

STRENGTHENING CAPACITY TO DESIGN AND IMPLEMENT POLICIES AND IDENTIFY SOLUTIONS THAT PROMOTE TRANSPORT CONNECTIVITY FOR THE ACHIEVEMENT OF THE SDGS

Data collection for monitoring corridor performance

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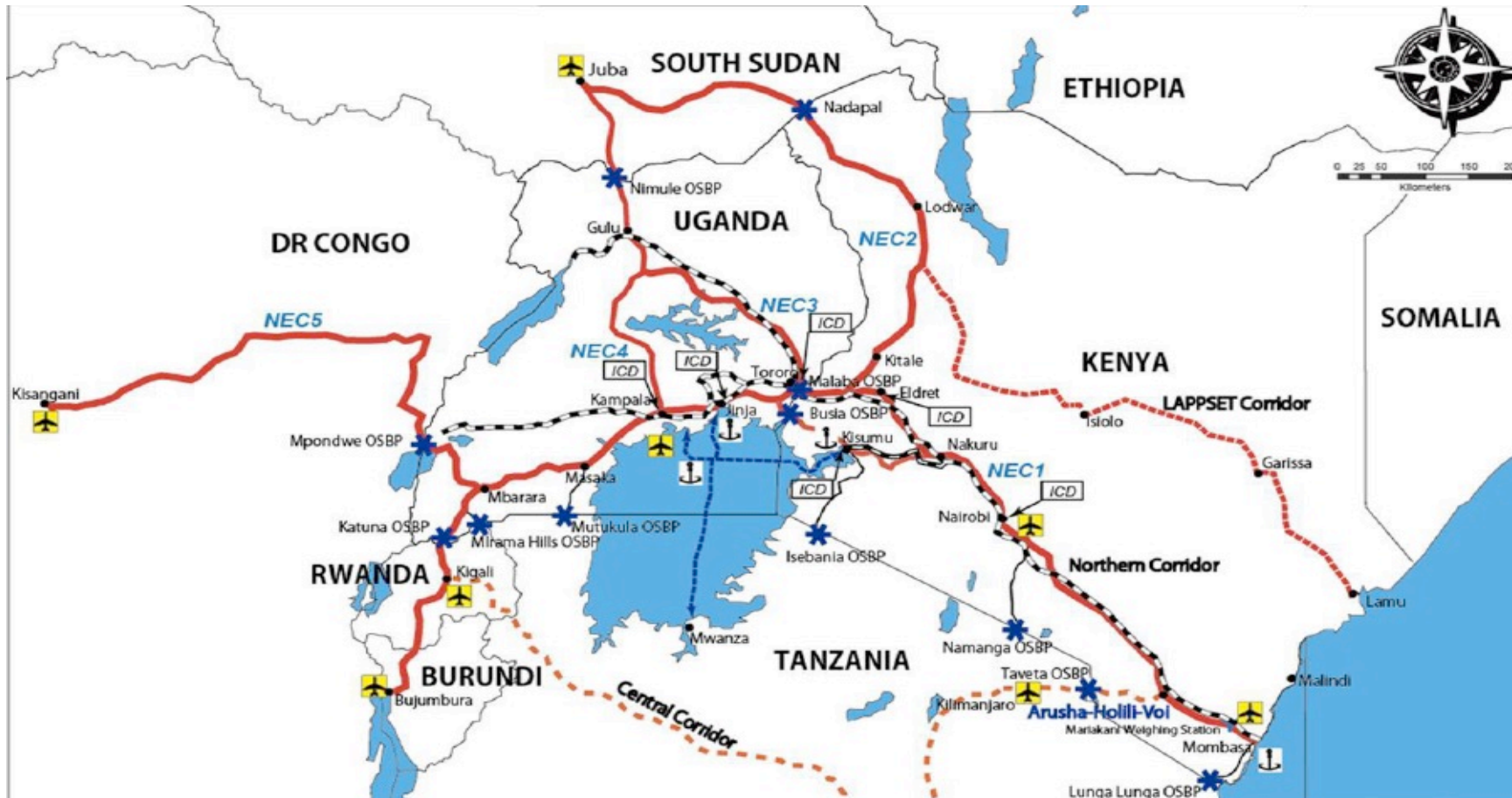
Northern Corridor Transit and Transport Coordination Authority

Scope of the Presentation

- A. Northern Corridor Transit and Transport Ordination Authority.
- B. Transport Observatory
- C. Indicators
- D. Data collection
- E. Analysis and reporting
- F. Challenges and Results
- G. Sample indicator results
- H. Conclusion.

