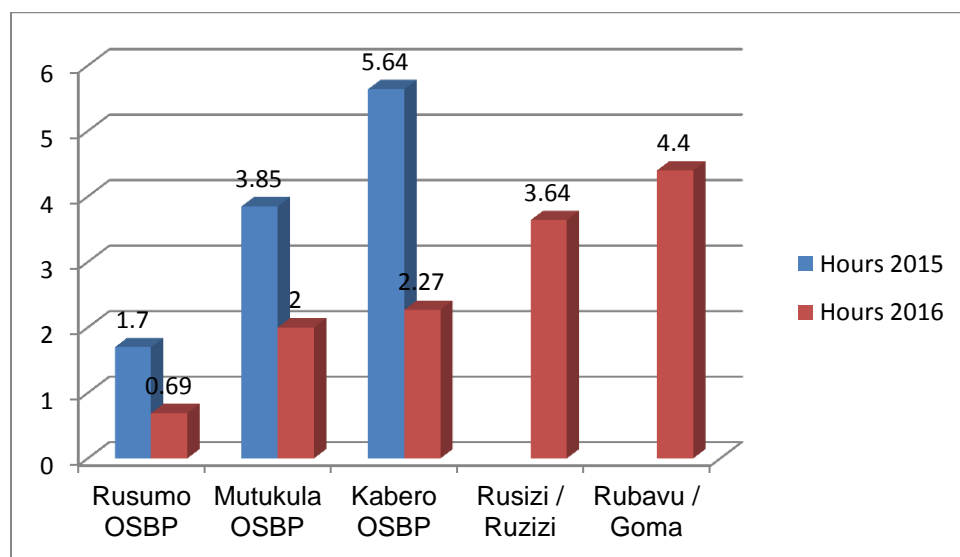
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVRG 2016	AVRG 2015
Rusumo OSBP	0.7	0.7	0.65	0.65	0.63	0.61	0.81	0.58	0.69	0.77	0.75	0.79	0.69	1.7
Mutukula OSBP	0.43	2.22	0.75	3.6	2.18	2.21	2.68	1.94	1.95	1.97	2.03	2.11	2	3.85
Kobero OSBP	2.56	3.43	2.85	2.19	2.11	1.74	1.81	1.77	1.94	1.87	2.25	2.68	2.27	5.64
Rusizi / Ruzizi	2.92	2.94	2.61	3.83	3.82	3.89	3.53	3.38	4.76	4.15	3.97	3.93	3.64	
Rubavu / Goma	3.02	5.03	5.2	5.05	4.47	4.27	4.5	4.47	4.01	4.2	4.43	4.13	4.4	

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

From the information displayed in Table 11, it is evident that border crossing time at all three OSBP (Rusumo, Mutukula and Kobero) reduced significantly between 2015 and 2016. Time savings are attributed to the fact that vehicles are subjected to one stop only for all crossing procedures and operations. Cross-border vehicles are subjected to longer delays at the Rusizi/ Ruzizi and Rubavu/ Goma border posts that still function as traditional two stop borders.

Figure 4 illustrates the average border post crossing time at the three OSBP and the two two-stop borders for the years 2015 and 2016:

Figure 4: Comparison: Average Border Post Crossing Time



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

It is evident from Figure 4 that the average time spent at the Rusumo, Mutukula and Kobero border posts decreased significantly since the operationalisation of OSBPs. For Rusumo, a time saving of 59, 4% was reflected between 2015 and 2016 while time savings of 48,1 and 59,8% was measured at the Mutukula and Kobero border posts.

e) Transit time to Destination

This indicator measures the time from the origin (when the truck starts the journey from Dar es Salaam) until it reaches the destination. It is calculated by subtracting the date and time the truck started the journey from the date and time the truck reaches its final destination based on the GPS road survey results.

The assumption is made that the destination is Bujumbura for Burundi cargo, Kigali for Rwanda cargo, Kampala for Uganda cargo and Goma and Bukavu for DRC cargo. Table 12 below summarises the transit time from the port of Dar es Salaam to various destination along the Central Corridor for the period January to December 2016.

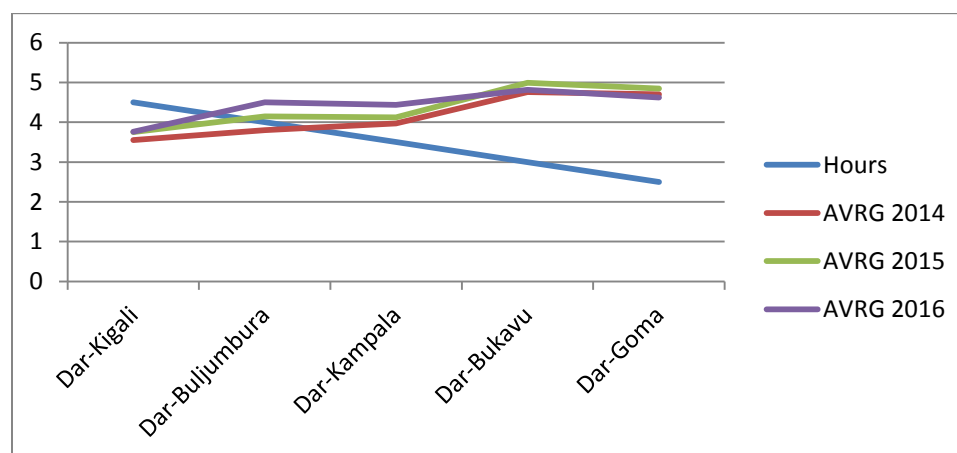
Table 12: Average Transit Time to Destination (days)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	AVRG
Dar-Kigali	3.85	3.77	3.76	3.76	3.77	3.77	3.76	3.76	3.77	3.8	3.7	3.76
Dar-Bujumbura	4.87	4.63	4.61	4.63	4.62	4.62	4.5	4.49	4.35	4.28	4.16	4.5
Dar-Kampala	4.09	4.14	4.15	4.83	4.78	4.78	4.78	4.45	4.39	4.2	4.3	4.44
Dar-Bukavu	4.81	4.83	4.73	4.88	4.93	4.93	4.87	4.81	4.8	4.8	4.6	4.81
Dar-Goma	4.68	4.66	4.6	4.73	4.7	4.7	4.67	4.67	4.65	4.53	4.44	4.62

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Figure 5 illustrates the average transit time to destinations graphically.

Figure 5: Average Transit Time to Destinations



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

From Figure 5 it is evident that the average transit time to the various destinations along the Central Corridor increased slightly over the three years. In 2016, transit time increased slightly over the first three quarters where after it decreased during Quarter 4. The increase in transit time is attributed to longer journeys from the port of Dar es Salaam to the Tanzanian borders, caused by speed restrictions in Tanzania and long personal stops along the route. On average, the minimum transit time was recorded to be 3.76 hours for the Dar es Salaam–Kigali route and the maximum transit time was 4.81 hours for the Dar es Salaam–Bukavu route (see Table 12).

➤ **Average Stops per Truck**

This indicator provides an average number of stops per truck per country for both inbound and outbound traffic. The outbound trip constitutes the journey from the port of Dar es Salaam to different destinations while inbound include the journey from different destinations to the Dar es Salaam port.

Table 13 illustrates the number of stops per truck, per country.

Table 13: Number of Stops per Truck per Country

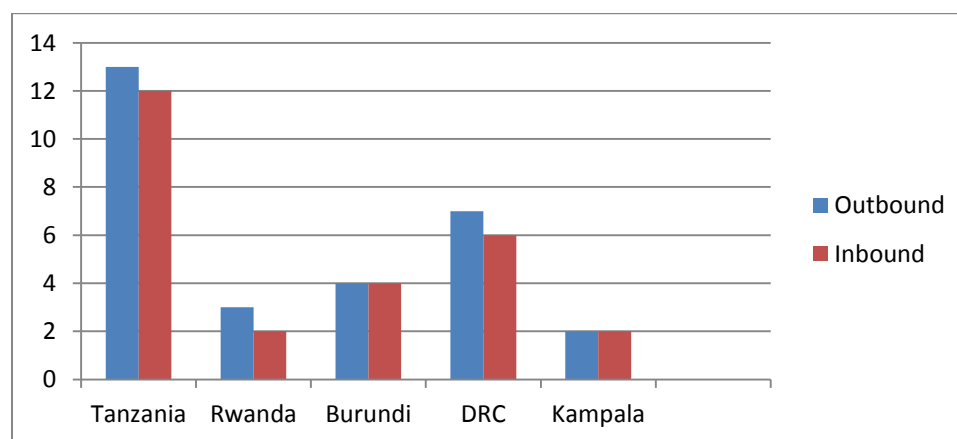
	Outbound	Inbound	Distance	Km/stops
Tanzania - Rusumo	13	12	1271	98
Tanzania - Mutukula	13	12	1446	111
Tanzania - Kabanga	13	12	1297	100
Rwanda	3	2	1495	93
Burundi	4	3	1630	96
DRC - Goma	7	6	1635	82
DRC - Bukavu	7	6	1704	85
Kampala	2	2	1780	119

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Table 13 shows that most of the stops are made in Tanzania. On a single trip, a truck makes about thirteen stops within Tanzania. After crossing the Tanzania borders, the number of stops decreased, however they are slightly higher for trucks heading to the DRC due to the long distance they have to travel, coupled with multiple border crossings.

Figure 6 indicates the average number of stops per truck per country graphically.

Figure 6: Average Number of Stops per Truck per Country



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

4.3.2.2 Transport Costs and Rates

Transport costs are the expenses incurred by a transporter to move products / cargo from one location to another. The total cost is determined by adding fixed (infrastructure) and variable (operational) costs. The latter varies according to conditions relating to location, condition of infrastructure, cost of energy and manner in which freight is transported.

On the other hand, rates are the price that cargo owners / shippers pay for transport services. Freight rates vary according to the mode(s) of transport used, vehicle size, distance travelled and type of goods shipped. The indicators for the transport costs and rate category include:

- Road freight charges / rates;
- Total cost comparison for importing containers by rail versus road;
- Total cost comparison for importing loose cargo by rail versus road; and
- Parking fees per country.

a) Road Freight Rates

Table 14 below gives a summary of the average transportation rates for moving a container (20 or 40 inch) from the port of Dar es Salaam to various destinations along the Central Corridor.

Table 14: Transport Rates per Route

Route	16-Jan	16-Feb	16-Apr	16-May	16-Ju	16-Jul	16-Aug	16-Sep	16-Oct	16-Nov	16-Dec
Dar - Kigali	\$3.700	\$3.800	\$3.500	\$3.000	\$3.000	\$3.000	\$3.000	\$2.800	\$2.800	\$2.800	\$2.700
Dar - Bujumbura	\$3.900	\$4.000	\$3.700	\$3.700	\$3.700	\$3.700	\$3.500	\$3.400	\$3.400	\$3.400	\$3.200
Dar - Kampala	\$5.100					\$3.700	\$3.600	\$3.300	\$3.300	\$3.300	\$3.300
Dar - Bukavu	\$6.700	\$6.000	\$6.000	\$6.000	\$6.000	\$5.500	\$5.500	\$5.500	\$5.400	\$5.400	\$5.200
Dar - Goma	\$5.300	\$5.000	\$5.000	\$5.000	\$5.000	\$4.700	\$4.700	\$4.600	\$4.600	\$4.600	\$4.500

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

It is evident from Table 14 that transport rates along the Central Corridor reduced to all destinations between January and December 2016. This trend may be attributed to the shortage of cargo at the port of Dar es Salaam (especially between April and September) which resulted in a decrease in transport rates, given the fact that the demand (number of transit trucks) exceeded supply (available cargo) along the Central Corridor.

Table 15 illustrates the cost of moving a 40 inch container to various destinations along the Central Corridor:

Table 15: Cost of Moving a 40 Inch Container per Kilometre to Various Destinations

Destination	Port Charges			Shipping Charge	Cargo Tracking Charge	Corridor Levy	Clearing fees		Visa Fees	Transport fees: entry Card Fee	OTAL COST	Distance (km)	Cost of 40" Container/km	
	Handling	Customs Fee	Wharfage				Dar-Port	Border/Dest						
Kigali	120	320	180	60	20	12	300	200	N.A.	2700	N.A.	1495	2.62	
Bujumbura	120	320	180	60	20	12	300	200	N.A.	3200	N.A.	1640	2.69	
Kampala	120	320	180	60	20	12	300	200	N.A.	3300	N.A.	1780	2.52	
Goma	120	320	180	60	20	12	300	200	50	4500	30	5792	1635	3.54
Bukavu	120	320	180	60	20	12	300	200	50	5200	30	6492	1769	3.67

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

The cost of moving a 40 inch container per kilometre is cheapest for Kampala destined cargo (\$2.52/km), followed by Kigali and Bujumbura at \$2.62/km and \$2.69/km respectively. It is most expensive to ship a 40 inch container to Bukavu in the DRC. The difference can be explained by additional charges (visa card and entry card fees) that are imposed on cross-border vehicles that enter the DRC on route to Goma and Bukavu.

b) Total Cost Comparison for Importing Containers by Rail and Road to Bujumbura - Burundi

Table 16 below indicates the cost incurred to import 40 inch containerised cargo either by rail or road to Bujumbu in Burundi. The costs include port charges, transport charges and other charges as indicated.

Table 16: Total Cost Comparison for Importing Containers by Rail or Road: Bujumbura - Burundi

Port Handling Charges		Shipping Charges: cargo Tracking Charge					Transport Charge			Clearing Charges			TOTAL
Mode	Dar	Kgm	Buj			Dar-Kgm	Kig-Buj	Dar-Buj	Dar Port	Kgm port	Border / Dest		
RAIL	620	558	200	60	N.A.	3000	1015	N.A.	300	200	200	6153	
ROAD	620	N.A.	N.A.	60	20	N.A.	N.A.	3200	300	200	200	4400	

Source: Road Survey Results. Central Corridor Transit Transport Facilitations Agency. April 2017

It is evident from the data provided in Table 16 that the transportation of containerised cargo from the port of Dar es Salaam to Bujumbura is much cheaper by road through the Kabanga / Kobera border post than by rail through the Kigoma port. The approximate costs are \$6153 for rail and \$4 400 for road.

c) Total Cost Comparison for Importing Loose Cargo by Rail and Road to Bujumbura - Burundi

Table 17 below indicates the cost incurred to transport loose cargo, either by rail or road to Bujumbura in Burundi. The costs include port charges, transport charges and other charges as indicated in the table. For the calculation a 40 ton wagon was used for rail, while for road transport, a truck carrying 30 tonnes loose cargo was considered.

