International Freight Logistics Best Practices Workshop

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Initiatives to Improve Seamless Flow of Cargo Along the Northern Corridor: "Success and Challenges"

Presented by Fred Paul Babalanda

Deputy Director Customs and Trade Facilitation

Northern Corridor Transit and Transport Coordination Authority Secretariat

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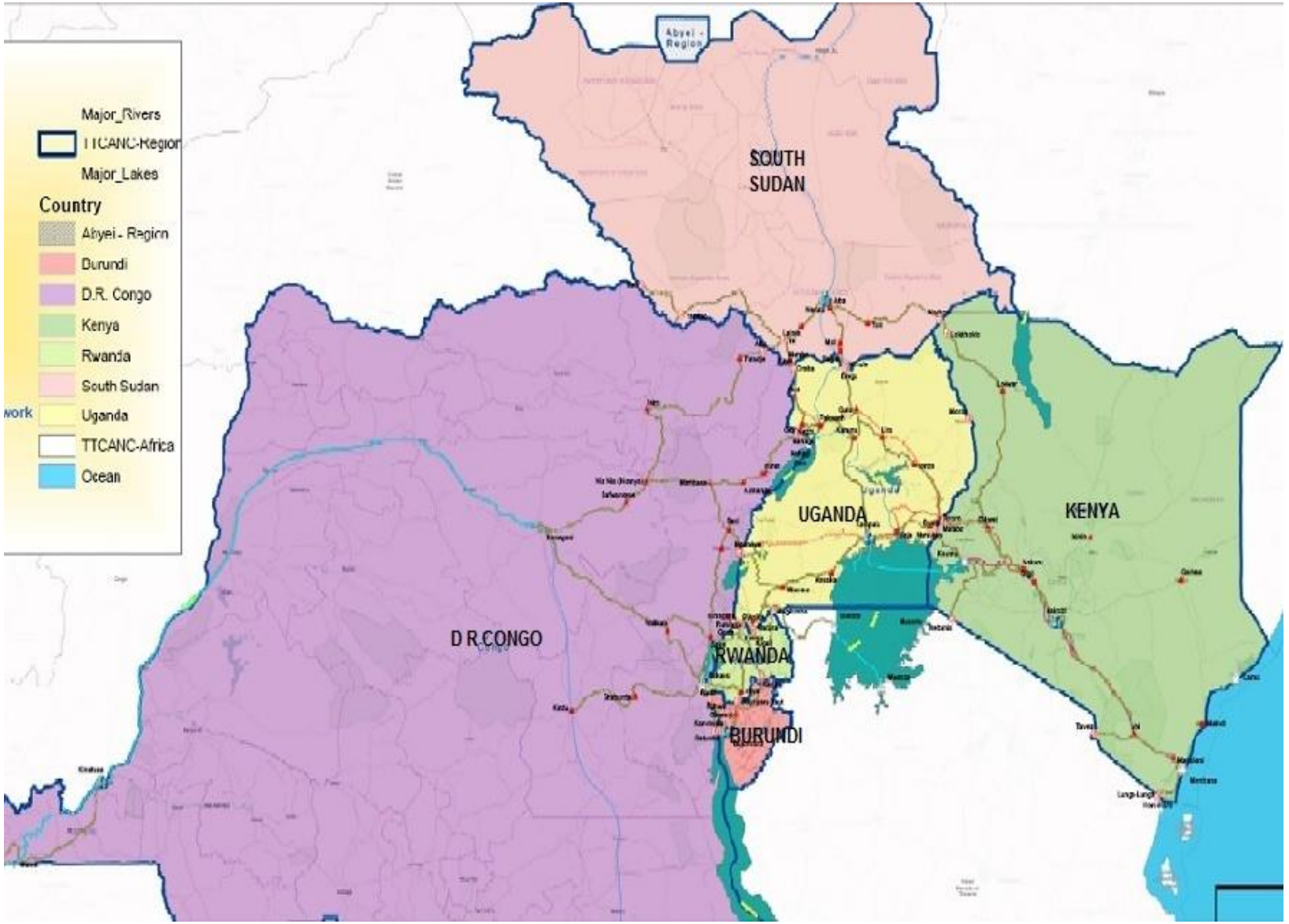
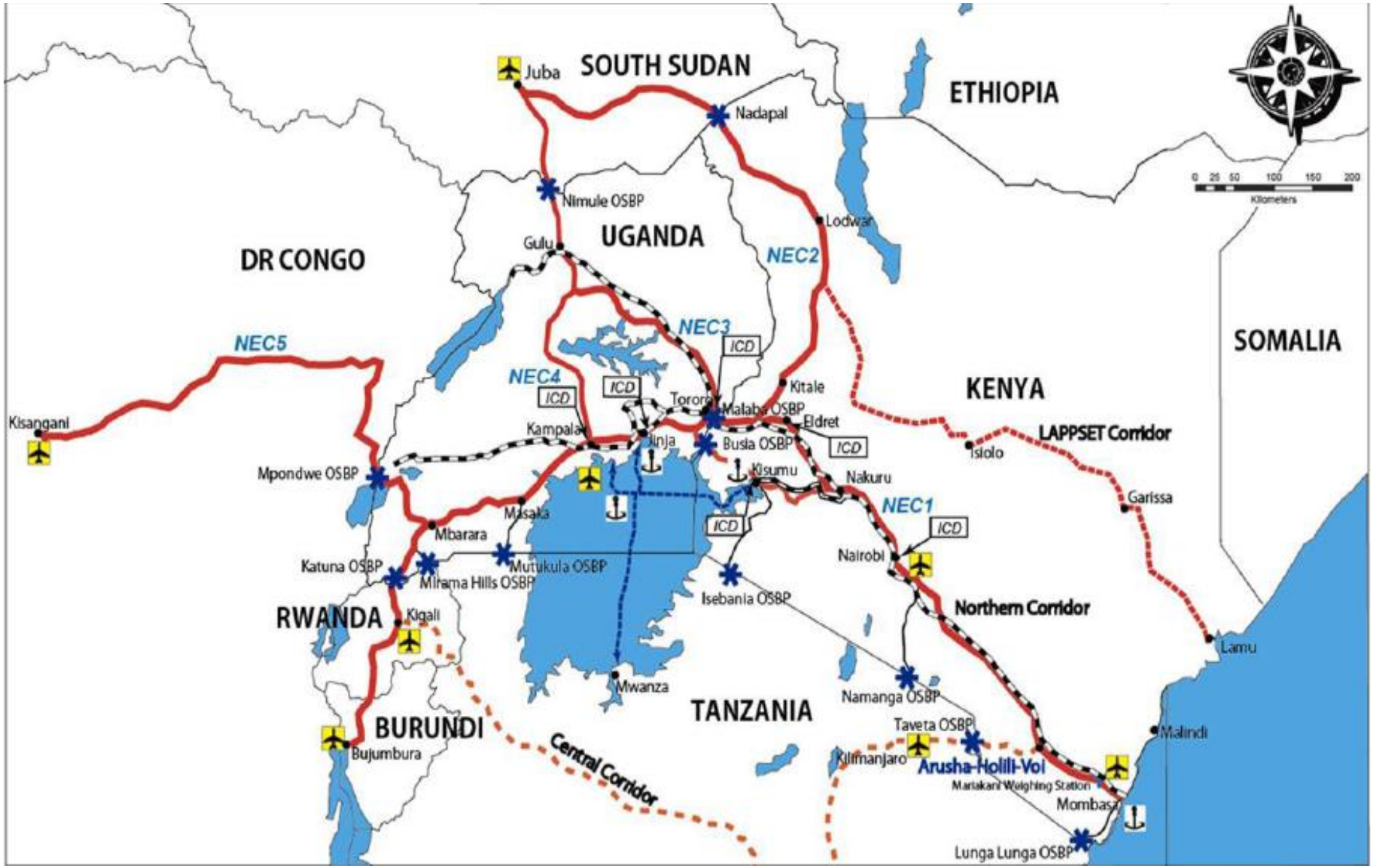
- Introduction – The Northern Corridor
- Northern Corridor Transport Network
- NCTTCA and its Mandate
- Initiatives to improve seamless flow of cargo along the Northern Corridor “Successes and Challenges”
- Way Forward

The Northern Corridor

- The Northern Corridor is a multimodal transport corridor encompassing: road, rail, pipeline and inland waterways transport
- It is the busiest Corridor in East & Central Africa with an annual growth of cargo throughput of around 10%.
- In 2016, Mombasa Port handled 27.36 million tons of cargo, compared to 26.73 million tons handled in 2015.
- The NC Vision is to be a seamless multimodal, economic, smart and green transport Corridor.



Northern Corridor Transport Network



What is the NCTTCA?

- The NCTTCA was formed under an Agreement; the Northern Corridor Transit and Transport Agreement (NCTTA). The NCTTCA currently comprises of six Member States; Burundi DRC, Kenya, Rwanda, South Sudan and Uganda.

Objectives of the NCTTCA

- To facilitate trade, movement of persons, vehicles and goods in domestic, regional and international transport.
- Stimulate economic and social development in the territories of the contracting parties.
- To transform the Corridor into a Development Corridor which in addition to offering safe, fast and competitive transport and transit services that secure regional trade, will stimulate investment, encourage sustainable development and poverty reduction.
- To implement strategies for accelerating economic and social growth along the Corridor while ensuring environmental sustainability.