About The Northern Corridor

The NC is the transport Corridor linking the Great Lakes Countries of Burundi, D. R. Congo, Rwanda, South Sudan and Uganda to the Kenyan sea port of Mombasa. The Corridor also serves Northern Tanzania and Ethiopia.



The six Member States of have signed the Northern Corridor Transit and Transport Agreement which is multilateral treaty with 12 protocols to facilitate transit cargo between the Kenyan Port of Mombasa and the hinterland States

NCTTCA

The Northern Corridor Transit and Transport Coordination Authority (NCTTCA) oversees the implementation of the agreement as well as facilitating interstate and transit trade and transport among member states.

OBJECTIVES

1. To **facilitate trade**, movement of persons, vehicles and goods in domestic, regional and international transport.
2. **Stimulate economic and social** development in the territories of the contracting parties.
3. 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.
4. To **implement strategies** for accelerating economic and social growth along the Corridor while ensuring **environmental sustainability**.

Northern Corridor Transport Observatory







Achievement of the NCTTCA mandate is intrinsically linked to the continual assessment of performance and the policy environment .

- ✓ The Northern Corridor **Transport Observatory** is a monitoring tool that assesses and measures performance of the Northern Corridor and has an online platform to track and disseminate information on various key performance indicators(<http://top.ttcanc.org>). Observatory has three components i.e., Indicators, GIS component and the Dashboard. Powerful tool for corridor diagnostics, analysis, and monitoring corridor performance.

Objectives

- ❑ Identification of areas where improvements are needed in relation to agreed targets.
- ❑ Provision of a set of tools for diagnosing problems.
- ❑ Measuring the evolution of the Corridor hence establishing the effectiveness of programs designed to address identified bottlenecks.
- ❑ Provision of key reliable information to policy makers to facilitate formulation of policies

A. Observatory Indicators

 Transit Times & Delays	 Productivity & Efficiency	 Rates & Costs	 Volume & Capacity	 Intra-regional Trade	 Emissions Indicators
<ul style="list-style-type: none"> • Vessel waiting Time before Berth • Ship turnaround time • Cargo Dwell time(at the port, ICD) • Truck Turnaround time (at ICDs, Port) • Transit time(per route, per Mode of transport) • Weighbridge Crossing time • Border Crossing time • Time for Customs Clearance at the DPC • Time at One Stop Centre • Delay after Customs release • Time for customs procedures at destination 	<ul style="list-style-type: none"> • Gross Moves per ship per hour • Number of accidents per route • Rate of Fraud or Declared damage of goods in Transit • Number of checkpoints per country per route • Quality of road infrastructure(IRI index) • Weight compliance 	<ul style="list-style-type: none"> • Port Transit Charges • Rail freight Charges (Per destination, MGR,SGR) • Road transport rates • Pipeline transport rates • Return of empty containers grace period, penalties, container deposits 	<ul style="list-style-type: none"> • Volume of containerized Cargo at the port • Volume of other cargo types(Bulk, liquid, general cargo) • Rate of containerization • Volume per country of destination • Total cargo throughput • Annual distance per truck • Evolution of licensed truck fleet per country • Transport capacity by rail locomotives and wagons • Weighbridge traffic 	<ul style="list-style-type: none"> • Volume and value of trade among Member states • Formal and informal trade 	<ul style="list-style-type: none"> • Emissions at the port(Ships on maneuvering, ship on anchorage, equipment use at the port, electricity usage at the port , rail locomotives accessing the port, vehicles and trucks accessing the port) • Corridor emissions(PM, NOX,CO2)

Development of indicators

Mapping processes and data capture

- Time release studies
- Specialized studies
- Stakeholder engagements
- Data Literacy-understanding the terminology