Table 17: Total Cost Comparison for Importing Loose Cargo by Road and Rail to Bujumbura - Burundi

Port Handling Charges		Transport Charges					Clearing Charges			Cargo Tracking	TOTAL	Cost per Ton
Mode	Dar	Kgm	Buj	Dar - Kgm	Kig - Buj	Dar - Buj	Dar	Kgm	Border / Dest			
RAIL	440	500	140	2600	616	N.A.	300	100	200	N.A.	4896	122.4
ROAD	330	N.A.		N.A.	N.A.	3200	300	N.A.	200	20	4050	135

Source: Road Survey Results. Central Corridor Transit Transport Facilitations Agency. April 2017

The figures presented in table 17 indicate that it costs \$122, 40 per ton to transport cargo by rail to Bujumbura through Kigoma port, while it costs \$135 per ton to transport cargo by road to the same destination through Kabanga / Kobero border. It is therefore cheaper to transport loose cargo by rail from the port of Dar es Salaam to Bujumbura in Burundi.

d) Parking Fees per County

Parking fees along the Central Corridor are mainly paid where trucks spend nights at parking areas. Most of the parking areas are unofficial and privately owned. Only a small number of parking areas are equipped with CCTV cameras to monitor the safety of drivers and cargo. Table 18 shows the parking areas per country, their status and parking charges incurred.

Table 18: Parking Fees

Country	Name of Parking	Status	Fees
Tanzania	<i>Mbezi</i>	Public	Free
	<i>Morogoro</i>	Private	\$2.3
	<i>Dumila</i>	Private	\$2.3
	<i>Dodoma</i>	Private	\$2.3
	<i>Manyoni</i>	Private	\$2.3
	<i>Ikungi</i>	Private	\$2.3
	<i>Singida</i>	Private	\$2.3
	<i>Misigiri</i>	Private	\$2.3
	<i>Igunga</i>	Private	\$2.3
	<i>Nzega town</i>	Private	\$2.3
	<i>Tinde</i>	Private	\$2.3
	<i>Isaka</i>	Private	\$2.3
	<i>Kahama</i>	Private	\$5
	<i>Ushirombo</i>	Private	\$2.3
	<i>Nyakanazi</i>	Private	\$2.3
	<i>Benaco</i>	Private	\$5
Rwanda	<i>Kayonza</i>	Private	\$4.2
	<i>Magerwa-Kigali</i>	Private	\$6
	<i>Gitagi</i>	Private	\$4.2
	<i>Butale</i>	Private	\$4.2
Burundi	<i>Gilega</i>	Public	\$8
	<i>Bujumbura</i>	Public	\$8
Uganda	<i>Nakawa</i>	Private	\$7.2
DRC	<i>Antreport-Bukavu</i>	Private	\$15
	<i>Antreport-Goma</i>	Private	\$15

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

As indicated in Table 18, most parking areas along the Central Corridor are managed by the private sector. Parking fees vary, with the highest fees (\$15) imposed on cross-border transporters in the DRC.

4.3.2.3 Cargo Volumes

This dimension illustrates the performance of the Dar es Salaam port in terms of cargo flow for imports and exports for the years 2015 and 2016. It also provides analysis and comparisons of performance figures for the stated period. The main indicator (overall cargo through the port of Dar es Salaam for 2015 and 2016) is sub-divided as follows:

- Overall imports through the port of Dar es Salaam for 2015;
- Overall imports through the port of Dar es Salaam for 2016;
- Overall exports through the port of Dar es Salaam for 2015;
- Overall exports through the port of Dar es Salaam for 2016;
- Overall import comparison (2015 and 2016); and
- Overall export comparison (2015 and 2015).

a) Overall Cargo traffic through Dar es Salaam Port for 2015 and 2016

Table 19 below shows cargo volumes for imported commodities by member and non-member countries through the port of Dar es Salaam between January and December 2015 and 2016:

Table 19: Overall Imports – January to December 2015 (metric tons)

Country	15-Jan	15-Feb	15-Mar	15-Apr	15-May	15-Jun	15-Jul	15-Aug	15-Sep	15-Oct	15-Nov	15-Dec	Year 2015
<i>Discharged</i>													
Tanzania	653,888	538,212	578,430	600,745	625,702	711,833	555,405	521,574	649,233	626,751	635,654	630,986	7,328,413
DRC	98,746	89,408	87,084	100,953	104,232	91,728	111,204	108,800	127,674	87,232	92,558	94,924	1,194,543
Burundi	20,525	21,212	24,628	38,403	30,772	21,725	24,170	21,103	31,887	31,189	34,017	48,175	347,806
Rwanda	68,572	66,440	52,592	65,090	68,024	68,486	73,222	57,597	74,338	75,315	77,387	72,872	819,935
Uganda	9,388	13,534	9,248	11,965	16,588	17,171	15,521	11,347	14,270	5,983	12,225	19,421	156,661
Others	177,610	117,472	189,032	134,582	173,435	187,621	229,370	146,933	251,953	147,894	98,929	195,823	2,050,654
TOTAL IMPORTS	1,028,729	846,278	941,014	951,738	1,018,753	1,098,564	1,009,892	867,354	1,149,355	974,364	950,770	1,062,201	11,899,012

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

The figures in Table 19 show slight variations in cargo flow, starting with minimum cargo being recorded for the months of August (867,354) and March (941,014) and a maximum of 1,149,355 metric tons recorded for September 2015.

Table 20 below shows overall imports for the period stretching between January and December 2016 through the port of Dar es Salaam:

Table 20: Overall Imports – January to December 2016 (metric tons)

Country	16-Jan	16-Feb	16-Mar	16-Apr	16-May	16-Jun	16-Jul	16-Aug	16-Sep	16-Oct	16-Nov	16-Dec	Year 2016
<i>Discharged</i>													
Tanzania	601,940	572,551	518,760	496,931	674,196	665,337	549,265	746,545	669,087	581,809	533,393	580,393	7,190,337
DRC	74,445	77,312	60,331	41,020	48,390	65,097	55,791	72,379	92,874	74,986	64,072	62,349	789,046
Burundi	26,613	29,438	23,453	15,638	26,336	21,233	18,400	25,541	32,256	24,780	28,229	29,083	301,000
Rwanda	72,181	66,903	65,135	62,936	60,750	70,329	53,780	66,685	101,696	77,104	65,795	76,998	840,291
Uganda	12,122	11,267	16,326	10,012	12,872	14,012	12,797	16,915	25,147	11,190	9,972	12,491	165,123
Others	109,251	68,089	174,276	211,806	137,759	204,790	81,640	201,529	235,462	141,036	168,327	240,787	1,974,753
TOTAL IMPORTS	896,552	825,560	858,281	838,343	960,303	1,040,798	771,673	1,129,594	1,156,522	910,905	869,918	1,002,101	11,260,550

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

When comparing the 2016 figures (Table 20) to the 2015 figures (Table 19), it appears that the year 2016 saw a slight downward trend for cargo imports through the port of Dar es Salaam. Total imports for 2016 amounted to 11,260,550 metric tons, compared to 11,899,012 for 2015.

Overall exports for the years 2015 and 2016 are illustrated in tables 21 and 22 below:

Table 21: Overall Exports – January to December 2015 (metric tons)

Country	15-Jan	15-Feb	15-Mar	15-Apr	15-May	15-Jun	15-Jul	15-Aug	15-Sep	15-Oct	15-Nov	15-Dec	Year 2015
<i>Discharged</i>													
Tanzania	120,697	124,258	96,620	99,032	88,499	121,480	133,657	104,541	146,918	120,488	93,860	114,734	1,364,784
DRC	47,899	42,345	38,944	45,191	29,728	41,015	64,996	48,356	50,269	41,198	32,987	38,094	521,022
Burundi	874	1,508	1,557	328	905	427	911	949	1,181	2,262	1,479	2,026	14,407
Rwanda	923	1,377	1,152	870	1,530	1,607	1,490	2,196	2,252	2,918	1,754	1,778	19,847
Uganda	201	80	107	48			131		84	18		34	669
Others	24,563	27,154	23,047	27,471	16,899	16,177	26,379	19,893	21,705	18,330	27,783	24,698	274,099
TOTAL EXPORTS	195,157	196,722	161,427	172,940	137,161	180,706	227,564	175,935	222,409	185,214	157,863	181,364	2,194,462

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

It is evident from the statistics displayed in Table 21 that there were slight fluctuations on a monthly basis during 2015.

Table 22: Overall Exports – January to December 2016 (metric tons)

Country	16-Jan	16-Feb	16-Mar	16-Apr	16-May	16-Jun	16-Jul	16-Aug	16-Sep	16-Oct	16-Nov	16-Dec	Year 2016
<i>Discharged</i>													
Tanzania	89,808	93,403	92,610	88,118	86,187	92,082	107,049	122,831	128,749	140,353	127,745	102,225	1,271,160
DRC	36,791	64,709	32,915	17,242	23,629	25,045	37,705	22,155	18,631	17,273	31,052	36,554	363,701
Burundi	2,511	1,506	1,970	912	954	558	1,074	3,157	1,584	1,354	1,980	1,814	19,374
Rwanda	1,639	1,215	1,962	1,132	1,816	2,116	1,818	1,937	2,740	1,718	2,098	2,157	22,348
Uganda	18	37	539	0	0	37	0	0	0	0	0	165	796
Others	32,266	24,227	35,211	27,712	21,751	50,931	26,915	27,242	25,776	31,565	28,968	29,301	361,865
TOTAL EXPORTS	163,033	185,097	165,207	135,116	134,337	170,769	174,561	177,322	177,480	192,263	191,843	172,216	2,039,244

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Overall exports illustrated the same tendency as overall imports between 2015 and 2016. Exports decreased slightly from 2,194,462 metric tons in 2015 to 2,039,244 metric tons in 2016.

Tables 23 and 24 provide a comparison between import and export volumes for the years 2015 and 2016:

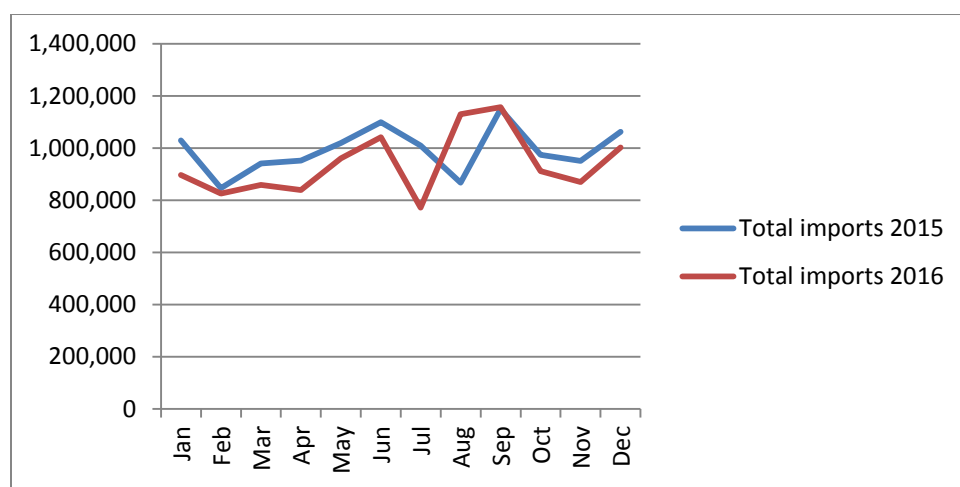
Table 23: Overall Import Comparison – January to December 2015 and 2016 (metric tons)

Months	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Total imports 2015	1,028,729	846,278	941,014	951,738	1,018,753	1,098,564	1,009,892	867,354	1,149,355	974,364	950,770	1,062,201	11,899,012
Total imports 2016	896,552	825,560	858,281	838,343	960,303	1,040,798	771,673	1,129,594	1,156,322	910,905	869,918	1,002,101	11,260,550

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Total import volumes decreased by 636,462 metric tons from 11,899,012 in 2015 to 11,260,550 in 2016. This trend represents a decline of 5, 4 %, as illustrated in Figure 7 below:

Figure 7: Overall Imports Comparison - January to December 2015 and 2016



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

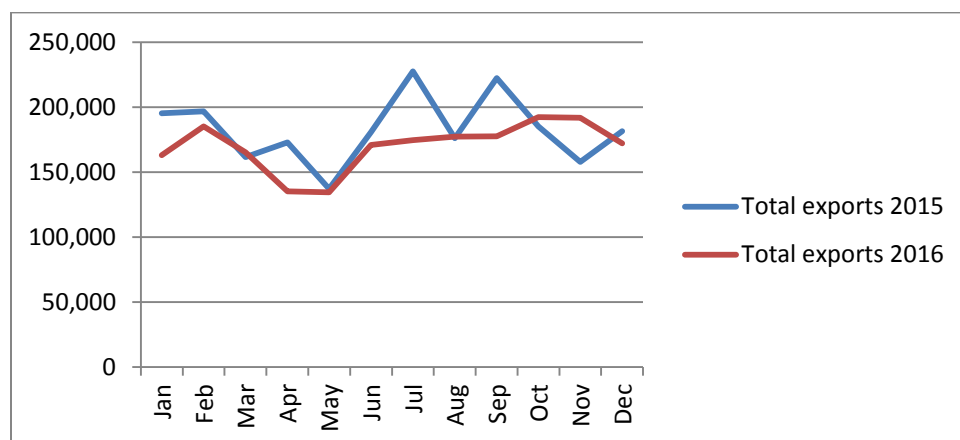
Table 24: Overall Export Comparison – January to December 2015 and 2016 (metric tons)

Months	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	TOTAL
Total exports 2015	195,157	196,722	161,427	172,940	137,161	180,706	227,564	175,935	222,409	185,214	157,863	181,364	2,194,462
Total exports 2016	163,033	185,097	165,207	135,116	134,337	170,769	174,561	177,322	177,480	192,263	191,843	172,216	2,039,244

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Overall exports declined by 7, 1% between 2015 and 2016 from 2,194,462 metric tons in 2015 to 2,039,244 metric tons in 2016. This decreasing trend is illustrated in Figure 8 below:

Figure 8: Overall Export Comparison – January to December 2015 and 2016



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

4.3.2.4 Efficiency and Productivity

The efficiency and productivity dimension are measured according to the following indicators:

- Weighbridge;
- Port dwell time;
- Tanzania Revenue Authority Release Time;
- Percentage of the origin for transit trucks versus other countries;
- Containerised vessel turnaround time;
- Truck turnaround time at Tanzania Port Authority; and
- Truck turnaround time and Tanzania International Container Terminal Services.