Mandate of the NCTTCA

Take measures to:

- Expedite the movement of freight and persons along the Corridor
- Minimize incidence of customs fraud.
- Simplify and harmonize regulations and documentation procedures relating to movement of goods in transit.
- Improve transport infrastructure and services.
- Adopt ICT to improve exchange of information and to monitor movement of cargo along the Corridor.
- Provide information to inform decision making by policy makers, regulators and users of the Corridor.

Initiatives to improve seamless freight flow along the Northern Corridor

Improvement in:

- **Hardware (Physical Infrastructure);** Ports, Roads, Rail, Waterways, Border Stations, Weighbridges, Containers Terminals/Warehouses, Cargo Handling Equipment.

- **Software;** Procedure/processes, trade facilitation instruments (RTCG, R-ECTS, SCT, e-SWS, AEO), automation, collaboration and coordination, sensitization, political will.

- **Monitoring and Evaluation;** Transport Observatory, Trade and Transport Logistics Surveys, Studies.

Improvement in transport infrastructure

Section of Nakuru – Eldoret Road

Above Left: Year **2011**, Section of Eldoret – Tiekoroa Road before rehabilitation, **Right:** Year **2017**, Section of the Eldoret –Tiekoroa road after rehabilitation

Section of Gulu – Nimule/Elegu Road

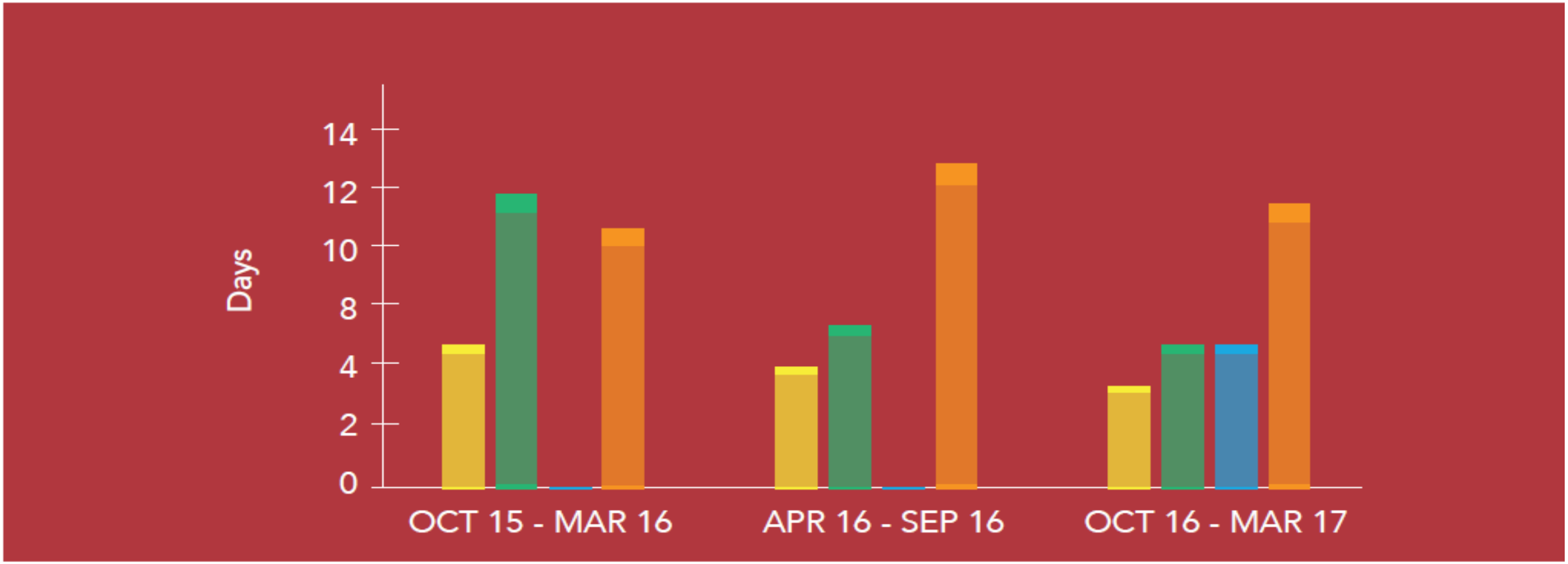
Above Left: Year **2013** Section of Gulu – Nimule Road near Elegu before upgrading **Right:** Year **2017** section of Gulu – Nimule road after upgrading. **Below:** The challenge now are the floods at Elegu – Nimule border which threatens trade and transport across the border and the lifespan of the road.

COMPARISON OF NORTHERN CORRIDOR ROAD CONDITION (KM) BETWEEN YEAR 2012 AND YEAR 2017								
Country		2012				2017		
	Total	Good	Fair	Bad	Total	Good	Fair	Bad
Burundi	400	80	247	73	567	418	92	57
DRC	3,932	1,824	1,193	915	3,857	1,562	1,386	909
Kenya	1,030	330	206	494	2,440	1,407	406	627
Rwanda	624	607	17	2	785	644	141	-
South Sudan	3,543	192		3,351	3,543		192	3,351
Uganda	1,688	956	446	286	2,072	871	974	227

*Average Transit Time Source: RECTS, September, 2017/*Transporters Tracking systems*

Route	Distance(Km)	Duration(days)
Mombasa-Busia	947	3.5
Mombasa - Kampala via Malaba	1,170	4.5
Mombasa-Elegu via Busia & Kampala	1,471	4.4
Mombasa-Elegu via Malaba & Kamdini	1,430	4.1
Mombasa-Kampala via Busia	1,145	4.1
Mombasa-Kampala via Malaba	1,169	4.3
Mombasa-Malaba	933	3.7
Mombasa –Kigali	1,682	7.3
*Mombasa-Juba	1662	10.4
*Mombasa -Goma	1838	6.24

Average Transit Time



Mombasa - Kampala	5.7	4.8	4.1	
Mombasa - Kigali	11.4	6.3	5.7	
Mombasa - Goma			5.5	
Mombasa - Juba	10.1	12.6	11.2	

Above: Old Meter Gauge Railway locomotives that were being operated by RVR, by the time of launching of the SGR they could only do an average of 30km/hr due to the aging permanent way and rolling stock. Below: H.E. Uhuru Kenyatta, President of the Republic of Kenya commissioning operations of the SGR train at Mombasa Terminus on 31st May 2017. The SGR cargo train does 80km/hr and the passenger train 120km/hr.

Below: A section of the SGR line near Mombasa

Left: Year 2017 MGR - Mombasa Railway Station. Right: Year 2017 SGR - Mombasa Terminus

Upon completion of construction of the SGR the share of cargo transported by railway is expected to increase to 40% of the total cargo transported through the Port of Mombasa.

Typical MGR station along the Northern Corridor

Above: long queues of trucks in traffic snarl ups along the Northern Corridor. The SGR will go a long way to have some of the cargo shift from road transport to railway which will help to decongest the roads and reduce delays encountered by all road users.

Country	Meter Gauge Railway (MGR)		Development of Standard Gauge Railway (SGR)		
	Section	Length (Km)	Section	Length (Km)	Status
Kenya	Entire Network	2,778	Proposed Network – Northern Corridor	1,066	
	Mombasa - Nairobi		Phase 1 Mombasa - Nairobi	472	Construction Completed Total Route Length 609km
	Nairobi - Nakuru		Phase 2A Nairobi - Naivasha	120	Under development tunneling Ngong hill 3.2km long
	Nakuru - Kisumu		Phase 2B Naivasha - Kisumu	262	In process of securing funding
	Nakuru - Eldoret - Malaba		Phase 2C Kisumu - Malaba	107	
	Other Sections		Other Sections Voi - Taveta	105	
			LAPSSET Corridor	2,050	
			Lamu – Isiolo - Nakdok	1,350	
			Nairobi – Isiolo - Moyale	700	
Uganda	Entire Network	1,226	Proposed Network Northern Corridor	1,614	
	Malaba - Kampala	250	Phase 1		
	Kampala - Kasese		Malaba - Kampala	258	Preliminary works commenced June 2015
	Tororo - Gulu		Tororo – Gulu – Nimule	760	Preliminary works commenced June 2015
	Gulu - Pakwach		Gulu - Pakwach		
			Phase 2		
			Kampala – Bihanga – Merama hills	294	
			Bihanga – Kasese - Mpondwe	377	
	Max. Capacity	40 TEU's	Max. Capacity	216 TEU's	
	Axle Load	18 Tons	Axle Load	25 Tons	
	Current Av. Speed	25Km/h	Cargo Train Passenger	80 Km/h 120 Km/h	

The SGR cargo train has the capacity of transporting 216 TEU's and can do a speed of 80 km/h, while the passenger train can transport 1,500 people at a speed of 120 km/h

Kenya Pipeline Company -Oil Pipeline Capacity Expansion

		Original Capacity		Capacity Increment		
		Year 2010		Year 2017 (New Lines)		
Line Section	Length (Km)	Pipe Diameter (Inches)	Flow Rate (m^3/hr)	Pipe Diameter (Inches)	Flow Rate (m^3/hr)	Remarks
Mombasa to Nairobi	450	14"	830	20"	1,000	Flow rate of the new pipeline to be increased further to 1,900m^3 by the year 2023 and to 2,600m^3 by the year 2044 through addition of pumping stations.
Nairobi to Eldoret	325	8"/6"	220	14"	311	Flow rate of the new pipeline to be increased to 750m^3 through addition of pumping stations.
Nakuru (Sinedet) to Kisumu	121	6"	110	10"	350	New pipeline (122km) lays grounds for development of oil jetty at Kisumu and extension of pipeline to Busia.