Development/updating of indicators, data analysis
, formulas

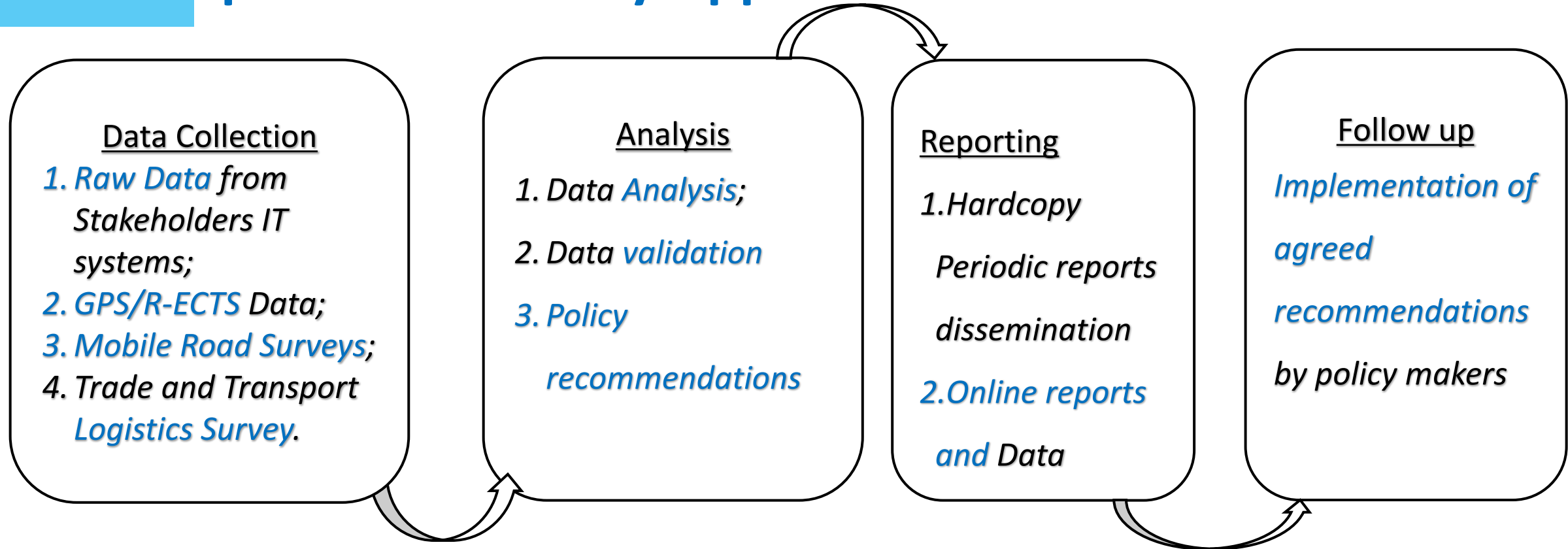
- knowledge sharing through Corridor working sessions (Central corridor , Abidjan Lagos corridor , Dar Corridor)-Important for benchmarking and harmonization
- Port and Norther Corridor charter
- Transport Observatories guidelines SSATP and other publication

<https://documents.worldbank.org/en/publication/documents-reports/documentdetail/719971468325781473/trade-and-transport-corridor-management-toolkit>

<https://www.ssatp.org/sites/ssatp/files/publications/SSATPWP98-Guidelines-Corridor-Observatory.pdf>

Setting targets-Benchmarking, stakeholders SLAs

Transport Observatory Approach



Data collection

Preparation of Data requirements based on the indicators

Data collection

i) Stakeholders IT systems are the preferred source for two main reasons:

1. Data being a by-product of operations, the sustainability of the source is guaranteed;
2. Accessing comprehensive data sets avoids challenges on the statistical validity of reduced samples.
3. Comparing multiple data sources

Process of getting existing automated data

- Application Programming interface (API)
- Direct transfer to the transport observatory server through FTP
- Emails –limited for voluminous data
- Physical Visits-Expensive