Each of the above indicators is discussed below:

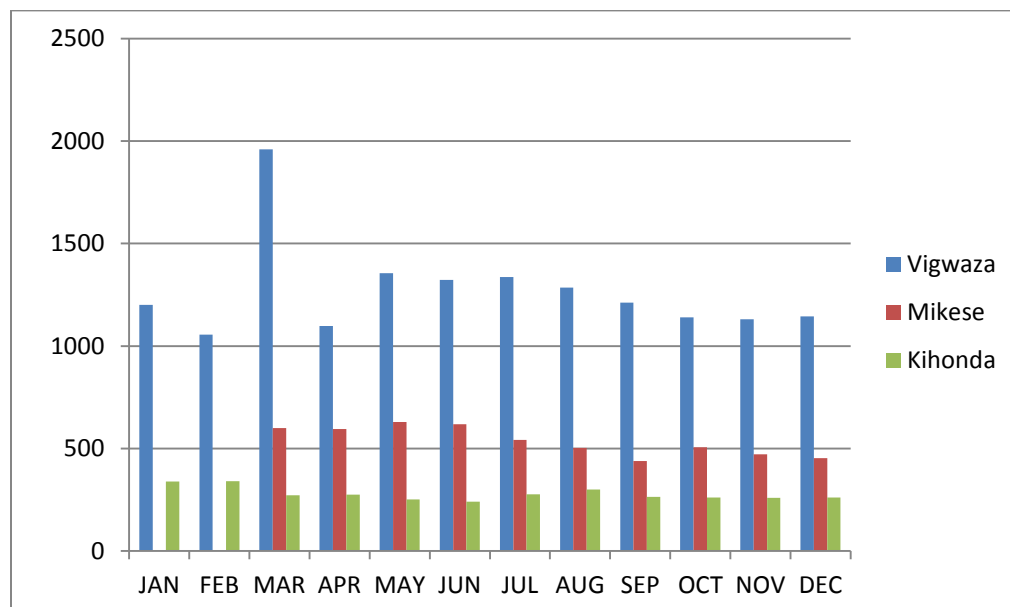
a) Weighbridge Indicators

The CCTO monitors the productivity and efficiency of weighbridges along the Central Corridor and the level of compliance at weighbridge stations. Weighbridges serve an important purpose along the Central Corridor insofar they protect roads from damage caused by overloading, thus enhancing road safety and enabling information gathering activities (traffic counts) that inform road expansion decisions.

➤ Weighbridge Traffic in Tanzania

This indicator measures the average number of trucks weighed per day at the various weighbridge stops in Tanzania. Figure 9 provides a twelve month summary of the average daily traffic weighed at the Vigwaza, Mikese and Kihonda weighbridges.

Figure 9: Weighbridge Daily Traffic 2016 – Tanzania Weighbridges



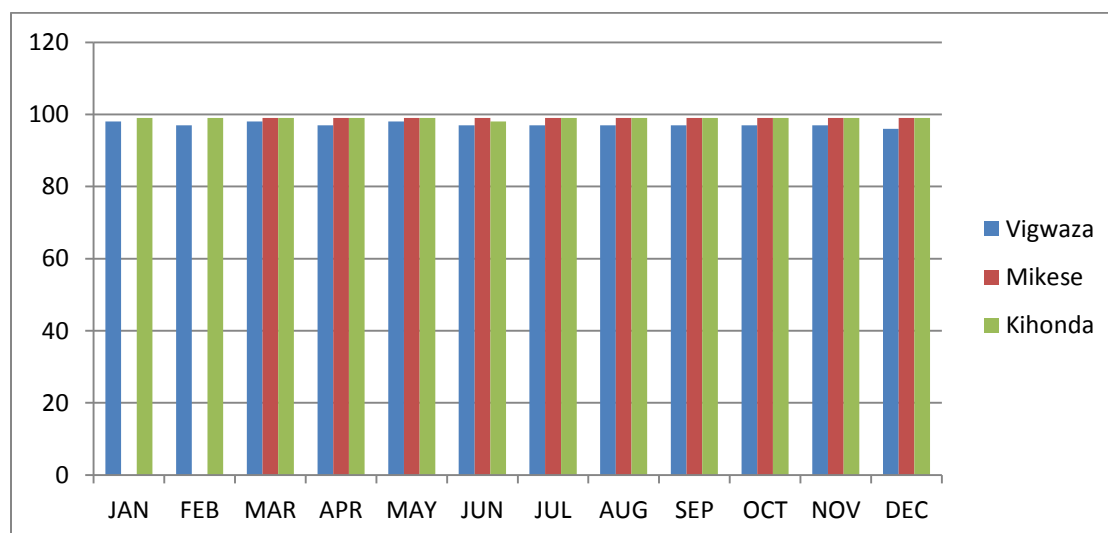
Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Figure 9 reveals fluctuations in the number of trucks weighed at all three weighbridge stops in Tanzania. The number of vehicles weighed at Mikese and Kihonda decreased slightly. This tendency is attributed to a decrease in cargo handled at the port of Dar es Salaam during 2016.

➤ *Weighbridge Compliance in Tanzania*

This indicator measures the percentage of trucks that comply with the gross vehicle weight and the axle load limits before and after re-distribution of cargo.

Figure 10: Weighbridge Compliance in Tanzania (%)



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Figure 10 shows that there is a high compliance by trucks at all three weighbridges. Compliance was consistent throughout the reporting period (January to December 2016).

b) Dwell Time Indicators

Dwell time refers to the total time spend by cargo at the port of Dar es Salaam from when the cargo was released from the vessel until it exits the port. The government of the United Republic of Tanzania has set in its programme “Big Results Now” a target duration of five days for customs and port procedures for containers in transit.

At the Dar es Salaam port there are two operations: the Tanzania Port Authority (TPA) and the Tanzania International Containers Terminal Services (TICTS).

➤ *Tanzania Port Authority Dwell Time*

Tanzania Port Authority dwell time indicators are generated from data collected from the TPA electronic system. Table 25 illustrates the average local container dwell time, measured in the number of days per container.

Table 25: Average Local Container Dwell Time (days per Container)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
2013	18.5	15.3	7.8	6.3	7.3	7.6	7	9.7	14.1	8.4	8.8	8.5	9.94
2014	10.5	9	6.5	7.8	8.8	8.1	3.1	9.9	8.7	7.8	4.2	8.5	7.74
2015	4.9	2.8	4	5.5	6.2	3.8	2.8	3.3	2.8	2.3	2.2	2.3	3.58
2016	2.3	2	6.3	4.2	1.3	1.6	1.9	2.7	2.4	4.6	8.5	7	3.73

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

The average dwell time for containers was 9.94 days in 2013, 7.74 days in 2014, 3.58 days in 2015 and 3.73 days in 2016. In terms of the “Big Result Target” of five days, the local dwell time target was attained for the years 2015 and 2016.

Table 26 illustrates the average dwell time for transit containers between 2013 and 2016.

Table 26: Average Dwell Time per Transit Container (days per container)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
2013	14.4	17.6	19.1	11.2	9.5	10.2	9.7	9.1	13	12.4	9.9	8.8	12.07
2014	14.8	14.2	17.3	11	15	9.5	7.8	12.6	10.1	11.3	9.5	7.6	11.72
2015	9.4	11.4	7.2	6	7	9.7	8.7	10.2	7.2	10.7	10.1	8.5	8.84
2016	12.8	10.6	4.1	3.8	8.9	7.6	9.2	10.3	10.6	8.4	11	8.5	8.82

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

From the data displayed in the above table it is evident that the average dwell time per transit container decreased steadily from 2013 to 2016, from 12.07 days in 2013 to 8.82 days in 2016. Despite the decreasing trend, the transit dwell time is still high compared to the Big Result Target of five days.

Table 27 displays the overall container dwell time for imports (local and transit containers) for the period 2013 to 2016.

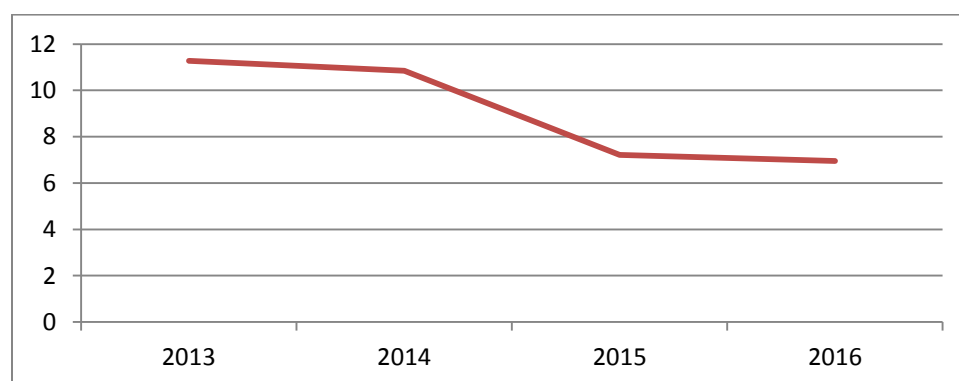
Table 27: Import Overall Container Dwell Time (days per container)

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
2013	14.9	12.9	17.9	10.6	9.2	8.9	8.3	9.4	13.2	11.9	9.4	8.6	11.27
2014	14.2	13.8	16	10.6	14.1	9.3	7.1	11.2	9.4	9.6	6.9	8	10.85
2015	7.1	7.1	5.6	5.7	5.2	6.7	5.8	6.8	5	10.8	10.9	9.9	7.21
2016	7.6	6.3	5.2	4	5.1	5.3	5.6	8	8.2	8.8	11.3	8	6.95

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

The overall container dwell time for imports has decreased from 11.27 days in 2013 to 6.95 days in 2016. However, the Big Results target of five days has not been reached. The decreasing trend is illustrated graphically in Figure 11.

Figure 11: Overall Container Dwell Time at Tanzania Ports Authority



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

➤ **Tanzania International Container Terminal Services**

Table 28 presents the average monthly local container dwell time in terms of days per container at the Dar es Salaam container terminal between 2008 and 2016.

Table 28: Average Monthly Local Container Dwell Time at Dar es Salaam Container Terminal

YEAR	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
2008	19	23	20	21	21	22	28	22	22	24	21	21	22
2009	17	16	18	21	25	22	19	19	16	15	15	11	17.83
2010	12	12	13	12	13	11	13	12	10	12	12	15	12.25
2011	13	11	10	10	9	7	8	7	7	7	8	9	8.83
2012	7	7	6	6	7	9	9	8	7	7	8	7	7.33
2013	8	7	6	6	7	7	6	6	6	6	7	5	6.41
2014	7	6	6	6	6	6	5	7	6	6	9	11	6.75
2015	8	6	6	6	7	6	4.7	4.5	4.6	5.5	4.2	5.3	5.65
2016	5.8	5.3	5.2	4.6	4.7	4.3	5.1	4.8	3.7	5.6	6.4	5.6	5.09

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

It is evident from Table 28 that the average container dwell time at the Dar es Salaam container terminal decreased significantly between 2008 and 2016, from an average of 22 days in 2008 to

just over five days in 2016. This reduction represents a cost saving to importers in terms of improved port efficiency.

Table 29 presents information on the average dwell time of transit containers at the Dar es Salaam container terminal between 2008 and 2016.

Table 29: Average Dwell Time Transit Containers at Dar es Salaam Container Terminal

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
2008	26.2	19.2	24.8	27.8	30.3	33.2	38.5	28.3	31.5	32.7	28	31.3	29.32
2009	26.2	19.2	24.8	27.8	30.7	23	21.2	26.3	15.3	13.5	17.5	13.8	21.61
2010	23.3	13.8	15.2	13.8	14.5	15.2	15.2	14	15.8	17.8	16.3	20.7	16.3
2011	20.2	16.7	15.5	14.7	16.3	16.5	17.7	19	19.8	19	14.2	16	17.13
2012	13.5	14.2	14.2	15.8	16.7	13.5	14.5	15.2	12.3	14.3	13.3	15.3	14.4
2013	18.3	20.2	17.5	18	16.3	13.2	13.7	12.3	11.7	10.5	13	14.7	14.95
2014	17.3	21.8	18	19	16.5	13.8	15.8	15.1	13	12.5	14.7	15.5	16.08
2015	17.2	17.7	15.5	17.7	19.5	15.3	11	11.3	10.9	8.7	11.4	11.1	13.94
2016	12.4	12.2	11.8	11.1	12.3	9.9	11.9	11.2	12.2	11.1	11.2	12	11.61

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

From the above Table it is evident that container dwell time for transit containers decreased steadily from an average of 29.32 days in 2008 to 11.61 days in 2016. However, the decrease is not as significant as it is for local containers.

Table 30 illustrates overall container average dwell time for local and transit containers between 2008 and 2016:

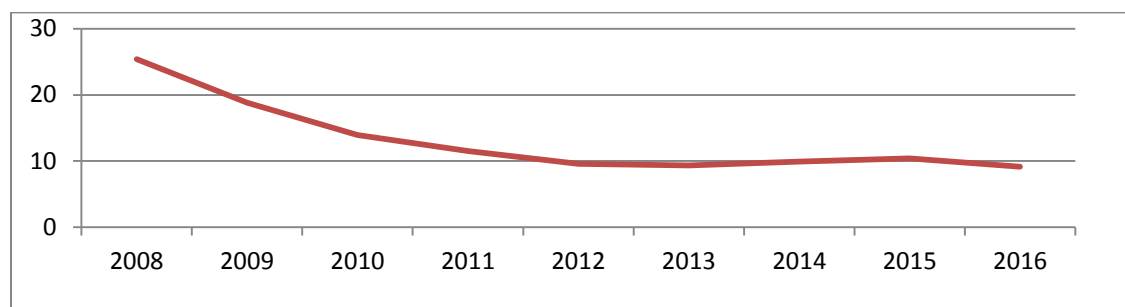
Table 30: Overall Container Average Dwell Time at the Dar es Salaam Container Terminal

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
2008	24	27	26	23	24	26	25	25	26	29	24	26	25.42
2009	20	17	21	25	25	22	18	19	16	15	15	13	18.83
2010	14	12	13	13	14	13	15	13	13	15	16	16	13.92
2011	15	13	11	11	12	10	10	11	11	11	11	12	11.5
2012	9	10	8	10	10	11	11	9	9	10	9	9	9.58
2013	12	11	9	10	11	8	8	8	8	8	10	9	9.33
2014	11	11	10	11	10	9	10	10	9	8	9	11	9.92
2015	12	11	11	10	12	10	8.4	10.3	9.9	9.5	10.3	10.3	10.39
2016	7.9	7.2	7.5	7.2	7	9.1	11.1	9.7	11	10.3	10.5	11	9.13

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

The average overall container dwell time decreased by 64% from 25.42 days in 2008 to 9.13 days in 2016. The decreasing trend is depicted in Figure 12 below:

Figure 12: Overall Container Average Dwell Time at Dar es Salaam Container Terminal



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

c) Tanzania Revenue Authority Release Time

This indicator measures the average time that elapses from when the declaration is made by Clearing and Forwarding Agents until the release order is issued by Customs for transit cargo declarations. It therefore measures the average time difference in hours between release time and declaration time, as illustrated in Table 31 below:

Table 31: Tanzania Revenue Authority Release Time (hours)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
2015	51.2	52.9	50.5	50.2	51.6	51.2	51.1	50.8	50.3	50.1	49.7	49.6	50.777
2016	55.14	52.4	48.46	50.98	53.48	55.92	57.64	59.6	62.53	65.25	66.71	67.85	57.997

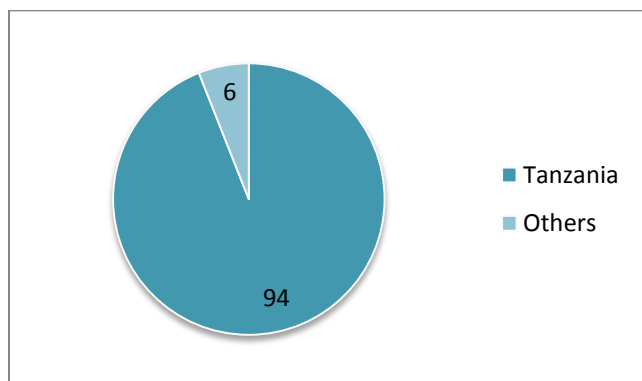
Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Table 31 illustrates an increasing trend in revenue authority release time from April to December 2016, compared to 2015. This alarming trend calls for a survey to observe the real cause(s) in order to expedite improvements.

d) Percentage of the Origin for Transit Trucks versus other Countries

This indicator shows the percentage of Tanzania registered transit trucks against registered trucks from other countries that are carrying cargo from the port of Dar es Salaam. Figure 13 illustrates the percentage split.