NB: *The new pipelines with bigger diameter were installed between year 2010 and year 2017 and they run parallel with the old pipelines for all the above sections.*

Above: NV Pamba wagon ferry at Port Bell pending refurbishment. Below-Refurbished NV Kaawa, its operations on Lake Victoria have been inefficient largely due to the dysfunctional railway system; the wagon ferry is loaded and offloaded manually using human labor as opposed to driving off and on board loaded wagons onto the ferry at the ports of loading/offloading cargo. NV Kaawa and NV Pamba each has a capacity to carry 22 loaded wagons i.e. 44 TEU's.

GATUNA/
KATUNA

RUBAVU/
GOMA

BUNAGANA

BUSIA

GATUMBA/
KAVIMVIRA

MPONDWE/
KASINDI

BUSIA OSBP

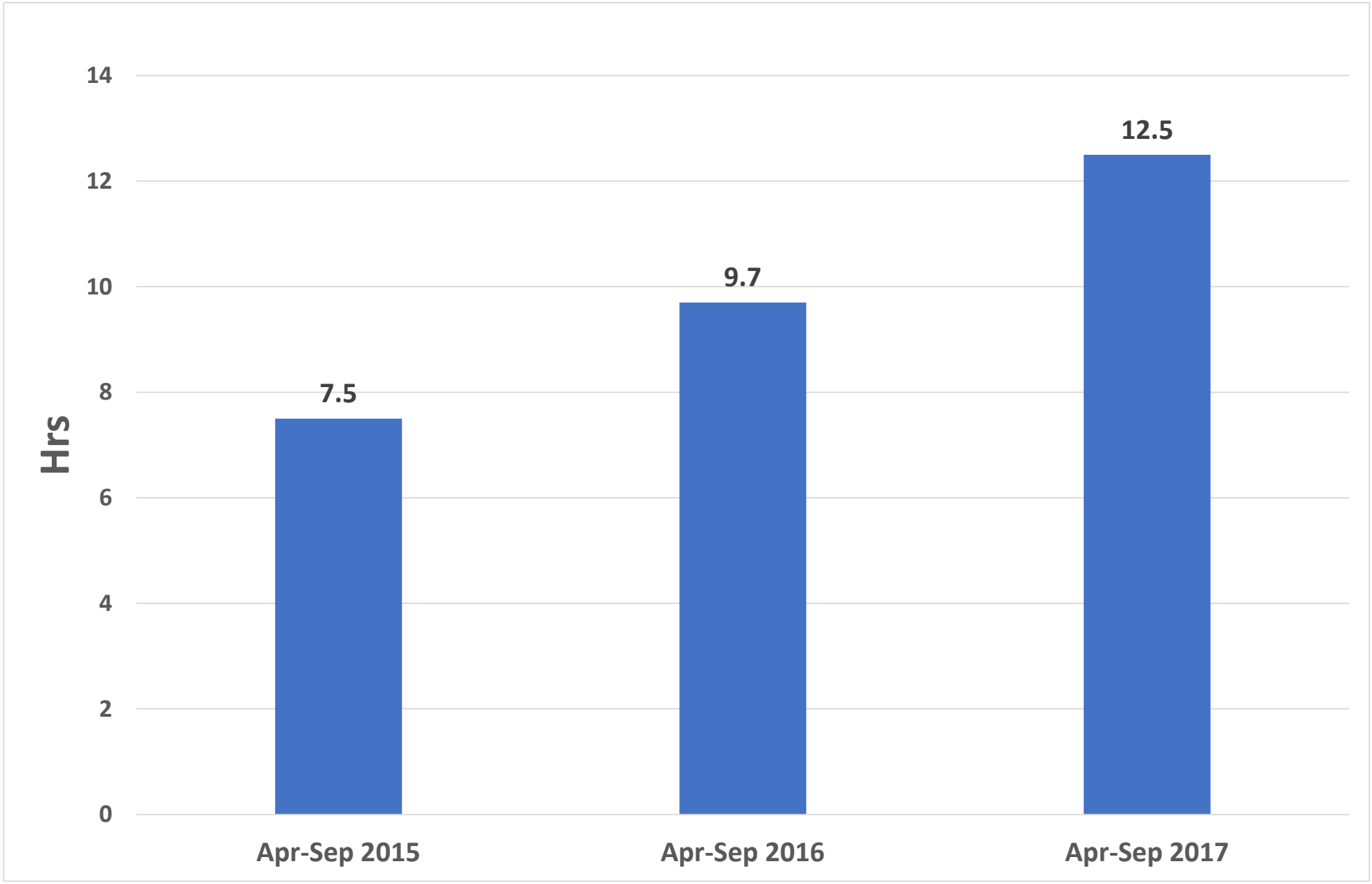
MERAMA HILLS/KAGITUMBA OSBP

MALABA OSBP

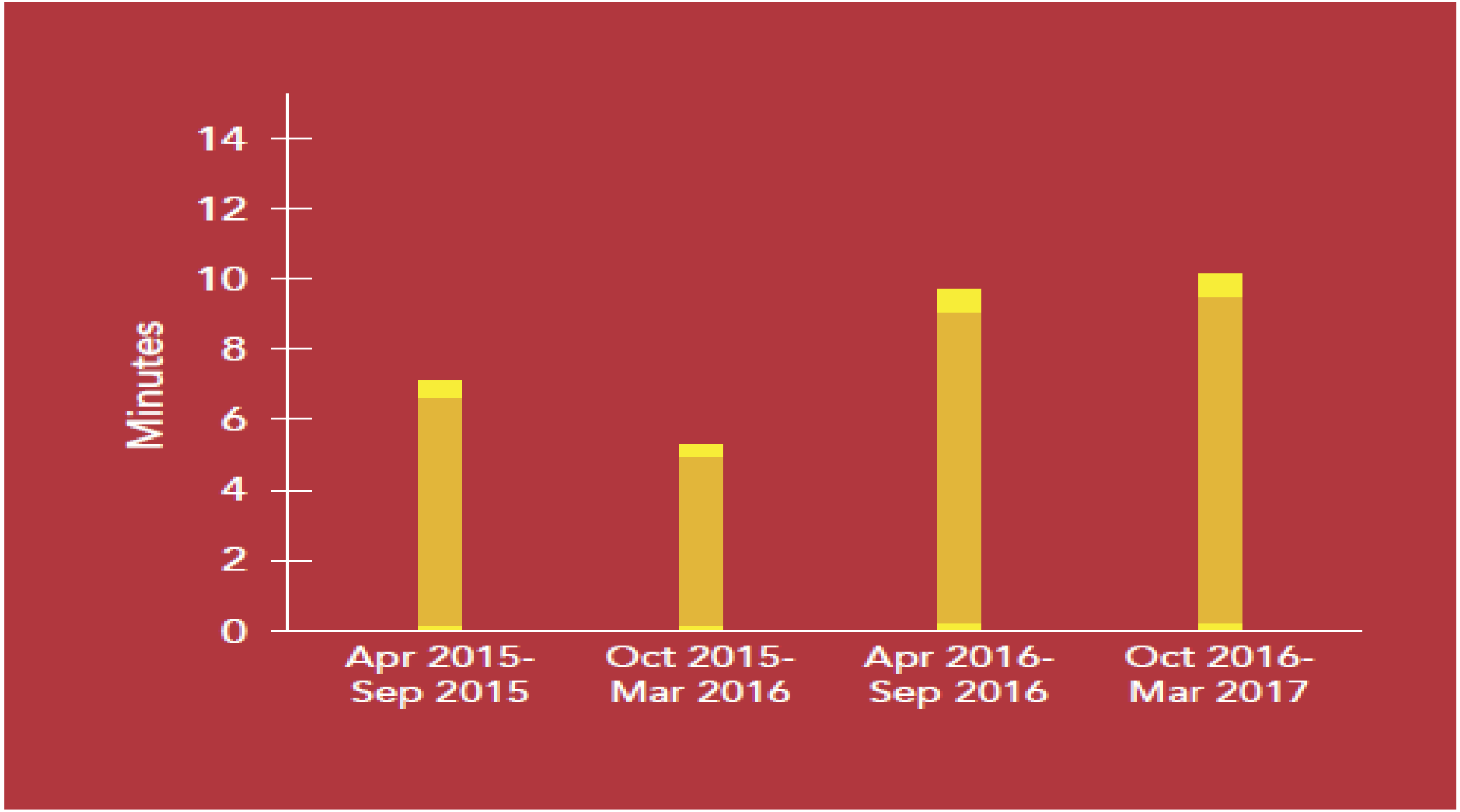
OSBP's along the Northern Corridor

OSBP	Location- Border Station	Status of Construction of OSBP Facilities	Status of Operations
Busia	Kenya/Uganda	Juxtaposed completed	Operational
Malaba	Kenya/Uganda	Juxtaposed completed	Operational
Elegu/Nimule	Uganda/South Sudan	Juxtaposed construction of main office block on Uganda side about to be completed. Construction on the South Sudan side yet to commence	
Merama Hills/Kagitumba	Uganda/Rwanda	Juxtaposed completed	Operational
Katuna/Gatuna	Uganda/Rwanda	Juxtaposed infrastructure construction ongoing completed	Operational
Nemba/Gasenyi	Rwanda/Burundi	Common Border	Operational
Akanyaru Haut/Kanyaru Haut	Rwanda/Burundi		
Mopndwe/Kasindi	Uganda/DRC	Juxtaposed construction yet to commence	
Rubavu/Goma	Rwanda/DRC		
Gatumba/Kavimvira	Burundi/DRC		
Goli/Mahagi	Uganda/DRC		
Nadapal/Lokichiogio	Kenya/South Sudan		