ii) Surveys

Guidelines on designing industry surveys

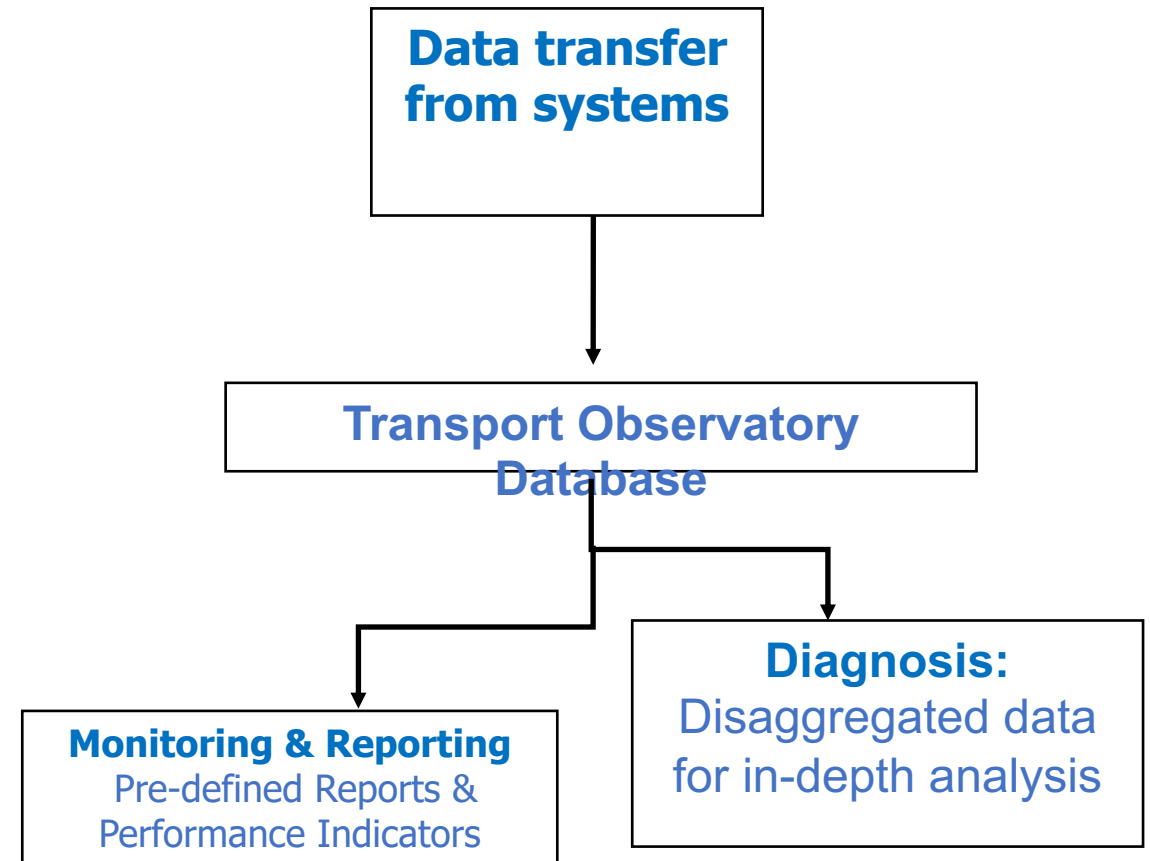
Automated some of the surveys e.g. the road transport survey for drivers captures transit times and stops , stop reasons though and android app installed on drivers phones

Data collection and Analysis

Data has to be raw. Why raw data and not processed or analysed data?

- Go Deep with Customized analytics
- Settle Discrepancies
- Squeeze all the juice; Disaggregated levels can be exploited further for conducting corridor diagnostics and analysis at granular level.
- Validate –before dissemination on the public portal or publication

Format: Any format is acceptable(Comma Separated files(CSV), Excel, txt, JavaScript Object Notation(JSON), shapefiles for geospatial vector data, XML etc)
Extract transform and load (ETL) tools for working with any format



Reporting.

Reporting period: Weekly , Monthly , quarterly , bi-annually, annually

1. Dashboard Report (Weekly): www.kandalakaskazini.or.ke
 - ✓ This report covers about 15 key Performance Indicators that can monitored on weekly basis
2. Port Community Quarterly Reports : Report on implementation of the Mombasa port and Northern corridor **charter** which binds both public and private stakeholders to collective and individual commitments towards enhancing efficiency of the corridor
3. Bi-annual/annual Transport Observatory Report: <http://top.ttcanc.org>
 - ✓ This is a comprehensive report (with over 40 Performance Indicators).
 - ✓ It helps to measure the effectiveness of programs designed to address identified bottlenecks.

Consumers of information:

1. Stakeholders (Public / Private Sector)
2. Policy organs-executive committee and council of ministers
3. Heads of States integration summit
4. Development Partners and Donors
5. Academia, Media, etc.