Figure 13: Percentage of Tanzania Transit Trucks versus Other Countries



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Figure 13 clearly illustrates that Tanzania transit trucks are dominating the transport market for cargo transported from the port of Dar es Salaam.

e) Containerised Vessel Turnaround Time

Vessel turnaround time is the total time spent by a ship at the port, measured from an average time difference per month from when a ship is off-berth, measured in hours per ship by the TPA.

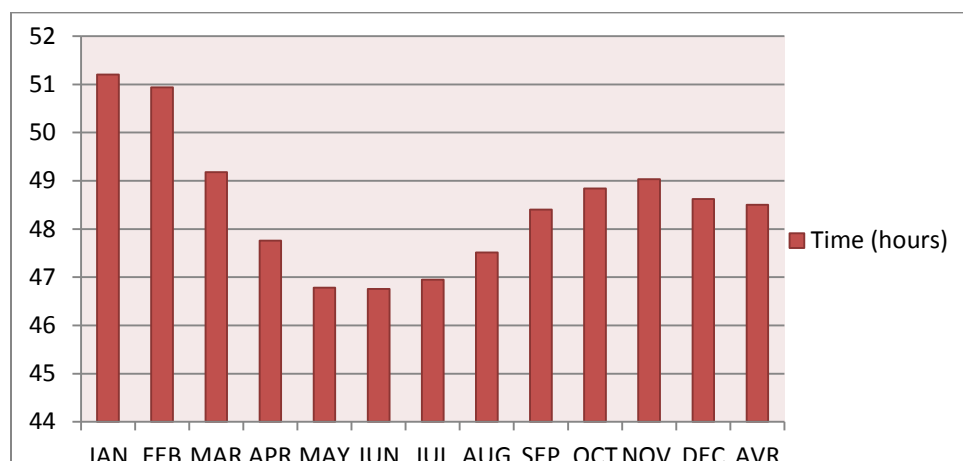
The components of ship turnaround time include aspects such as ship waiting time and berthing and un-berthing time. The waiting time is normally a small proportion of the turnaround time. When berth time is reduced, it can substantially reduce ship turnaround time and reduce shipping costs. The berth time depends on the quantity of cargo a vessel has to load or discharge, the type and characteristics of the vessel, the type of port equipment and other resources used at the port. Table 32 reveals the ship turnaround time for the twelve months of 2016, whereas Figure 14 depicts the containerised vessel turnaround time graphically.

Table 32: Containerised Vessel Turnaround Time (hours)

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Time (hours)	51.2	50.94	49.18	47.76	46.78	46.76	46.95	47.51	48.4	48.84	49.03	48.62	48.5

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Figure 14: Containerised Vessel Turnaround Time - 2016



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

As evident from Table 32 and Figure 14, containerised vessel turnaround time decreased from February until June, where after it increased steadily. The average ship turnaround time in 2016 was 48.5 hours.

f) Truck Turnaround Time at Tanzania Port Authority

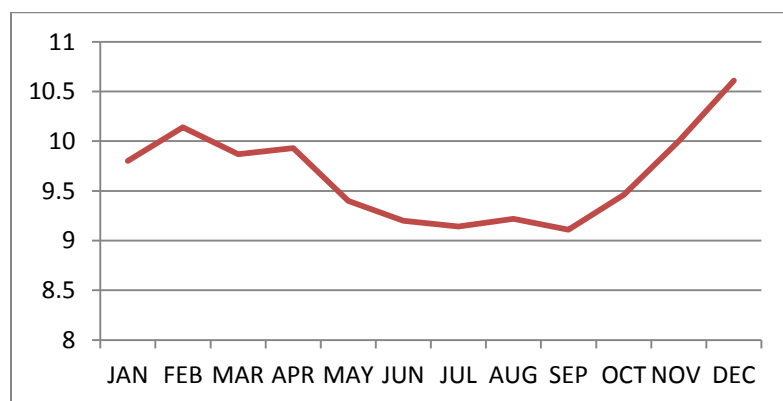
Truck turnaround time is measured from the average time different between the Truck INDate and Truck OUTDate. Table 33 illustrates the monthly truck turnaround time at the Dar es Salaam port for 2016, whereas figure 15 depicts the figures graphically.

Table 33: Monthly Truck Turnaround Time – 2016

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVR
Time (hours)	9.8	10.14	9.87	9.93	9.4	9.2	9.14	9.22	9.11	9.46	10	10.61	9.66

Source: Central Corridor Transit Transport Facilitations Agency. April 2017

Figure 15: Truck Turnaround Time at Tanzania Port Authority (hours)



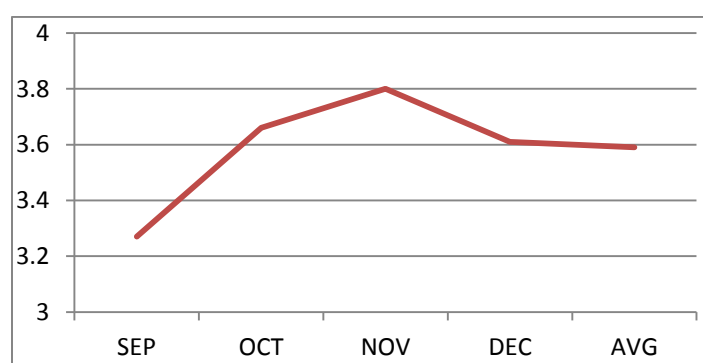
Source: Central Corridor Transit Transport Facilitations Agency. April 2017

As depicted in Figure 15, the average truck turnaround time varied between the months of January and December, with the lowest turnaround time obtained during the month of September. The average truck turnaround time was 9, 66 hours.

g) Truck Turnaround Time at Tanzania International Container Terminal Services

This indicator refers to the average time taken in hours for truck turnaround at the Tanzania International Container Terminal Services, measures from the average time difference between Truck Gate Out date and Truck Gate In date. Figure 16 depicts the truck turnaround time at Tanzania International Container Terminal Services for the months of September, October, November and December 2016.

Figure 16: Truck Turnaround Time at Tanzania International Container Terminal Services (hours)



Source: Central Corridor Transit Transport Facilitations Agency. April 2017

As depicted in the graph above, there was an increase in truck turnaround time from September to November 2016, where after the turnaround time decreased due to improvements at Tanzania International Container Services.

4.3.4 Central Corridor Route Surveys

In addition to computerised statistics provided by the on-line electronic platform (Central Corridor transport observatory), route surveys are conducted along the Central Corridor from time to time to complete and validate electronic and questionnaire reports. The objective(s) of the route survey is to:

- Identify areas/ points along the Corridor where infrastructure deficiencies exist;
- Identify the cause of delays along the Corridor to come up with actions to address recurring delays;
- Identify challenges faced by users and regulators along the Corridor and opportunities available to address such challenges;
- Disseminate information and sensitise stakeholders about new developments along the Central Corridor; and
- Promote collaboration among public and private sector stakeholders to address their day to day operation challenges at the various nodes along the Central Corridor.

Route surveys are conducted at various locations along the Central Corridor (e.g. weighbridges, parking spaces, police checkpoints & border posts) and provide valuable information pertaining to the status of the road network and inland ports, OSBP operations and safety and security along the entire corridor.

Primary and secondary data collection methods are applied to conduct route surveys. Primary data collection is conducted on the ground by a team that assesses the condition of the road network from the port of Dar es Salaam through the various border posts. Individual and focus group discussions are also conducted at different nodes along the corridor with various role-players (e.g. drivers, highway authorities, weighbridge operators, customs officers, police, immigration and border managers).

As far as secondary data collection is concerned, a dedicated team analyses previous route survey reports to update information on issues resolved. The team also analyses data obtained from drivers through GPS kits to validate the number of reported issues and conduct discussions and engagements with local authorities along the route to build long-working relationship with them.

Route surveys were conducted along the Central Corridor during June and October 2015 to complete and validate electronic and questionnaire reports. The findings that were presented to the Central Corridor Board of Directors and the Interstate Council of Ministers meetings, resulted in the following resolutions:

- Limit the weighing of transit trucks to three weighbridges instead of eight;
- Rehabilitate the Central Corridor roads that are in a poor condition;
- Reduce visa cost and validity for Tanzania transporters entering the DRC; and
- Conduct complete route surveys covering the entire route along the Central Corridor on an annual basis.

4.3.5 Lessons Learned

An assessment of the performance of the Central corridor revealed a number of positive results, which include:

- ✓ Reduction in the weighbridge stops for transit vehicles, with resultant time savings for cross-border operators;
- ✓ Consolidation of law enforcement inspections along the corridor as witnessed in the construction of OSIS at Vigwaza, Manyoni and Nyakanazi;
- ✓ High level of operator compliance along the entire corridor;
- ✓ Significant decrease in border crossing time at OSBP; and
- ✓ Massive reduction in cargo dwell time at the port of Dar es Salaam from 22 days in 2008 to less than seven days in 2016.

These positive trends triggered massive investments, notably the Dar es Salaam port modernisation programme. Despite the improvements listed above, total transit time from the port to the respective EAC MS increased between 2015 and 2016. The reason for this tendency lies in the fact that all the weak links along the Central Corridor have not been addressed over

the period under review. The implementation of speed restrictions along the Tanzanian section of the Central Corridor, slower release time by the TRA and an increase in the number of personal stops by drivers of transit vehicles reduced the overall impact of other implemented reforms (e.g. OSBP) and requires intervention by corridor role-players to improve the competitiveness of the corridor.

Moving forward, it is imperative that corridor performance monitoring be extended to the other RECs that form part of the Tripartite. The COMESA and SADC do not currently utilise online electronic platforms (transport observatories) to monitor traffic flows along transport corridors stretching through their territories.

Against this background, the importance of transport observatories becomes apparent. Support for this initiative is noted in a current programme that seeks to develop a web-based corridor performance monitoring system for the eastern and southern regions. More information on this programme is presented in Section 4.4.

4.4 Development of a Corridor Performance Monitoring System for Eastern and Southern Africa

A new initiative unfolding in the eastern and southern African regions is the development of a web-based corridor performance monitoring system. This system provides a list of indicators for measuring border crossing and route trucking time for several corridors in the eastern and southern African regions.

Upon completion, the web-based performance monitoring system will map bottlenecks and identify areas that need improvement along key transport corridors. Progress towards establishing an online monitoring system is noted in the appointment of a consultant and the allocation of funding for the first year of the project by the World Bank.

4.4.1 Corridor Geo Zones and Routes

The web-based corridor performance monitoring system monitors the performance of a various points of interest along prioritised transport corridors in the Eastern and Southern African regions, as displayed in Table 34. Data to enable the development of this initiative has been provided by cross-border transporters and leading tracking companies who all share the vision of leveraging GPS data to provide insights into truck movements on key transport corridors.

Table 34: Corridor Geo Zones and Routes

Category	Locations
<i>Seaports</i>	Cape Town, Port Elizabeth, Durban, Coega, Maputo, Walvis Bay, Nacala, Beira, Nacala, Port Elizabeth, Mombassa, Luderitz & Dar es Salaam
<i>Inland Border Posts</i>	Kasungula, Ressano Garcia, Beitbridge, Chirundu, Kasumbelesa, Nakonde/Tunduma, Martin’s Drift/Groblersburg, Trans Kalahari/Mamuno, Kopfontein, Vic Falls/Livingstone, Nyampanda/Cuchamano Forbes, Machipanda/Magabi, Kacherbere Busia/Malaba, Gatuna/ Katuna, Kagitumba/Mirmar, Oshoek/Maseru, Ladybrand/Vioolsdrift, Noordoewer, Bwera/Kasindi, Ishahsa, Bunugana, Cyangugu, Thornwood/Milange

Dry ports	Magerwa, City Deep
Inland ports	Bujumbura, Kigoma & Mpulungu
Economic areas	Kigali, Bujumbura, Kampala, Lilongwe, Blantyre, Windhoek, Maseru, Mbabane, Gaborone, Gauteng, Copperbelt DRC, Copperbelt Zambia, Harare, Lusaka, Nairobi

Source: <https://www.corridorperformancemonitoringsystem.com/geozone-route-catalogue>

4.4.2 Web-based Reports

Although still under development, the online monitoring tool produces monthly dashboards that provide valuable corridor and border information for the following corridors:

- Beira and Nacala;
- Central;
- Dar es Salaam;
- Lesotho and Swaziland;
- Malawi;
- Maputo;
- Northern; and
- Walvis Bay corridor(s).

Dashboards provide information on four corridor categories. Given the fact that the online monitoring tool is still under development, statistics displayed in some of the dashboards (e.g. border crossing time) are indicative, and do not capture actual results. This is due to the low number of observations per month.