Malaba Average Border Crossing Time

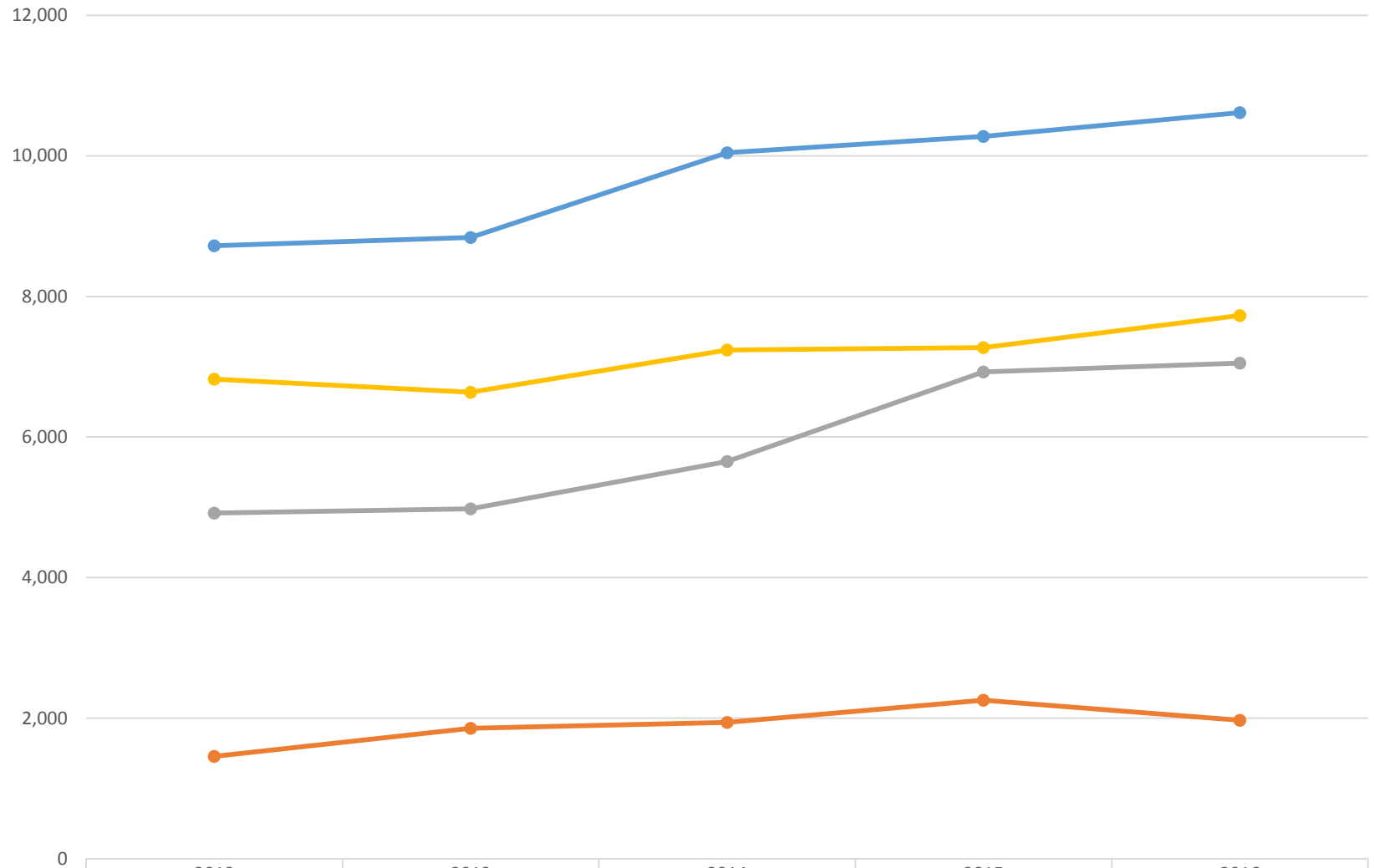


Source: Northern Corridor GPS and Mobile Phone Survey


Minutes
14
12
10
8
6
4
2
0
Apr 2015-
Sep 2015
Oct 2015-
Mar 2016
Apr 2016-
Sep 2016
Oct 2016-
Mar 2017

Above Left: Dredging of Mombasa Port. **Above Right:** Section of New Berth and Container Terminal. **Below Left:**Dongo Kundu Road linking to the New Container Terminal. **Below Right:** Section of the Dongo Kundu road.

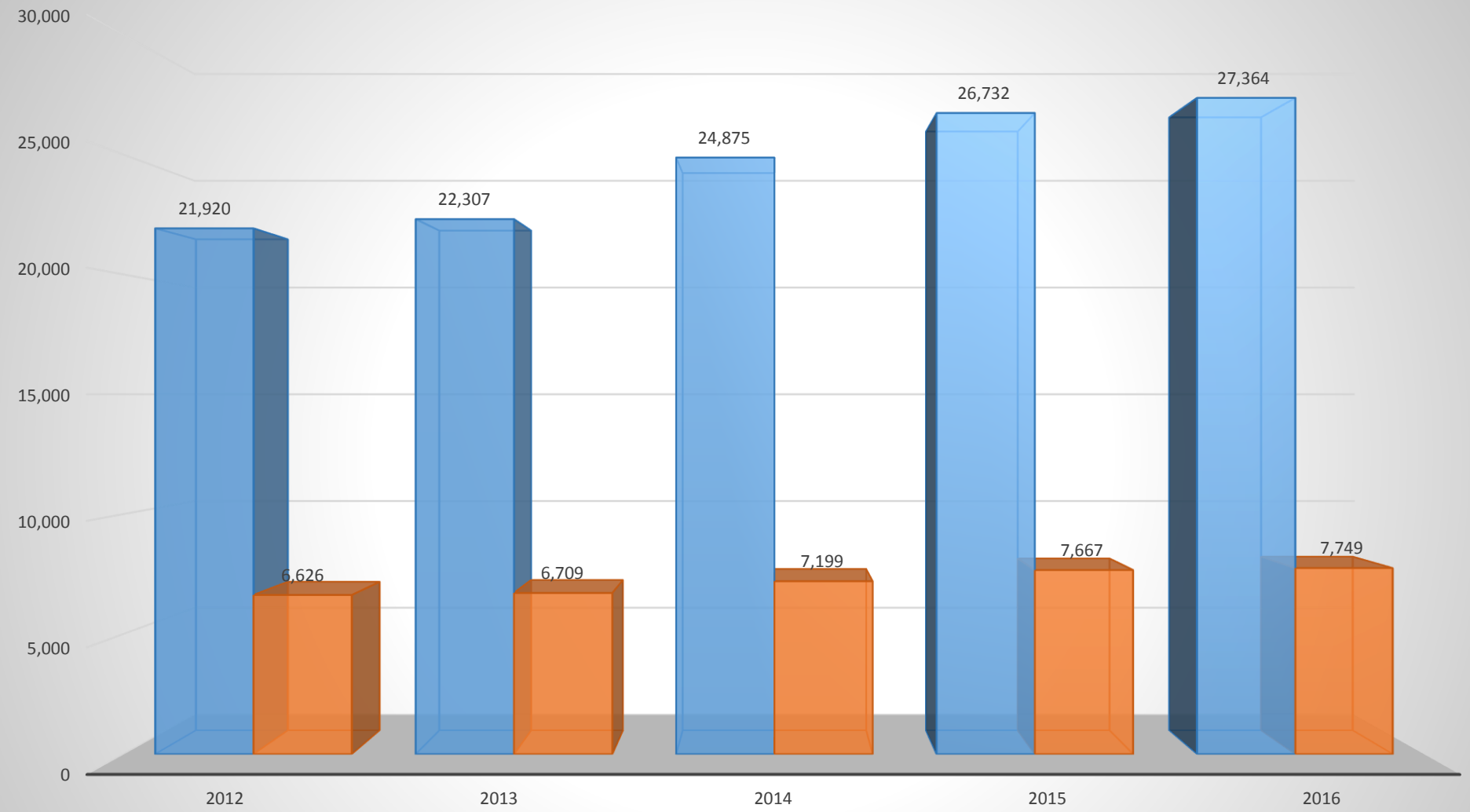
CARGO PROFILE MOMBASA PORT (DWT)