Challenges and some Results

Some Challenges

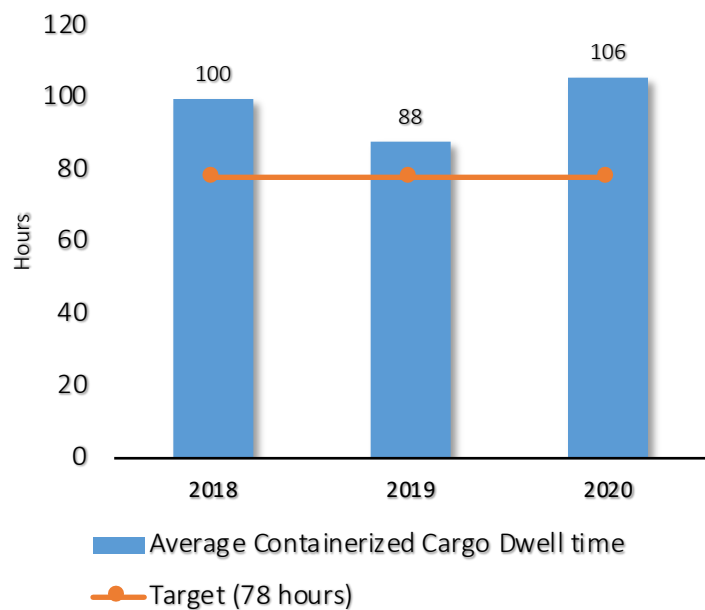
- Lack of integration of Information systems from different Member States.
- Manual processes of data collections from some stakeholders.
- Missing data for some defined indicators. Eg Lack of regular and systematic collection of road safety and road condition data due to challenges in some Member States.
- [Sustainability](#) mechanism-funding the initiative;

The observatory has led to;

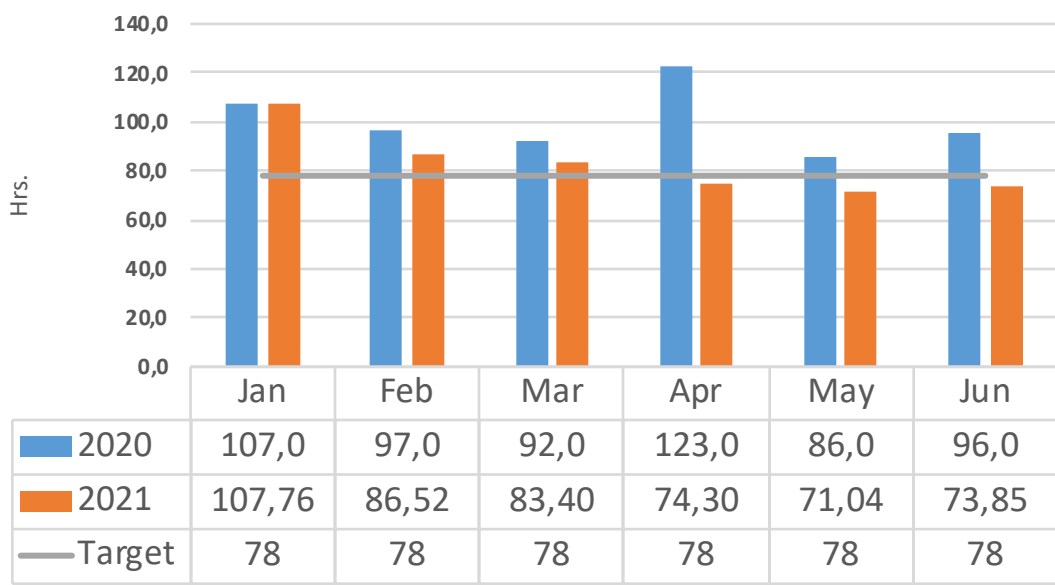
- Installation of the HSWIM on weighbridges.
- Reduction in Transit times
- Reduction in Border Crossing Time and Installation of OSBPs.
- Reduction/Elimination of Police and Roadblocks:
- Identification of other trade facilitation initiatives: this include;
 - ✓ *Establishment of the Port Community Charter.* This was a result of Inefficient performance of the Port as well as Northern Corridor being reported by the observatory.
 - ✓ *Self Regulatory Vehicle load Control Charter:* This is aimed at sensitizing transporters to be weight compliance to protect our road and promotion safety among others.
- ✓ Safety promotion along the Corridor through mapping of blackspots