The web-based corridor performance monitoring system can be accessed at <https://www.corridorperformancemonitoringsystem.com>. The reader is advised to log onto the website to observe the information produced by the dashboards that provide information on:

a) Borders with Border Arrival

This dashboard contains border information for the various land borders located along the prioritised corridors. From the dashboards it is possible to compare borders with one another and to obtain an understanding of the distribution of border times. A distinction is made between import, transit and unknown traffic.

b) Routes with Speed

This dashboard contains route information along prioritised corridors. It indicates the segments of the route travelled and segment type (e.g. economic area, border post). Dashboards can be filtered by direction, particular month or route.

c) Border Activity

The dashboard contains a breakdown of activity and travel times within the border precinct of thirty border posts along the selected corridors. Dashboards can be filtered by border, month, direction and import transit.

d) Economic Areas

This dashboard distinguishes between twenty eight zones. The zone categories include economic activity, major city, port city and facilities. The dash board can also be filtered by direction, month, inland border or zone type.

4.5 Conclusion

The countries that comprise the Tripartite face various infrastructure impediments that undermine their ability to trade with each other, and threaten the establishment of a free trade area within the anticipated time frames. Infrastructure impediments can only be addressed if they can be measured.

Corridor performance monitoring is regarded as a pre-requisite to increasing corridor efficiency. Success depends on the availability of accurate and specific data on those components of transport corridors that are not working well to influence policy makers to adopt interventions that will bring about improvement.

Within the Tripartite, the EAC has taken the lead in improving corridor performance monitoring through the development and launch of online monitoring tools (the Central and Northern Corridor transport observatories). These tools measure the behaviour and performance of the Central and Northern corridors according to a set of corridor performance indicators.

A case study review of the performance of the Central Corridor, based on real-time data extracted from the Central Corridor Transport Observatory, revealed positive results which include a reduction in port dwell time at the port of Dar es Salaam and a significant reduction in border crossing time at OSBPs.

Decision-making bodies are currently attending to the areas that need improvement (e.g. speed restrictions along certain sections of the road network) to develop and implement policies that will optimise the performance of the Central Corridor.

Acknowledging the notion that states *“if you cannot measure it, you cannot improve it”* it is imperative that the other Tripartite RECs (COMESA and SADC) build on the success of the EAC by developing and implementing online monitoring tools (transport observatories) that measure the performance of key corridors in their regions.

5. MOVING FORWARD: IMPROVING CORRIDOR EFFICIENCY IN THE TRIPARTITE

5.1 Introduction

Earlier chapters of this report pointed to the existence of many challenges in key corridors in the Tripartite that undermine seamless traffic flows within the Tripartite. There are a number of reforms that were approved at continental, Tripartite and REC levels to address trade and transport challenges. Unfortunately, evidence of the impact of reforms remains limited, outside of a few examples. Various reasons are cited for the limited progress with respect to implementation of reforms and they include the following:

- Poor level of implementation of agreed initiatives;
- Lack of reliable data on the performance of corridors;
- Non-alignment of national legislative frameworks to regional and continental initiatives;
- Multiple memberships to various RECs;
- Funding and human resource constraints; and
- Absence of strong institutional support at REC and continental level to enforce the implementation of approved initiatives.

Taking cognisance of the above challenges, this Report proposes a number of reforms that seek to address, or at least minimise the impact of the hard and soft infrastructure inadequacy and / or inefficiencies along corridors that transverse the EAC-COMESA-SADC Tripartite. For the purposes of this discussion, the reforms are categorised under existing reforms (e.g. on-going reforms that are in various stages of implementation) and new reforms that are recommended for implementation in the Tripartite.

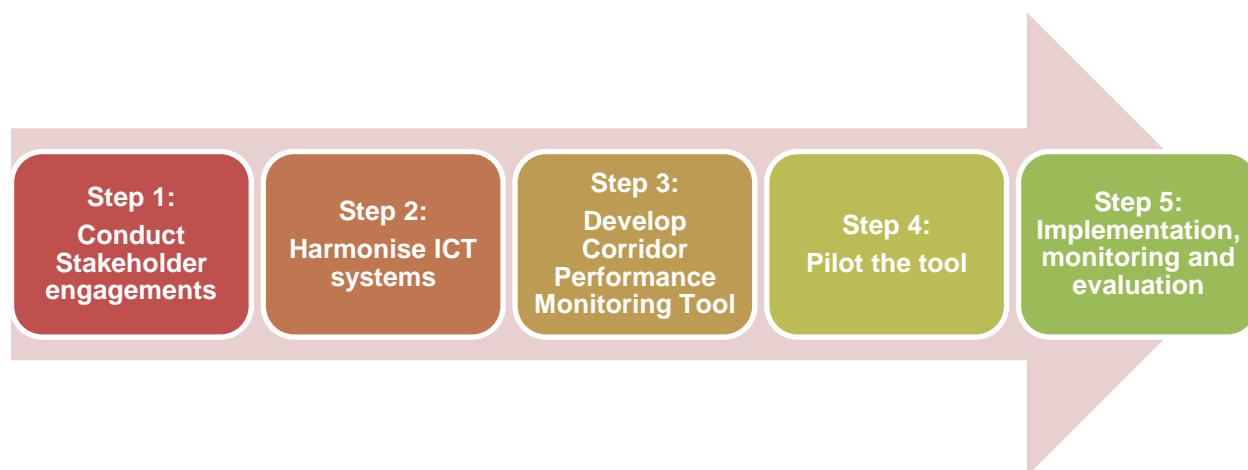
5.2 Existing Reforms

5.2.1 Establish Corridor Performance Monitoring System for the Tripartite

Real-time information on traffic flows in the Tripartite is not readily available. In the absence of reliable corridor data, decision-making authorities are often bound to base decisions on proposals that are not supported by facts.

This reform supports the implementation of an initiative currently unfolding in the Tripartite that seeks to develop a comprehensive web-based corridor performance monitoring system for the Tripartite to measure corridor performance according to a list of KPIs, thereby providing a clear picture of the efficiency of prioritised transport corridors. Figure 17 encapsulates the steps associated with operationalising this reform:

Figure 17: Steps associated with implementing a Corridor Performance Monitoring Tool



Source: Figure created for study

The importance of stakeholder engagements in implementing this initiative cannot be over-emphasised (step 1). Corridor performance can only be improved if it can be measured. Since transport corridors traverse through various countries, cooperation between all corridor role-players (public and private sectors) is needed to share information and to obtain political buy in for operationalising this reform.

The EAC has taken the lead in developing and implementing transport observatories for the Northern and Central Transport Corridors. Participation from the EAC representatives in stakeholder platforms to share their success stories and challenges will go a long way towards obtaining political buy-in for this initiative.

Step 2 entails harmonising ICT systems and procedures to enable the sharing of corridor information (e.g. traffic flows) that will serve as input data into developing a web-based corridor performance monitoring system. Experience has shown that efforts to harmonise ICT systems is challenging and costly since ICT capacity varies from one MS to the next. This once again emphasises the importance of stakeholder engagements in reaching agreement on the type of ICT software / systems that will be used to exchange corridor information.

A lot of work has already been done into developing a web-based corridor performance monitoring system for the eastern and southern African regions (step 3). Although funding has been secured for the first year of the project, additional funds are needed to enable the SP to fully develop the on-line performance monitoring tool, where after it will be piloted and refined.

Step 4 entails piloting the online monitoring tool along selected transport corridors on a regular basis to test for system failures and to improve/ update the online tool. Once the tool has been updated, it will be implemented to measure corridor performance in the Tripartite region. Monitoring (step 5) will be conducted to ensure continuous improvement of the tool and also to utilise information obtained from the tool.

The implementation of this reform across the Tripartite region will address the following challenges:

- Lack of reliable data on cross border traffic flows;
- Slow pace in which impediments along transport corridors are detected and addressed; and
- High cost of doing business owing to inefficiencies in the cross-border value chain.

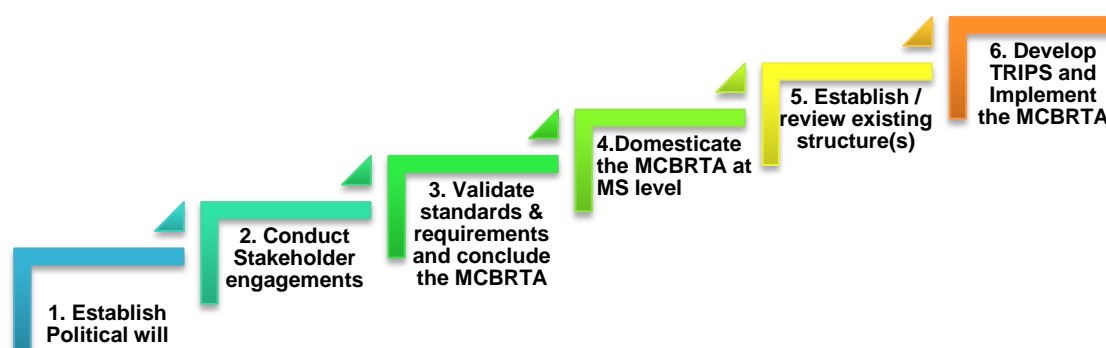
5.2.2 Implement Quality Regulation

The Tripartite is currently pursuing a reform that entails implementing a single MCBRTA within the region that will require signatory MS to migrate from quantity to quality regulation. This new approach differs from the current approach in the Tripartite, where regulatory instruments are anchored on and aimed at achieving the objectives of quantity regulation; i.e. controlling the “supply side” of transport services through cross-border road transport permits.

Acknowledging the fact that the Tripartite consists of three RECs and twenty six member countries, a number of challenges may prevent the timeous roll-out of this initiative. Establishing political will amongst all MS is critical since continued support, cooperation and actioning are required from all member countries throughout the reform execution process.

Since this initiative is on-going, a lot of ground work has already been covered and significant progress is noted. Figure 18 illustrates key actions that should be performed to ensure the timeous implementation of the MCBRTA.

Figure 18: Implement the Multilateral Cross-Border Road Transport Agreement



Source: Figure created for study based on the Draft MCBRTA

From Figure 18, it's evident that political will is key and should be established amongst all Tripartite countries to move them from ratifying the MCBRTA to implementation (step 1). Meanwhile, stakeholder engagements are equally important (step 2) as the final approval and implementation of the MCBRTA depends on agreement on the scope of the MCBRTA and associated standards.

Once political will is obtained, MS should validate and adopt standards and requirements in respect of quality regulation before they can conclude and domesticate the MCBRTA. This will require that MS review their respective institutional structures, policies, legislations and regulations to incorporate recommended regional standards into domestic legislation (steps 3 and 4).

Meanwhile, a regional structure will be tasked to coordinate the implementation of the MCBRTA, whereas regulatory institutions at MS level will handle operator registration and manage the TRIPS system. These institutions should be equipped with appropriate staffing, facilities and budget to fulfil their functions effectively (step 5).

The development and implementation of TRIPS that captures information on cross-border operators, drivers and fleet is a key to success since the MCBRTA depends on the availability of real-time data to monitor operator conduct in the Tripartite. Although the guidelines for TRIPS have been designed, they have not yet been approved by all countries. Objecting parties do not favour the development and implementation of a single electronic cross-border transport information platform. Instead, they feel that each MS should develop their own system that is aligned to the TRIPS guidelines. The development and approval of TRIPS is a pre-requisite to implementing the MCBRTA that will introduce quality regulation in the Tripartite.

The C-BRTA, in consultation with many regional regulatory authorities, is currently championing the development of the Operator Compliance Accreditation Scheme (OCAS) that will operationalise the MCBRTA in the region. OCAS seeks to redefine regulatory processes, procedures and practices that will enable MS to harmoniously domesticate the MCBRTA. Thus, OCAS is aligned to the MCBRTA reform in so far as it seeks to achieve re-engineering of regulatory processes, procedures, standards and practices at MS level.

The implementation of Quality Regulation seeks to address the following challenges:

- Fragmented regulatory frameworks and variability in regulatory requirements, standards and practices between Tripartite MS;
- Market access restrictions owing to the need for cross-border road transport permits before operators can conduct cross-border operations;
- Generally low quality transport services rendered, owing to weaknesses in the quantity regulatory regime that compromises the extent to which road transport supports cross-border trade in the region;
- Too many (official and unofficial) road blocks and inspection points that increases journey times and reduces productive times; and
- Corrupt practices along many regional road transport corridors.

5.2.3 Implementation of One Stop Border Posts

Inland border posts are viewed as major stumbling blocks to the unimpeded flow of traffic in the Tripartite. Given the fact that border posts deter instead of facilitate the seamless movement of traffic across border posts, all three Tripartite RECs support the OSBP initiative as a solution to enhance seamless cross-border road transport movements, intra-Africa trade and connectivity to markets, thus improving competitiveness if the region.

Currently, more than eighty OSBPs on the continents are now at the planning or implementation stage. With the exception of the EAC where construction work to ten OSBPs was completed during 2016 (Trademark East Africa 2017) progress towards constructing OSBPs in the SADC and the COMESA has been slow, with only one border (Chirundu) currently functioning as an OSBP. Although the construction of OSBP facilities was completed at the Lebombo / Ressano Garcia border, this border has not yet been transformed into an OSBP and does not function as an OSBP.

Figure 19 illustrates the steps that should be taken to expedite the operationalisation of prioritised OSBP projects in the Tripartite:

Figure 19: Implement OSBPs



Source: Figure created for study

Step 1 in the process is to conduct stakeholder engagements to provide a solid platform for planning and the establishment and / or strengthening of political will for the implementation of this reform. Under international law, it is generally agreed that the application of national laws is limited to the territory of a country. As a consequence, OSBPs rely on the principle of extra-territorial application of laws, which allows a country to extend the application of specific national laws outside of its own territory.

The implementation of OSBPs therefore requires a detailed analysis of the legislative, regulatory and institutional frameworks governing the operations of border agencies. Numerous agencies are involved in border operations. These agencies need to operate in a coordinated manner to minimise duplications. The appointment of a lead management agency will assist the process of coordinating OSBP preparatory activities and post-implementation coordination. However, the choice of a lead agency by any MS should purely be based on national considerations.

The legal and regulatory review (step 2) should culminate in the conclusion of bilateral agreements between neighbouring countries in which the parameters of establishing OSBPs are spelled out. It also required that such arrangement be entrenched in the domestic laws of each country by way of an appropriate Act of Parliament with an overriding effect over all border control legislation as to give legal effect to the provisions of the MoU and the principles of extra territoriality and hosting arrangements.

Step 3 involves the establishment of a joint technical working group, comprising technical officials of both member states. The composition of this working group should comprise of representatives of all the border agencies operating at the border. The decision of which agencies should be at the borders should be taken early in the OSBP process. Chairing of the technical working group and hosting of meetings should be conducted on a rotational basis between the two MS. The joint technical working groups should also lead the process of conducting a business case review of proposed OSBP to determine the economic viability of the proposed OSBP, largely through an assessment of the estimated costs and benefits of proposed OSBPs.