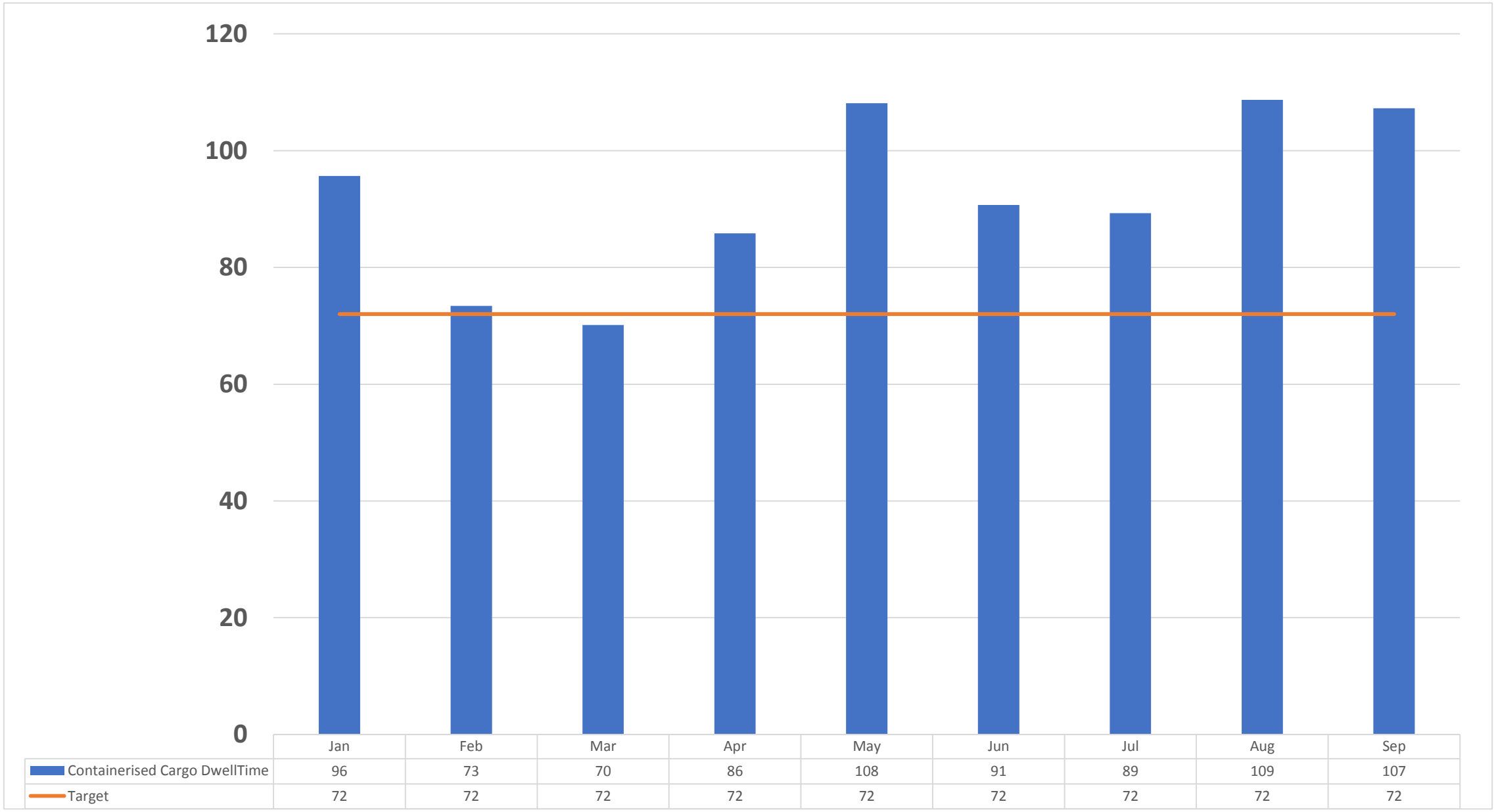
	2012	2013	2014	2015	2016
Containerized Cargo	8,723	8,838	10,047	10,276	10,615
Conventional Cargo	1,455	1,854	1,938	2,256	1,968
Dry Bulk	4,917	4,978	5,653	6,928	7,053
Liquid Bulk	6,825	6,637	7,237	7,272	7,728

Containerized Cargo Conventional Cargo Dry Bulk Liquid Bulk

GROWTH IN CARGO THROUGHPUT AT MOMBASA PORT



	2012	2013	2014	2015	2016
Throughput ('000DWT)	21,920	22,307	24,875	26,732	27,364
Transit Traffic ('000 DWT)	6,626	6,709	7,199	7,667	7,749



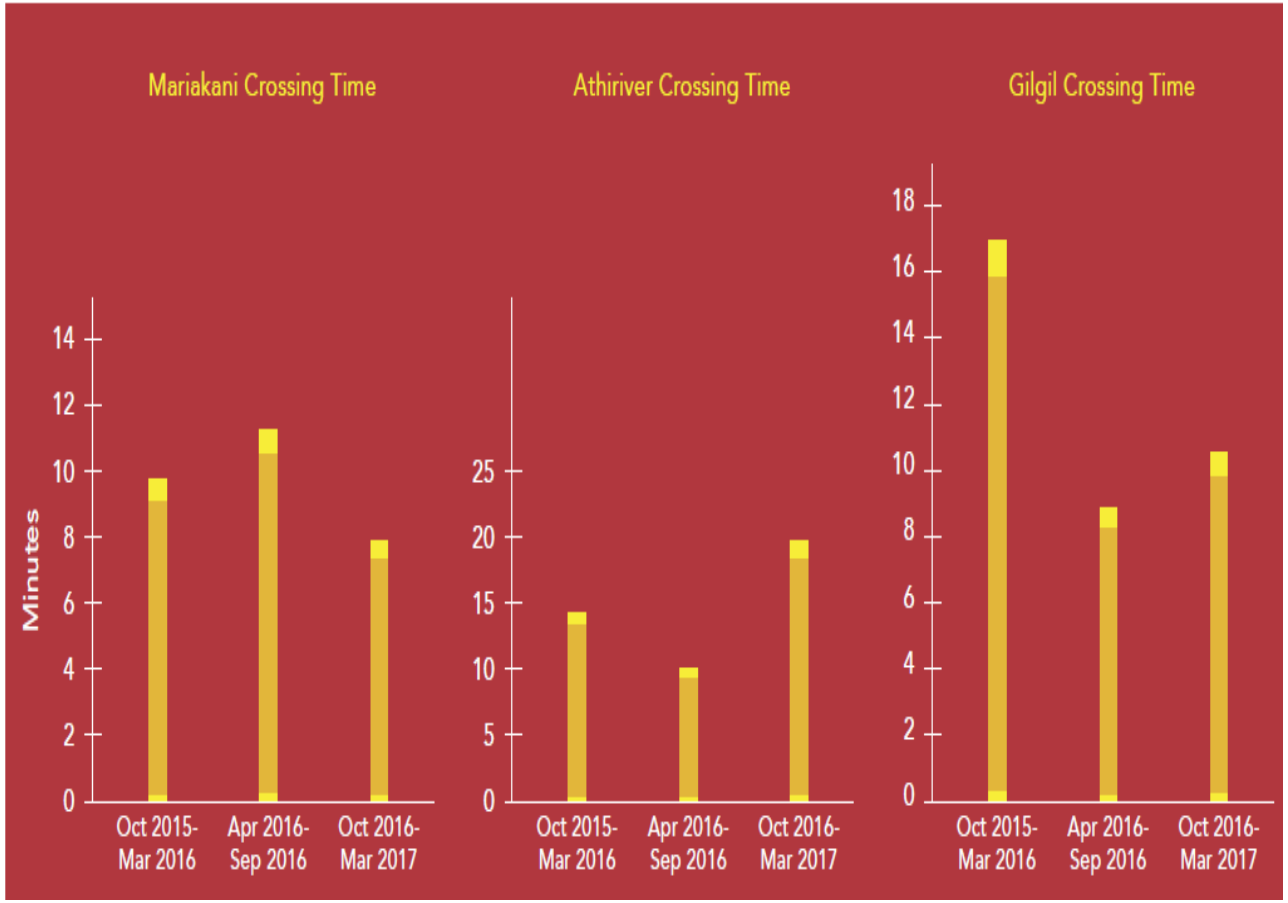
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Containerised Cargo DwellTime	96	73	70	86	108	91	89	109	107
Target	72	72	72	72	72	72	72	72	72

Borsboro Weighbridge near Lira Town.