The OSBP initiative goes hand in hand with the establishment of collaborative single window systems (step 4). In moving towards single window systems, border crossing procedures should firstly be simplified and harmonised to enable the electronic capturing and sharing of information amongst border agencies. ICT therefore serves as a critical component of collaborative single window systems. Increases in the number of travellers and cargo volumes through border posts require a strategic balance between border controls and facilitation.

ICT allows for the efficient use of limited resources to manage borders by facilitating intra-inter connectivity of agencies for implementing responsible risk management systems and for understanding mobility and trade patterns.

A baseline survey should be carried out for every border that is to be transformed into an OSBP (step 5). The purpose of this survey is to assess the situation prevailing at both sides of the border that are to be merged into an OSBP before any activities commence. Information that should be collected includes traffic flows through the border, disaggregated as much as possible (e.g. passenger vehicles, small buses, medium buses, taxis, container carriers, break-bulk vehicles and tankers) and average time taken to clear the borders for each class of vehicle. This information should be used to project traffic flows over the long-term (10 to 20 years) and design the OSBP so that it is able to accommodate increases in traffic flows.

Further to addressing soft infrastructure components, OSBP facilities such as offices for border officials, equipment, warehouses and parking need to be designed and constructed / expanded to facilitate seamless traffic movements through OSBPs (step 6). Once funding has been secured for construction, TOR drafted and SPs appointed, the actual construction of OSBPs will commence. While all border posts require physical facilities for border operations, the level of facilities required depends on the type and size of operations at a border post. Once all 6 steps have been attended to the border post should be transformed into an OSBP.

The implementation of OSBPs will address the following challenges:

- Inefficient border management systems associated with long and sometimes manual paper intensive border crossing processes which culminate in delays and lengthy transit times;
- Variability in inter-border Information Communication Technology (ICT) and Customs Data systems that either delay or limit direct exchange of information between regulatory authorities on either side of the border;
- Slow and un-integrated immigration procedures between member states, and
- High cost of doing business owing to inefficiencies in the cross-border value chain that culminates in delays and long transit times.

5.3 New Reforms

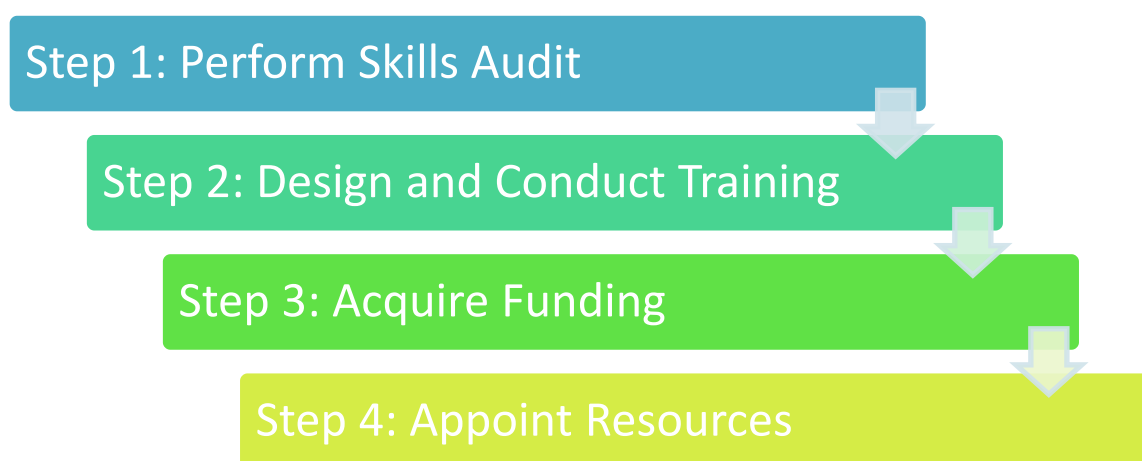
5.3.1 Addressing Skills Gaps and Strengthen Institutional Capacity

Although a number of trade and transport facilitation reforms have been approved by the EAC-COMESA-SADC RECs to stimulate economic growth and development within the region, limited progress is noted in the implementation of prioritised reforms. A lack of skilled resources in public transport institutions (at both regional and national level) is cited as a main reason for limited progress made towards implementing Tripartite reforms.

It is therefore recommended that MS pursue strengthening institutional capacity at national (member state) and regional (Tripartite) level through eliminating the existing skills gap with the aim of creating a technical and appropriate knowledge base that is capable of implementing prioritised

The steps associated with operationalising this reform are indicated in Figure 20 below.

Figure 20: Steps associated with Addressing the Skills Gap



Source: Figure created for study

Step 1 entails that public sector institutions (e.g. Ministries of Transport) conduct skills audits to measure and record the skills of individual employees and / or selected groups. The main purpose of this exercise is to identify the skills and knowledge that public sector institutions require, as well as the skills and knowledge that they currently have. As part of the skills audit a training needs analysis should be performed to identify the employees in need of development, as well as the area(s) where improvement is needed.

This will inform the development of tailor-made training and development programmes for under-performing employees to improve their technical capabilities (step 2). In the case of skills that require a tertiary education such as engineering and accounting, governments need to adopt a long-term vision that begins with engagement with the Department of Basic Education or its equivalent to ensure that learners acquire the necessary skills (e.g. mathematics) to later be in a position to qualify for the requisite tertiary education programmes.

The same process should be followed at regional level (e.g. REC Secretariats & Tripartite Coordination Mechanism and Coordination unit) to ensure that these bodies are equipped with appropriate staff to oversee the implementation of Tripartite reforms and to improve inter country / regional dialogue. This is especially true for the Tripartite Coordination unit within the SADC Secretariat that has been tasked to drive the implementation of the TTTFP.

Steps 3 and 4 revolve around acquiring sufficient funding to develop tailor-made training programmes for public sector servants to eliminate the skills gap and to employ and retain technical expertise in public sector institutions to fast track the implementation of trade and transport facilitation programmes.

The implementation of this reform will address the following challenges:

- Inadequate resource mobilisation at public sector institutions;
- Skills shortages in public sector institutions; and
- Poor delivery on national and regional commitments.

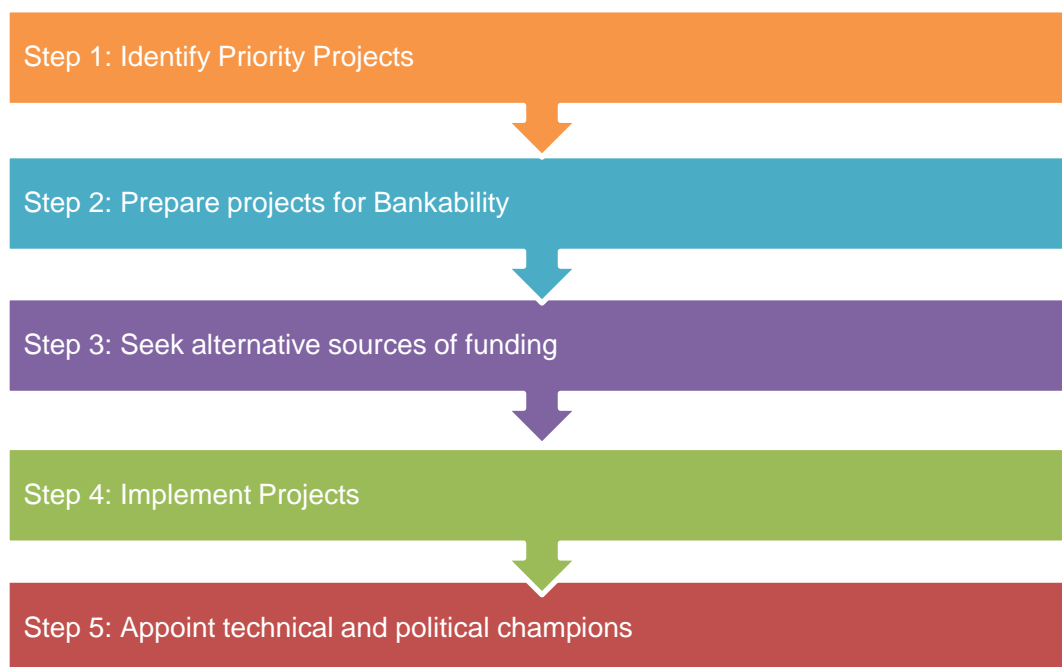
5.3.2 Obtain Alternative Sources of Funding for Infrastructure Development

Inadequate transport infrastructure is a critical obstacle to seamless cross-border road transport movements and undermines the competitiveness of African products in world markets. In Africa, infrastructure inefficiencies contribute to high transportation costs estimated to be two or three times higher than in developed countries. (<https://www.tralac.org/news/article/10347-a-growing-logistics-industry-in-africa-represents-opportunities-for-middle-east-investors-and-experienced-developers.html>).

In order to bring about improvement, significant investment in transport infrastructure is required to address the major transport infrastructure deficit on the African continent. Meanwhile, public sector financing of infrastructure continues to face challenges owing to fiscal limitations and competing needs from other socio-economic sectors.

In order to address this gap, this reform advocates for securing alternative sources of funding to implement regional infrastructure projects / programmes. The steps associated with operationalising this reform is illustrated in Figure 21 below.

Figure 21: Alternative Sources of Funding for Infrastructure Development



Source: Figure created for study

A number of strategic projects (e.g. TTTFP & MCBRTA) have already been identified and approved at Tripartite level to address hard and soft transport challenges that undermine the seamless flow of traffic between the twenty six Tripartite countries.

All prioritised projects should be properly assessed, evaluated and packaged, meaning that they should undergo detailed feasibility analysis to ensure they are economically viable and bankable (step 2). This underpins the importance of sustainable funding frameworks. All MS develop and implement sustainable funding frameworks and structure them in such a way that they are able to attract private investments.

Once the project preparation process has been completed, funding should be obtained to move from the planning to the implementation phase. During this stage, the feasibility of prioritised projects needs to be proven and the project contractual structure must be in place. The Tripartite Trust Account (TTA), a grand-funded account, held by the DBSA, was established to assist with the funding of infrastructure programmes.

The TTA is used to leverage other monies, including grants and concessionary and commercial loans to finance key infrastructure projects. Given the current infrastructure deficit, it is likely that the private sector will play a more prominent role in funding continental and regional infrastructure programme in future inter alia, through concessions, leases and PPPs.

Once funding has been secured, ToR drafted and Service Providers (SP) appointed, the actual construction of projects will commence. Technical and political champions should be appointed at MS level to scope and champion projects at political level and fast-track progress.

The implementation of this reform will address the following challenges:

- Poorly maintained road networks due to insufficient funding attributed to road construction and maintenance;
- Delayed implementation of transport programmes at regional and MS level; and
- High cost of doing business in the Tripartite.

5.3 Recommendation(s) Interventions and Action Plans

It is recommended that the reforms presented in this report be presented to various structures and institutions in the Tripartite. Those that are already being implemented should be supported, whilst the new reforms must be lobbied through various structures for approval. It is envisaged that the implementation of the reforms will enhance the seamless movement of traffic in the Tripartite region, thereby enhancing inter and intra-regional trade and improving the competitiveness of the region.

This section proposes a number of action plans that provide a high-level overview of the envisioned steps that stakeholders should take towards implementing the reforms. It should be noted that the establishment of political will is a pre-requisite to success as none of the reforms can be fully operationalised if political support is not secured.

5.3.1 Action Plan for Reform 1: Establish Corridor Performance Monitoring System for the Tripartite

Corridor constraints can only be addressed if they are correctly identified. In the absence of real-time data on traffic flows along transport corridors, decision-makers are seldom in a position to correctly identify and eliminate corridor constraints.

A corridor performance monitoring system for the Eastern and Southern African regions is currently being developed. The action plan associated with implementing this initiative is presented in Table 35.

Table 35: Action Plan for Reform 1

Action Plan	Envisaged impact	Responsibility
<ul style="list-style-type: none"> ✓ Corridor role-players (e.g. governments, cross-border operators, REC Secretariats) should participate in developing a corridor performance monitoring tool for the Eastern and Southern African regions. 	<ul style="list-style-type: none"> ✓ Availability of real-time data on traffic flows; ✓ Evidence based transport policy making by Tripartite governments; ✓ Improved decision-making by public sector bodies and corridor users; ✓ Improved traffic flows along Tripartite corridors; ✓ Increase in intra-REC trade; ✓ Economic growth and development. 	<ul style="list-style-type: none"> • Tripartite MS; • Public sector role-players (e.g. Ministries of Transport, Port & Revenue authorities), • Private sector (e.g. freight forwarders); • Tripartite

Action Plan	Envisaged impact	Responsibility
		Secretariats; <ul style="list-style-type: none"> • Tripartite Coordination Mechanism and Coordination unit; • Cross-border road transport operators.

Source: Table created for study

5.3.2 Action Plan for Reform 2: Implement Quality Regulation

The implementation of quality regulation in the Tripartite is expected to contribute towards the development of a more competitive, integrated and liberalised transport market in the East and Southern African regions. The action plan associated with implementing this initiative is presented in Table 36 below:

Table 36: Implement Quality Regulation

Action Plan	Envisaged impact	Responsibility
<ul style="list-style-type: none"> ✓ Tripartite countries should implement quality regulation 	<ul style="list-style-type: none"> ✓ Harmonisation of regulations, instruments, systems and standards to be applied by Tripartite MS; ✓ Reduction in the number of road accidents; ✓ Creation of a single regional road freight market; ✓ Improved inter and intra-regional trade and transport flows; ✓ Improved decision-making due to the availability of real-time data on corridor traffic. 	<ul style="list-style-type: none"> • Tripartite MS; • Council of Ministers; • RECs.

Source: Table created for study

5.3.3 Action Plan for Reform 3: Implement One Stop Border Posts

In order to expedite the unimpeded flow of traffic within the Tripartite, a number of OSBP projects have been approved at regional (Tripartite) level. With the exception of the EAC, limited progress is noted in the operationalisation of OSBP in the COMESA and the SADC. Table 37 illustrates the steps associated with, the envisaged impact and the role-players responsible for implementing OSBP.

Table 37: Implement One Stop Border Posts

Action Plan	Envisaged impact	Responsibility
✓ Tripartite countries should implement OSBPs	<ul style="list-style-type: none"> ✓ Shorter clearance time at border posts due to improved border management processes; ✓ Reduction in time spent at OSBPs; ✓ Reduction in total travel time and cost; ✓ Increases in inter and intra-REC traffic flows; ✓ Economic growth and development. 	<ul style="list-style-type: none"> • Tripartite MS

Source: Table created for study

5.3.4 Action Plan for Reform 4

A lack of technical skills within public sector organisations is cited as a major reason for the limited progress made towards implementing strategic regional (Tripartite) commitments. In order reverse this trend, the following actions are proposed as shown in Table 38.

Table 38: Address Skills Gaps to Strengthen Institutional Capacity

Action Plan	Envisaged impact	Responsibility
✓ Public sector institutions in the Tripartite eliminate the skills gap through up-skilling human resources	<ul style="list-style-type: none"> ✓ Improved transparency and governance; ✓ Improved delivery on regional commitments; ✓ Creation of a conducive environment for private sector participation; ✓ Enhanced economic growth and development. 	<ul style="list-style-type: none"> • Public sector institutions; • Regional bodies (REC Secretariats)

Source: Table created for study

5.3.5 Action Plan for Reform 5: Obtain Alternative Funding Sources for Infrastructure Development

Africa faces a huge infrastructure gap where the costs associated with eliminating the infrastructure gap is beyond the capacity of governments and donors. Due to limited public funds for infrastructure development the implementation of prioritised transport infrastructure programmes are constrained by budgetary limitations.

In light of this limitation this reform proposes that alternative funding solutions are sought to enable the timeous implementation of prioritised transport programmes. The actions associated with implementing this reform is presented in Table 39.

Table 39: Action Plan for Reform 5

Action Plan	Envisaged impact	Responsibility
✓ Tripartite countries obtain alternative sources for of funding for infrastructure development	<ul style="list-style-type: none"> ✓ Timeous completion of prioritised projects; ✓ Improved delivery on regional commitments; ✓ Improved monitoring of projects during and after delivery; ✓ Improved traffic flows along Tripartite corridors; ✓ Economic growth and development 	<ul style="list-style-type: none"> • Tripartite MS; • Private Sector.

Source: Table created for study

5.4 Conclusion

It is imperative that lasting solutions (reforms) as recommended in this report are implemented to address long standing challenges that include:

- Inadequate and poorly maintained road networks;
- Inefficient border posts;
- Inadequate public transport infrastructure;
- Disjointed regulatory frameworks; and
- Market access restrictions.

The reforms that should be prioritised by stakeholders include:

- Establishment of corridor performance monitoring systems;
- Full implementation of quality regulation;
- Implementation of One Stop Border Posts;
- Addressing skills gaps in both public and private sectors, and
- Obtaining alternative sources of funding for infrastructure development.

The implementation of the above reforms will go a long way towards creating a cross-border road transport system that is able to effectively connect African countries and support strategic objectives of continental, Tripartite and REC programmes, discussed in this report.

Moving forward, an inclusive approach that involves all role-players joining hands and working together towards implementing strategic programmes / projects should be adopted. The recommendations and Actions Plans in this ASCBOR should be lobbied in the Tripartite through various structures, monitored and reported on to ensure they are fully implemented. Ultimately, success depends on the political will of Tripartite MS to approve and implement reforms in their jurisdictions.

Since all reforms have a regional character, each MS will need to mobilise stakeholders within its jurisdiction, while at regional level, coordination will be required to ensure that there is convergence on the approach that will be taken to implement prioritised reforms.

Apart from establishing political will amongst all corridor role-players, additional funds for infrastructure development should be secured to complement public sector funding. The last chapter of this report (Chapter 6) provides more information on the financing options that can be explored by MS for implementation of existing continental, Tripartite and RECs reforms as well as the new proposed reforms in this report.

6. FINANCING OF STRATEGIC TRANSPORT PROGRAMMES AND RECOMMENDED REFORMS

6.1 Introduction

Consensus exist amongst African policymakers that the continent's economic growth and transformation is significantly constrained by inadequate transport infrastructure. The amount of capital outlay required for infrastructure is so huge that it is practically impossible to finance infrastructure development from traditional sources comprising principally of government funds, donors and international development assistance agencies.

In order to eliminate the existing transport gap concerted effort is required from African countries to intensify efforts to mobilise alternative sources of funding for infrastructure development. According to the PIDA, it will cost around \$360 billion between 2011 and 2040 to close the infrastructure gap in Africa.

The PIDA Priority Action Plan, comprising of fifty one priority infrastructure programmes in the four transport sub-fields, requires investment of \$68 billion to be realised by 2020, of which \$25.4 is required for the transport sector. These costs are beyond the financing capacities of governments and donors (<https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/PIDA%20brief%20closing%20gap.pdf>).

Within the Tripartite, public financing still constitutes the bulk of resources allocated towards infrastructure projects, with tax revenues making up a large portion of these funds. Reality indicates that public funds alone are not enough and it is imperative that countries look beyond public funds for financing of infrastructure.

This chapter explores the financing options that can be explored by Tripartite MS to secure adequate funding for the implementation of existing transport programmes and the recommended reforms proposed in this ASCBOR. Emphasis is placed on the importance of private sector in establishing partnerships with Tripartite governments. Their aim is to work jointly towards developing, financing and operating major transportation programmes within the region that can produce mutual benefits for both the public and private sector partners, whilst reducing the current infrastructure gap.

6.2 Financing Options for Infrastructure Development

The basic options or sources available for financing infrastructure development in Africa include public financing, development assistance or grants from donors, assistance from Development Finance Institutions (DFIs), private sector financing and assistance from emerging partners.

More information on each of these options is presented below:

6.2.1 Public Financing

Public financing entails direct investment by government from within its budget (fiscus) and soft loans borrowed by government. Traditionally these, and grants received from donors, have been the principal source of transport infrastructure development financing in Africa. Thus, most

of the major roads, railways, ports and airports development projects on the continent have in the past been financed by funds obtained from the public sector. This is not the case anymore, due to the following reasons:

- Firstly, there are more limited and often relatively declining funds available under this option, principally as a result of monetary policy reforms being implemented to bring about necessary macro-economic and financial stability; and
- Secondly, also within the context of reforms, higher government priority is accorded to the development of social welfare programmes (e.g. education and health), other community development activities, as well as infrastructure development in inaccessible or underserved areas where private sector financing and service provision is considered not viable.

6.2.2 Development Assistance

Donor agencies have in the past provided a large amount of aid or grant funds for infrastructure development in Africa to support government intervention. Just as is the case for public funds, availability of donor funds for infrastructure development is dwindling.

Nowadays, donor assistance is being directed to social services (e.g. education and health) and other poverty alleviation programmes that pose direct benefits to local communities. In addition, there is a deliberate move towards leaving commercially viable projects and operational functions to the private sector. This implies that infrastructure projects that were financed by donors in the past (e.g. railways, ports, airports and some road programmes) are nowadays being carried out by the private sector alone or in partnership with the public sector.

6.2.3 Development Finance Institutions

Development Finance Institution's (DFIs) are increasing their presence in the development of Africa's infrastructure. It is important to note that DFIs have overtaken the governments of African countries as the largest financier of infrastructure projects in Africa (<https://www.cbn.co.za/property/building-construction/the-role-of-development-finance-institutions-vs-donor-funders-in-infrastructure-projects>).

The role of DFIs in African countries can longer be underestimated as they represent 35% of external financing in infrastructure projects on the continent. Therefore, DFIs can play a critical role in leveraging private funding. Intervention from DFIs can also significantly improve the bankability of projects and increase the flow of private funding into African infrastructure. (<http://blackrhinogroup.com/development-finance-institutions-infrastructure-financing-in-africa/>).

Over the past decade several DFIs have launched initiatives to reduce the existing infrastructure gap on the continent. One example includes a joint assistance programme launched by the European Investment Bank and the Development Bank of Southern Africa (DBSA) to improve the preparation and implementation of infrastructure projects in Africa.

DFIs, especially the World Bank Group and the AfDB, will continue to represent an important source of finance, especially in lower-income countries and underfinanced sectors. Perhaps

more importantly than their direct role in financing, DFIs have a unique ability to improve projects' bankability through the mitigation of sovereign risks and the improvement of the business environment. If fully realised, this "enabling" capacity will have a determinant impact on reducing the infrastructure gap on the African continent.

6.2.4 Public-Private Partnerships

Private sector involvement in developing, financing and operating major transport projects is an option that can produce mutual benefits for both public and private sector partners. Whilst traditionally the provision of major transport infrastructure systems and related transport services to communities has been a prerogative of the public sector, Public-Private Partnerships (PPPs) can effectively become a good alternative to it.

A PPP is a partnership between the public sector and the private sector for the purpose of delivering an investment and / or a service traditionally provided by the public sector. As the private sector increases its participation, it assumes increasing responsibility for the functions of the design, build, finance, operation and maintenance of that infrastructure. In cases of full privatisation, the private sector also assumes complete ownership over the infrastructure assets.

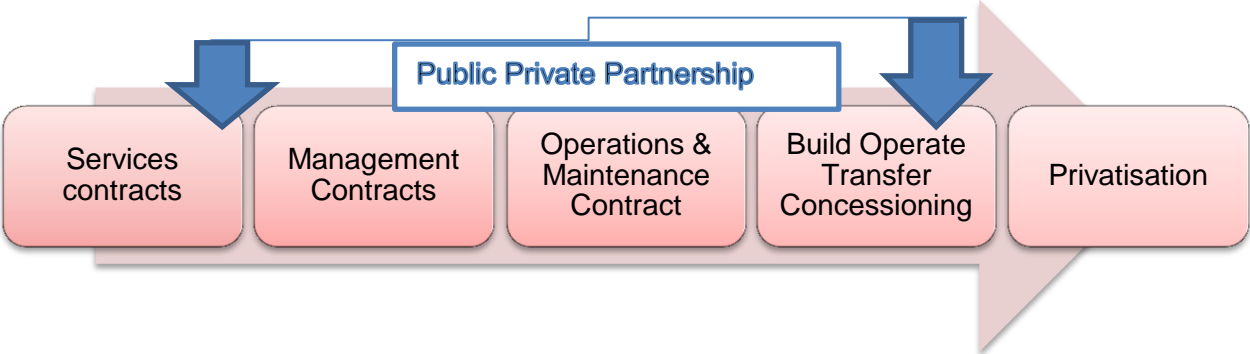
The general drivers of interests in PPPs can be summarised as follows (European Development Fund: 2016).

- Using private sector financing to make infrastructure investments that the public sector cannot afford;
- Maximising the value for money through appropriate risk allocation between the public and private sectors;
- Attaining greater efficiency, lower costs, higher quality and faster delivery of public infrastructure projects; and
- Promoting innovation not only on technical and operational matters, but also in financial and commercial arrangements.

a) Public-Private Partnerships

Various forms of PPPs have been developed worldwide to respond to the various fields of application. The major PPP options are presented in a simplified manner in Figure 22 below, in which the extent of private sector participation increases from the left to right.

Figure 22: PPP Options



Source: European Development Fund. September 2016, as adapted.

The characteristics of the different PPP options are presented in Table 40.

Table 40: Characteristics of the Main PPP Options

PPP Option	Main Features	Risk Transfer	Access to Private Finance	Ownership	Comment
Services Contract	<ul style="list-style-type: none"> • Certain services are outsourced to the private sector. • Private company provides agreed services to GOV. • GOV remains general control and supervision. 	<ul style="list-style-type: none"> • Service contracts provide a relatively low-risk option for expanding the role of the PS. • No equity risk is borne by the PS. 	<ul style="list-style-type: none"> • Limited infusion of PS capital. 	<ul style="list-style-type: none"> • GOV. 	<ul style="list-style-type: none"> • This type of PPP has limited benefits. • Service contracts require a well-developed service industry. • Not suitable for initial toll road development / investment.
Management Contract	<ul style="list-style-type: none"> • The PS is entrusted with various types of tasks. • The function of the PS is to respond to day-to-day routine maintenance requirements on behalf of GOV. • GOV remains control and supervision. 	<ul style="list-style-type: none"> • Management contracts provide a low-risk option for expanding the role of the PS. • Responsibility for investment decisions remains with GOV. 	<ul style="list-style-type: none"> • Limited infusion of PS capital. 	<ul style="list-style-type: none"> • GOV. 	<ul style="list-style-type: none"> • A greater amount of responsibility if given to the PS than under the Services Contract. • PS manages transport infrastructure / services without committing its own investment capacity.
Operations & Maintenance Contract	<ul style="list-style-type: none"> • Management and operation of public infrastructure is outsourced to the PS. • Similar to service and management contracts, but the scope of services is wider and greater control is passed to 	<ul style="list-style-type: none"> • Similar to service and management contract but additional risk of keeping up infrastructure is passed on to the PS. • No equity risk is borne by the PS. 	<ul style="list-style-type: none"> • Limited infusion of private capital, i.e. working capital. 	<ul style="list-style-type: none"> • GOV 	<ul style="list-style-type: none"> • Suitable for projects with a significant operating content. • A suitable method to import PS efficiencies and technical know-how. • Not suitable for initial toll road development / investment.

<p>Build-Operate-Transfer Concessioning</p>	<p>the PS.</p> <ul style="list-style-type: none"> • GOV finances and the PS operate the facility. • PS operates the facility on a concession. • At the end of the concession, the facility is transferred to GOV. 	<ul style="list-style-type: none"> • GOV bears the equity risk. • PS bears the risk associated with construction. 	<ul style="list-style-type: none"> • Limited access to PS finance. 	<ul style="list-style-type: none"> • GOV 	<ul style="list-style-type: none"> • Suitable to projects that require significant investment and operating content. • Suitable for all toll roads.
<p>Privatisation</p>	<ul style="list-style-type: none"> • Initial public offer, wholly or partly of a SOE • Partial divestiture means GOV still owns a percentage of the SOE • Total divestiture means the SOE has been completely privatised. 	<ul style="list-style-type: none"> • The PS is responsible for all aspects/ risks associated with infrastructure provision. 	<ul style="list-style-type: none"> • The PS funds future development of the business. 	<ul style="list-style-type: none"> • PS 	<ul style="list-style-type: none"> • Need to establish a strong regulatory body to prevent abuse of power. • Suitable if GOV want to import PS efficiencies into SOE. • Privatisation can be politically controversial.

Source: Source: European Development Fund. September 2016, as adapted

Note: GOV: Government
 PS: Private Sector
 SOE: State Owned Enterprise

b) Financing of PPP Options

PPP projects are generally financed using project finance arrangements. In project finance, lenders and investors rely either exclusively or mainly on the cash flow generated by the project to repay their loans and earn a return on their investments.

For a new-build project involving complex PPP schemes requiring financing to be provided mainly by the private sector, the latter usually sets up a specially created project company which will enter into a PPP agreement with the public sector company for the construction and operation of the transport project.