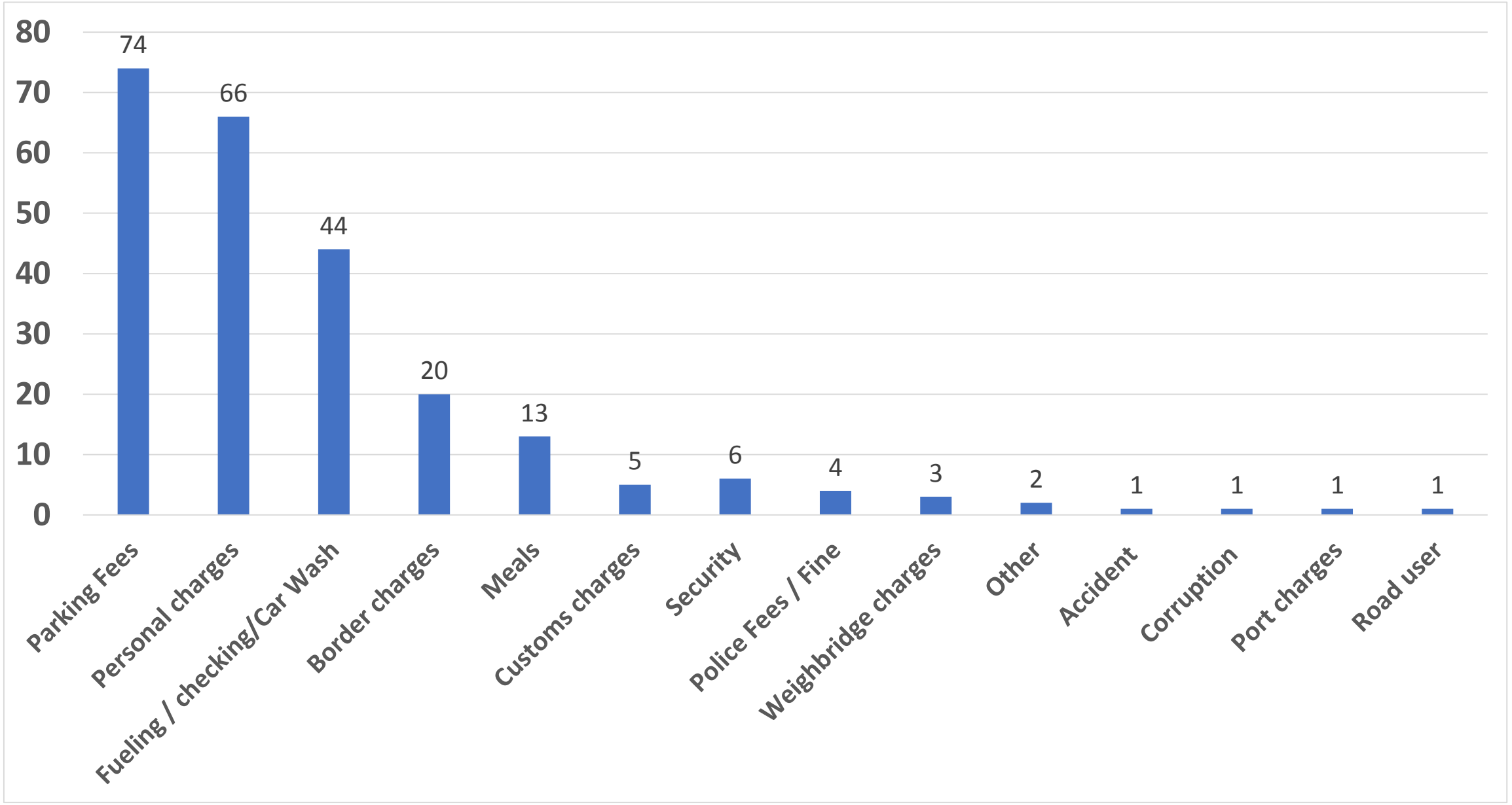
Dusty yard at Athi River Weighbridge Station

Mariakani HS-WIM: Left: A truck shown a Green Light is compliant and continues on its journey. **Right:** Truck is shown a Red Light is not compliant, it is diverted to the Static Weighbridge. Currently all the weighbridges in Kenya are being managed by SGS

Average Weighbridge Crossing Time



Stops by Drivers/Trucks and Incidence of paying fees

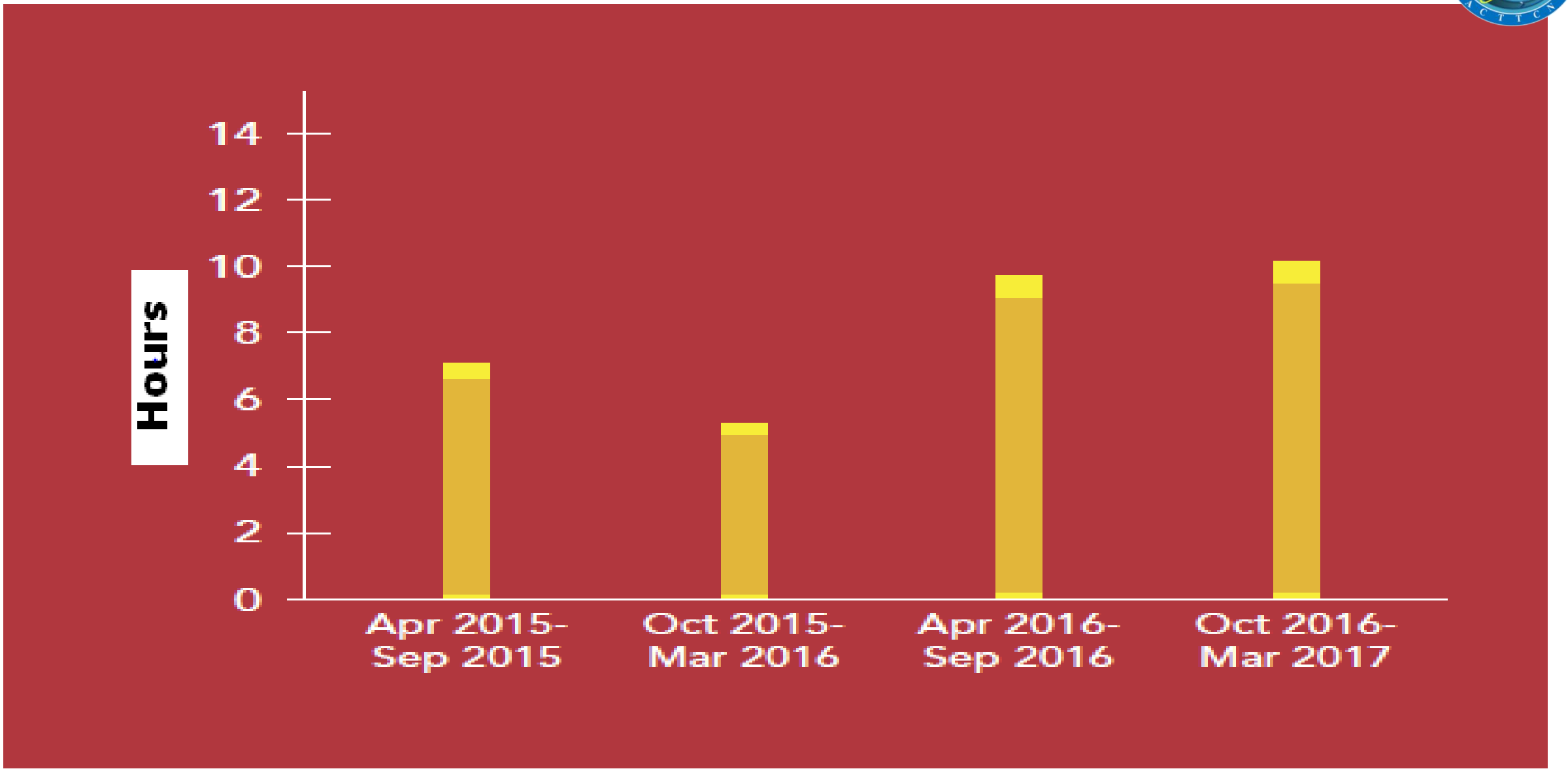


Road Transport Rates to various destinations in USD

Route		Distance	Average transport rates		Average cost per KM		No. of Round-Trips per month	
From	To	(Km)	March, 2015	March 2017	Mar-15	Mar-17	March, 2015	March 2017
Mombasa	Nairobi	481	1,057	800	2.20	1.66	11	10
Mombasa	Kampala	1,170	2,751	2,500	2.35	2.14	4	3
Mombasa	Kigali	1,682	4,350	3,300	2.59	1.96	3	2-3
Mombasa	Bujumbura	1,957	4,990	3,984	2.552	2.04	3	2
Mombasa	Goma	1,840	5,058	6,127	2.75	3.33	2	2
Mombasa	Juba	1,662	5,030	4,800	3.03	2.89	2	2