Different financing sources can be arranged involving a combination of both conventional and innovative financing mechanisms of which examples are provided in Table 41 below:

Table 41: Conventional Versus Innovative Financing Tools

Conventional Financing Tools	Innovative Financing Tools
<ul style="list-style-type: none">• Loans• Debt and Equity instruments• Guarantees• Subsidies• Investment grants	<ul style="list-style-type: none">• Blended financial products• Cash-flow guarantees• Project bonds

Source: Source: European Development Fund. September 2016

A summary of suitable project financing options for PPP projects is presented in Table 42 below.

Table 42: Project Financing Options

Options		Key Characteristics
1	<i>Loans</i>	<ul style="list-style-type: none"> • Long-term loans are provided by investment and commercial banks and IFIs; • Financing conditions depend on the project type and the security offered by 3rd parties; • Interests can be fixed, reversible or convertible; • Repayment is normally on a semi-annual or annual basis; • Grace period for capital repayment may be granted for the construction phase of projects
2	<i>Equity</i>	<ul style="list-style-type: none"> • Equity is usually provided by the private sector investors acting as project sponsors; • The project development company may include one contractor that will build the facility and another one that will operate the facility during the project life; • A large part of the equity provided by the investors may be in the form of shareholders subordinated debt, for tax and accounting benefits; • Since equity holders bear primary risk under a PPP project, they will seek a higher return on the funding they provide.
3	<i>In-Kind Contribution</i>	<ul style="list-style-type: none"> • This is a form of financing provided by the Public Sector partner, notably as in-kind equity contributions to a PPP project through the transfer of existing transport infrastructure assets.
4	<i>Grants</i>	<ul style="list-style-type: none"> • Are unremunerated equity provided by the public sector; • Grants may come in the form of investment grants or tax cuts subsidies aimed at reducing the initial investment and overall project cost; • On certain projects grants may be needed to make a project bankable or affordable.
5	<i>Loan Guarantees</i>	<ul style="list-style-type: none"> • Is a form of indirect contribution provided by the banks of private sector sponsors or IFIs on behalf of the public sector partner, aimed at helping a PPP project company to secure the amount of debt capital required to finance the project or a loan at favourable interest rates.
6	<i>Blended Financial Products</i>	<ul style="list-style-type: none"> • Blended finance is increasingly being used by international development partners to boost up infrastructure financing in Africa; • The aim is to transform available resources, normally grants into financial products such as loans, guarantees, equity and other risk-bearing mechanisms; • Blended financial products differ from conventional ones in that they embed grant money, which is often critical to enable the issue of the product itself; • The lead development partner would ensure the establishment of a fund where other multilateral development partners or bilateral partner countries can contribute.
7	<i>Cash-flow Guarantees</i>	<ul style="list-style-type: none"> • Is particularly critical for transport infrastructure projects to cover the revenue risk for the project company which cannot otherwise be effectively managed or mitigated by the private sector partner; • Cash flow guarantees substantially enhance credit quality, thereby encouraging a reduction of risk margins in the interest rates applied to senior project loans; • Savings made on lower interest rates should surpass the cost of the guarantee;

8	<i>Project Bonds</i>	<ul style="list-style-type: none"> • Guarantees have a limited duration, usually lasting from 5 to 7 years after project completion. • Regarded as an innovative financing tool whose objective is to stimulate capital market financing for large-scale transport infrastructure projects; • It is a debt instrument issued by private companies to attract additional private sector finance from institutional investors (e.g. pension funds) that are looking for long-term investments.
9	<i>Pension Funds</i>	<ul style="list-style-type: none"> • In situations of low bond marked yields, pension funds may look for attractive long-term investment opportunities to diversify their holdings and meet their long-term payment obligations; • PPP project developers and governments in developed and developing countries have turned their attention to capturing the financing potential of pension funds through project bonds instruments; • The use of these instruments in most African countries remain a challenge when it comes to infrastructure development; • Investors are concerned with issues such as the absence of permanent stable cash flows and the lack of expertise by pension fund managers to assess construction risk.
10	<i>Local-currency bond markets</i>	<ul style="list-style-type: none"> • Present a potentially important vehicle for developing the domestic investor base for mobilising domestic savings to support public and private investment in the transport sector; • Local bond markets in many African countries remain underdeveloped and government action from the responsible ministries and Central Banks is required to strengthen local financial markets and financial institutions.
11	<i>Diaspora Bonds</i>	<ul style="list-style-type: none"> • Are debt instruments issued by a government, a sub-sovereign entity, or a private corporation aimed at raising finance from its overseas diaspora citizens; • Bonds are often marketed at sensible times in a country and appeal to the diaspora's patriotic feelings.
12	<i>Sovereign Wealth Funds</i>	<ul style="list-style-type: none"> • Are regarded as an attractive source of financing for major transport projects, especially for African countries possessing considerable oil or mineral resources reserves; • Such funds are directly or indirectly owned by governments, which would allocate a substantial portion of current and future oil or mineral extraction revenues towards the fund.

Source: Source: European Development Fund. September 2016

c) *Creating an Enabling Environment for Private Sector Participation in Financing, Development and Operation of Transport Infrastructure and Services*

Worldwide experience reveals that the successful implementation of PPP programme(s) require an enabling environment, characterised by well-managed interaction between the public and private sector during all stages of project development and implementation to ensure the effective implementation of PPP programme(s) that yield the highest benefits to the public sector.

The creation of an enabling environment requires political will and public sector commitment, a favourable investor climate which encourages private funding, a well-defined legal and regulatory framework and capable public and private sectors.

Developing the Required Policy, Legal and Institutional Framework for Promoting the PPP approach

- *Policy Framework*

Under PPP procurement the role of the public sector changes from that of provider to that of a facilitator. A core element of any national PPP strategy is the development of a PPP policy framework that gives confidence to both the public sector that has to implement the rules and also the private sector that has to invest time and money to ensure that both parties achieve their objectives.

A policy framework can complement existing law and regulations and provide a justification for specific decisions. Some sectors (e.g. the railways sector) are unlikely to attract private sector investment in the absence of reform and clarity regarding sector regulation. A lack of clarity, consistency or fairness will increase the perceived risks of investing in the project. This usually results in more commercial risks being transferred to the public sector, or even a smaller number of bidders, thus reducing the value of the PPP option.

- *Legal Framework*

A legal framework should create a favourable environment to attract private sector financing and put in place adequate controls to ensure that a PPP project will deliver its expected value to the public.

A PPP enabling legislative and regulatory framework such as a PPP / Concession law should clearly set up the institutional bodies and their responsibilities regarding the PPPs. Unclear and complex requirements and processes will raise concern from potential bidders.

The role of the legal framework is to put in place laws, decrees and regulations to guarantee that a PPP project will deliver its expected value to the public. According to the United Nations (UN) legislative guidelines on privately financed infrastructure projects, a good PPP law should incorporate the following (European Development Fund: 2016):

- Scope of the authority to award PPP projects;
- Description of the institutional framework that enables sound administrative coordination;
- Provisions for providing financial or economic support to the project;

- Transparent, competitive procedures for selection of bidders, requesting proposals up to negotiation and contract award;
- Description of exceptional circumstances for exemption of competitive procedures;
- How to deal with unsolicited proposals; and
- Permission granted to the private party to collect tariffs or user fees, subject to regulation.

- *Institutional Framework*

PPPs require major institutional changes since the function of the public sector changes from direct provider of transport services to monitoring of service delivery by the private sector. A strong institutional setup is necessary to manage and assess risks from PPPs and to help governments build a reputation of being a good partner. The lower the political and regulatory risk perceived by the private sector, the higher the value of money that can be achieved.

Building PPP knowledge and management capacity is particularly important for most African countries where the infrastructure investment market is still considered risky due in part to incomplete legislative and regulatory frameworks, in addition to insufficient institutional capacity in project development, structuring and implementation. The establishment of a strong institutional setup requires clear allocation and implementation of responsibilities and skilled and dedicated staff.

Two principal models exist, namely:

- A decentralised approach that places responsibility at line ministries; and
- A centralised approach by creating a dedicated PPP unit within the Ministry of Finance, or Ministry of Planning, or a national PPP / concession agency.

Irrespective of the model selected, there is a need to recruit high calibre specialists and create a nucleus, able to drive the PPP process. At the beginning, PPP units would have a primary focus on developing institutional capability, stimulating the required legal and regulatory changes, promoting market interest and developing pilot projects in order to test and demonstrate the value of PPPs.

As experience is gained, the role of PPP units change to focus on assisting in the identification and selection of PPP opportunities, counselling of line ministries, developing the required analysis tools to ensure value for money, private sector investors' attraction, and, above all, maintaining political support for PPPs.

At a later stage, during PPP implementation, the PPP units could perform a centralised oversight function and serve the role of a single contact point for various public sector agencies and the private sector. PPP units and the public sector have a key role to play in building trust, which in turn allows a reduction in risk and eventually the overall cost of a project. Trust should include the open exchange of information with the private sector, respect for the objectives of all parties involved in the PPP and integration of mechanisms for non-conflicting dispute resolution. Furthermore trust also implies a strong political commitment, which must be developed, sustained and communicated by the necessary institutional structures.

Acknowledging the fact that the institutional and organisational framework of the transport sector in many African countries may not be fully mature for the development of PPP arrangements, the role of centralised PPP units is of particular importance during the early stages. This is especially important for transportation sub-sectors dominated by only one operator, or where there exists only one, usually a public operator as it is often the case with the rail and airport operators.

Last but not least, along with the development of an effective public sector management and monitoring capability, it is necessary to promote the development of transport user associations to play a role as “watchdog” in ensuring transport users are satisfied with the delivery of transport services by the private sector.

- *Ensuring Sound and Effective Monitoring during PPP project Implementation*

As already stated, the delivery of transport programmes through PPP approaches requires institutional and regulatory changes to national systems. The public sector will see its function transforming from a provider of transport infrastructure and services to an oversight and monitoring agency to ensure that the respective roles and responsibilities set out in the PPP concession contract are fulfilled and that the concessionaire activities over the concession period are implemented in a timely fashion to avoid any penalties and ensure delivery at the price and quality standards as agreed to.

In addition, public sector agencies should establish an appropriate mechanism to manage the implementation of PPP agreement(s) once signed, such as establishing a PPP is a Contract Management and Performance Monitoring Unit. The contract management unit is responsible for developing a contract management plan that sets out the rules under which the contracting agency and the concessionaire can work in partnership together. This unit is also responsible for the drafting of contracts during project preparation/ procurement. Contract management continues over the life of the project with the effective management and monitoring of critical project functions through the appropriate management plan and through an effective institutional structure.

The PPP Contract Performance Monitoring Unit is responsible for developing a performance monitoring manual that sets out the overall contract management strategy, management tools and processes. Furthermore, it monitors the operations of the private sector to ensure satisfactory long-term service delivery and no-reversible risk transfer.

6.2.5 Emerging Partners as Financiers

Further to involving the private sector in funding infrastructure development in Africa, emerging countries with higher levels of growth, such as China, Brazil and India have in recent years begun playing a growing role financing infrastructure programmes in Sub-Saharan Africa. According to available literature, the initial and on-going motivation for emerging countries to invest in Africa is linked to the quest to extract and transport natural resources from African countries to their own nations in order to expand their own economies.

The relevance of China to infrastructure development on the continent is that the Chinese are now considered the major player, with some estimates suggesting that China has outplaced the World Bank as the leading funder of Africa's infrastructure. The nature of the financing via the Chinese EX-IM bank is cited as one reason why China is capturing an increasing share of the market.

The issue of risk which bedevils many of the other banks that make loans directly to recipient governments is overcome by the fact that China channels little or none of its funding directly to a recipient country. Chinese funding for infrastructure in Africa generally stays in and flows through Chinese banks and companies. Risk is also less of a concern since funding for infrastructure is seen as the means to reach the bigger goal, namely natural resource extraction for economic development. (Hagerman, E. 2012: 51).

Brazil and India are also important financiers of infrastructure development, although their role is dwarfed in comparison to the advances made by the Chinese. They are particularly key in the areas of rail, road and power development. In March 2017, the Export-Import Bank of India (also known as Exim Bank) announced its plans to co-finance various infrastructure projects in Africa.

Progress is noted in the formation of the Kukuza Project Development Company (KPDC) that was established to bring infrastructure projects in Africa to a bankable stage. Investments of around \$7.4 billion have been set aside for the implementation of projects across Africa. (<http://www.thehindubusinessline.com/money-and-banking/exim-bank-to-work-with-african-development-bank-on-cofinancing-of-projects-says-managing-director-rasquinha/article9610532.ece>).

Further to China and India, Arab donor countries have also been playing a key role in African infrastructure. Between 2009-2007 commitments, channelled through special funds or development agencies (e.g. Islamic Development Bank, Arab Bank for Economic Development in Africa) averaged just over \$500 million a year. Although activities are broadly spread across various African countries they are more concentrated in countries with relatively large Muslim populations.

a) Aspects to consider

The expanding role of China, India, and other non-OECD financiers in Africa represents an encouraging trend for Africa to eliminate, or at least minimise, its enormous infrastructure deficit. The financing these bodies provide is unprecedented in its scale and in its focus on large-scale infrastructure projects. It is important however that African countries have a full understanding of the nature and expectations from its relationships with emerging financiers in order to derive the most favourable benefits for itself and for the continent.

According to Hagerman (2012: 48) the Chinese are acknowledged as the sharpest negotiators in the world. African governments should therefore be clear about what is at stake and what they can reasonably gain when entering into negotiations with China and other emerging partners. Other aspects that require attention by African leaders include the following:

- Adoption of a regional approach to infrastructure development to create a greater sense of regional ownership and control of infrastructure projects;
- Improved governance across the continent to create an enabling environment which allow and support the development of regional infrastructure programmes / projects;
- Better negotiation terms, especially in terms of the engagement of local labour in infrastructure projects and the construction of feeder roads to link local communities to markets;
- Improved productivity by the African labour force; and
- Improved monitoring of programmes / projects throughout the project life cycle.

6.3 Conclusion

The state of the cross-border road transport environment in the Tripartite requires urgent intervention as it is inundated by various infrastructure challenges that hinder the optimal performance of the transport system. Without an efficient transport system, the Tripartite stands very little chance of achieving strategic goals that revolve around linking African economies, enhancing intra-regional and intra- Africa trade and achieving regional integration imperatives.

Given the constraints faced by the public sector in securing adequate financing for infrastructure development, Tripartite countries need to adopt innovative solutions that combine international, public and private sources of funding for infrastructure development. The private sector is currently playing an increasing role in funding infrastructure programmes through various forms of PPPs with funding secured from either conventional or innovative financing sources. In addition, DFI and emerging countries are performing important roles in leveraging the contribution that the private sector can make.

Irrespective of whether Tripartite countries opt for international or private sources of funding, effective monitoring throughout the entire project life cycle is imperative to ensure satisfactory long-term service delivery and non-reversible risk transfer.

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