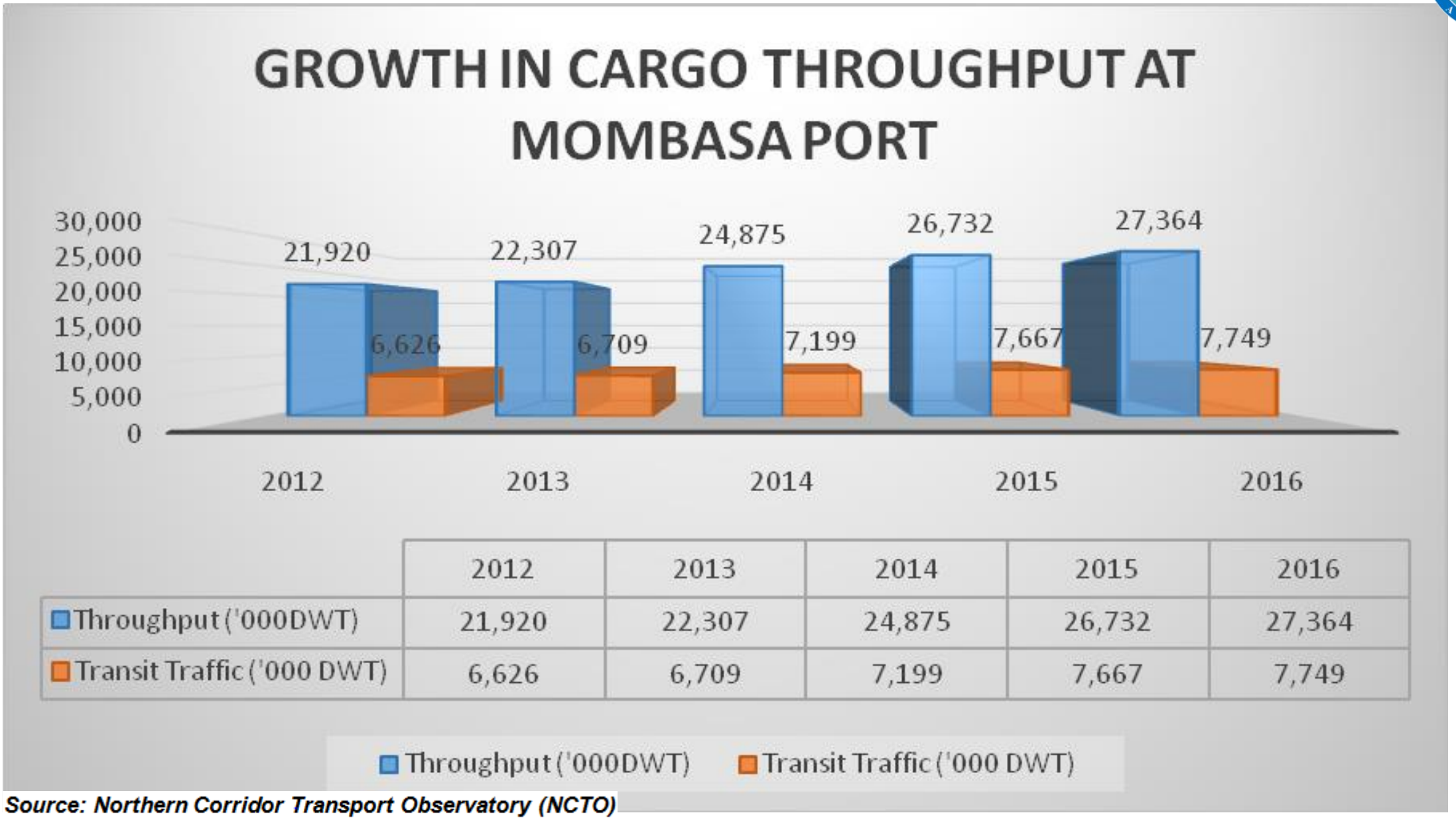
Source: Northern Corridor Transport Observatory (NCTO)

Average Border Crossing Time at Malaba (Hours)



Source: Northern Corridor Transport Observatory (NCTO)

Growth of Mombasa Cargo Throughput



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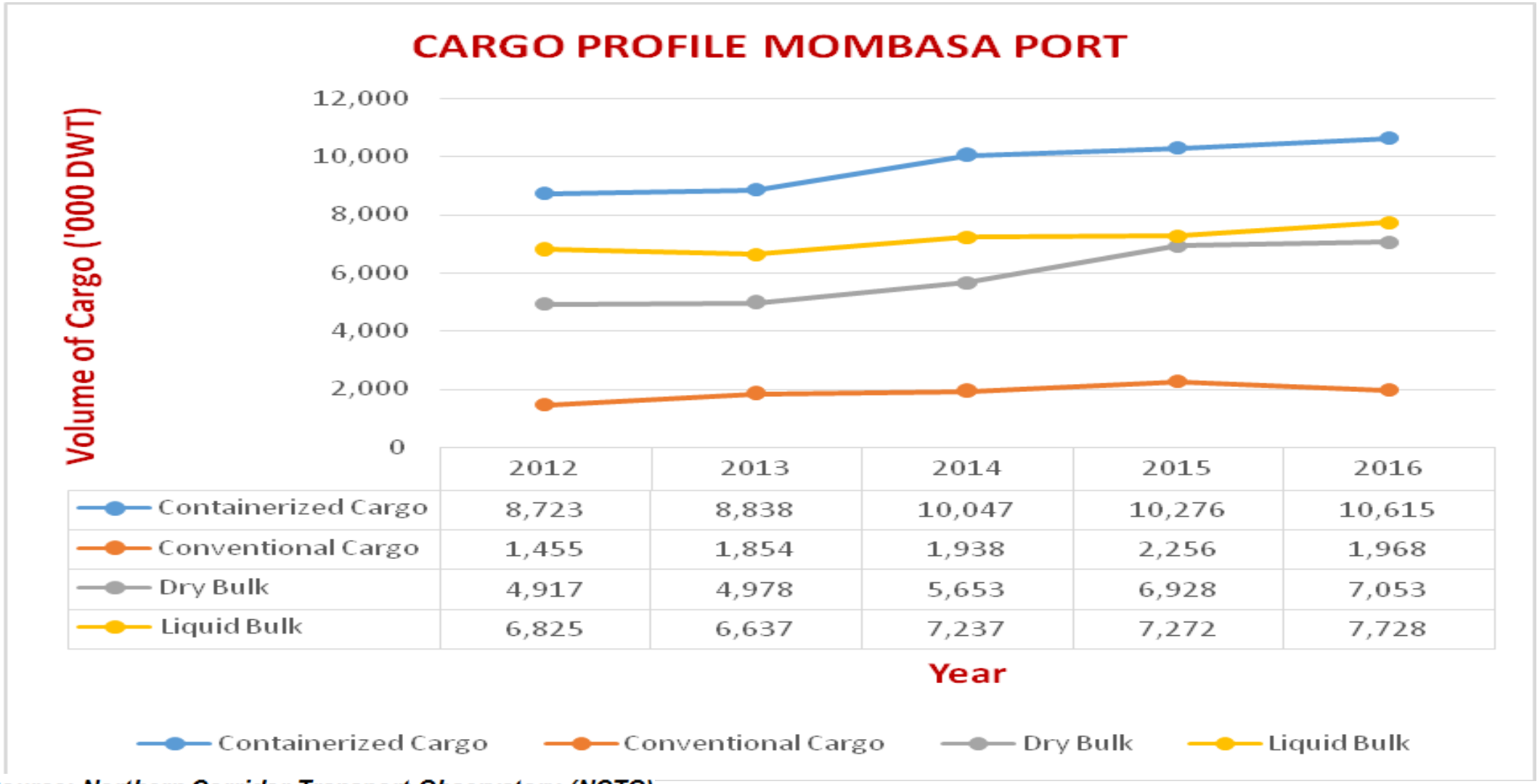
Breakdown of cargo throughput



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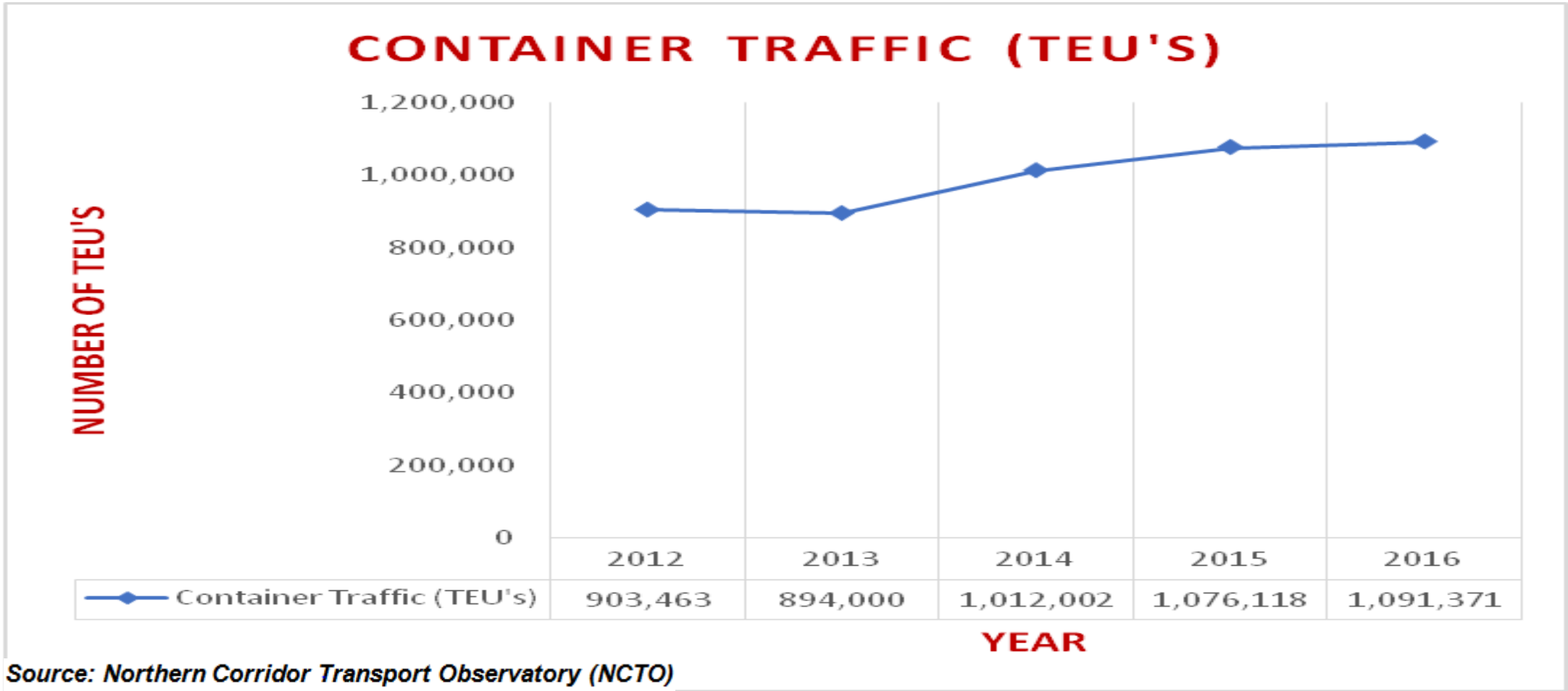
Source: Northern Corridor Transport Observatory (NCTO)

Container Traffic at Mombasa Port

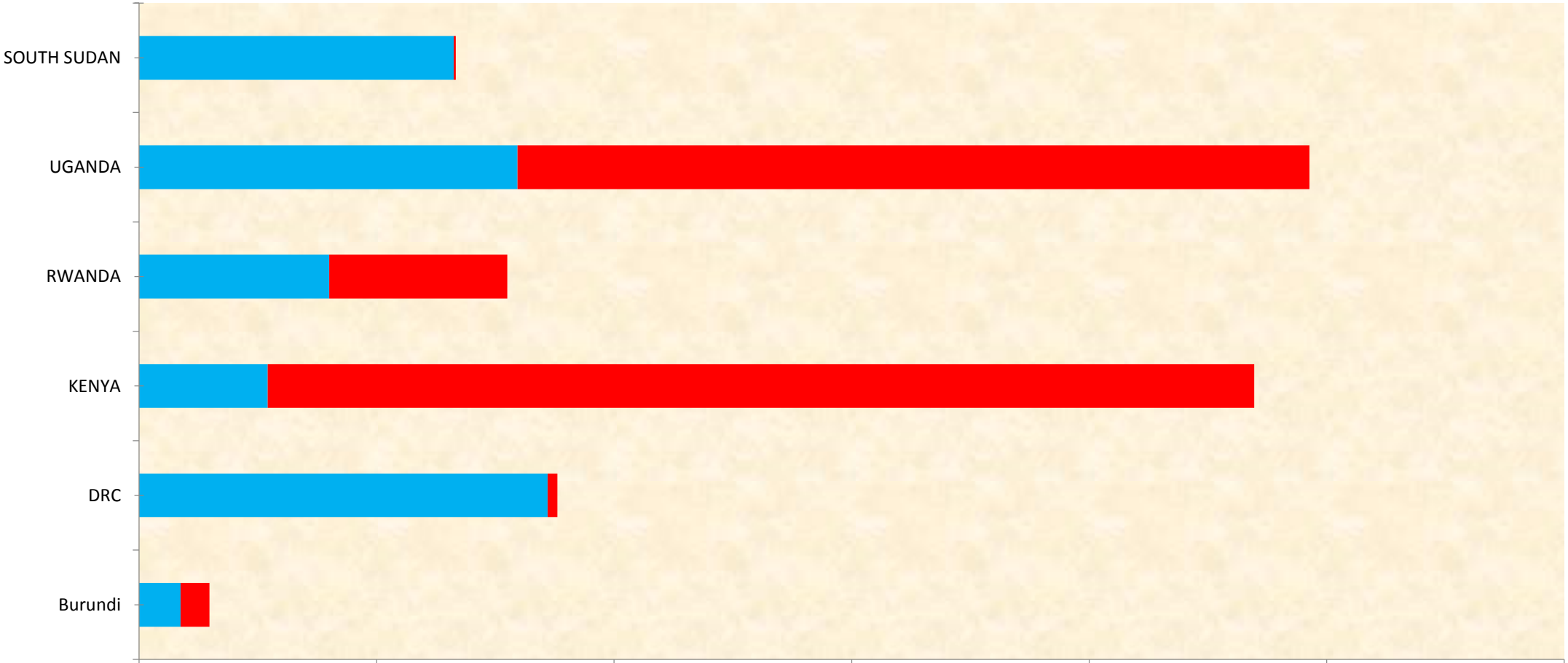
- In 2016 average daily container traffic was 2990 TEU's.
- SGR capacity running 5 trains a day 1080 TEU's
- Average annual growth of containerized traffic is 4%



Source: Northern Corridor Transport Observatory (NCTO)

Northern Corridor – Intra Regional Trade.

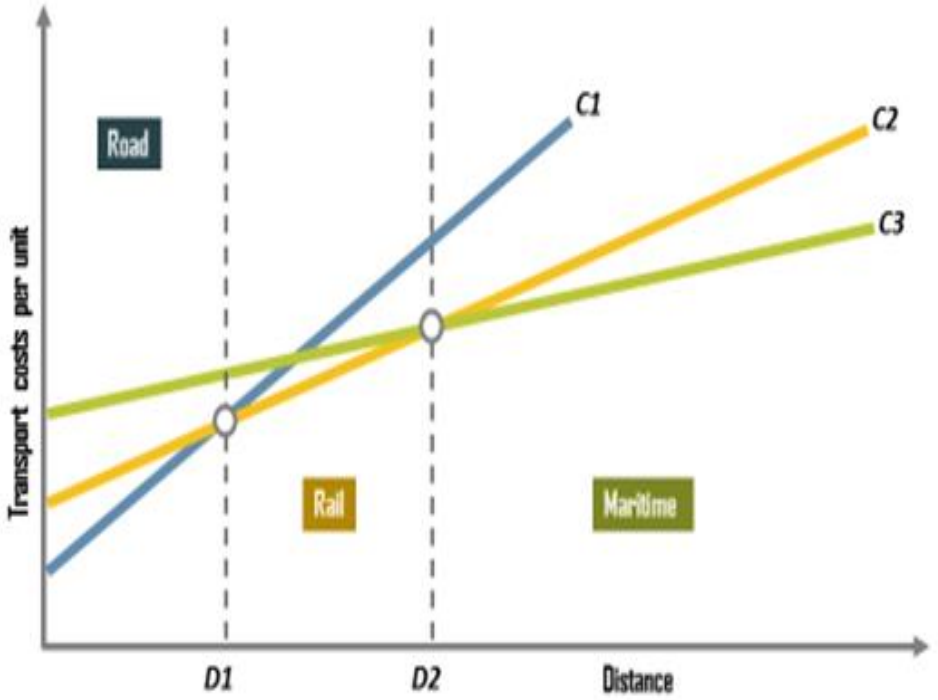
Trade (US$) among the Northern Corridor Member States (April to Sept 2016)



	Burundi	DRC	KENYA	RWANDA	UGANDA	SOUTH SUDAN
Total Imports	35,033,187	344,074,522	108,408,611	160,067,038	318,746,973	265,015,261
Total Exports	24,329,546	8,244,700	830,550,978	150,051,093	666,665,145	1,698,531

Distance, Modal Choice and Transport Costs

Highest					Lowest
Relative Cost	Air	Truck	Rail	Pipe	Water
Transit Time	Water	Rail	Pipe	Truck	Air
Reliability	Pipe	Truck	Rail	Air	Water
Capability	Water	Rail	Truck	Air	Pipe
Accessibility	Truck	Rail	Air	Water	Pipe
Traceability	Air	Truck	Rail	Water	Pipe



Way forward

- Countries with efficient transport systems have multimodal transport for both cargo and passengers; Develop all modes of transport, embrace development of continental transport infrastructure.

- *Develop intermodal transport exchange facilities*

- *Sensitization across all levels of stakeholders before implementation of trade facilitation initiatives.*

- *Develop a regional transit business system*

- *Think Global when producing goods for sale*

Way Forward

Promote intermodal transport along the Northern Corridor.

What is required:

- **Transport Links:** improvement and maintenance of transport links such as highways, railway networks/sidings, and inland waterways.
- **Transport Nodes:** contribute to the improved transshipment and distribution of goods in wider inland areas by improving operational efficiency . Consideration should be given to their location, accessibility and supporting infrastructure.
- **Transport Services:** Service quality and price are important factors in encouraging a modal shift. Documentary requirements for handling and clearance of goods should also be minimized.

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- Embrace policies that promote efficient utilization of our transport equipment e.g.
- Address the restrictions on trucks licensed to transport goods in transit.
- Promote use of piggy back wagons

THANK YOU

Northern Corridor Transit And Transport Coordination Authority - NCTTCA

P.O. Box 34068-80118

Tel:+254 41 4470734

+254 733 532485

Website: www.ttcanc.org

NCTO: http://top.ttcanc.org