Sample Indicator results

Containerized Port Dwell time

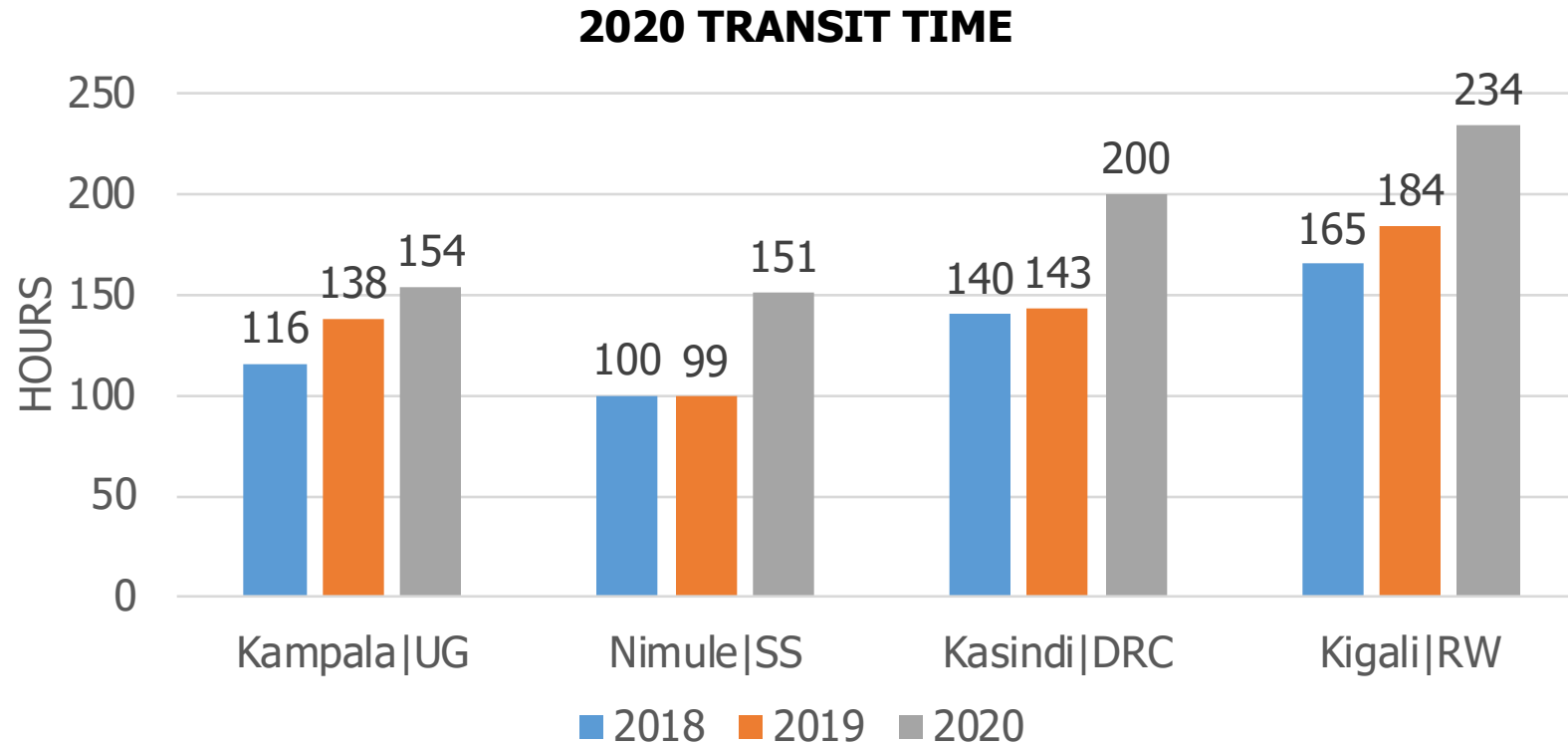


Containerized Port Dwell time 2021



- The Average Container Dwell Time generally improved in 2021 compared to 2020

Average Transit Time from Mombasa to Various Destinations

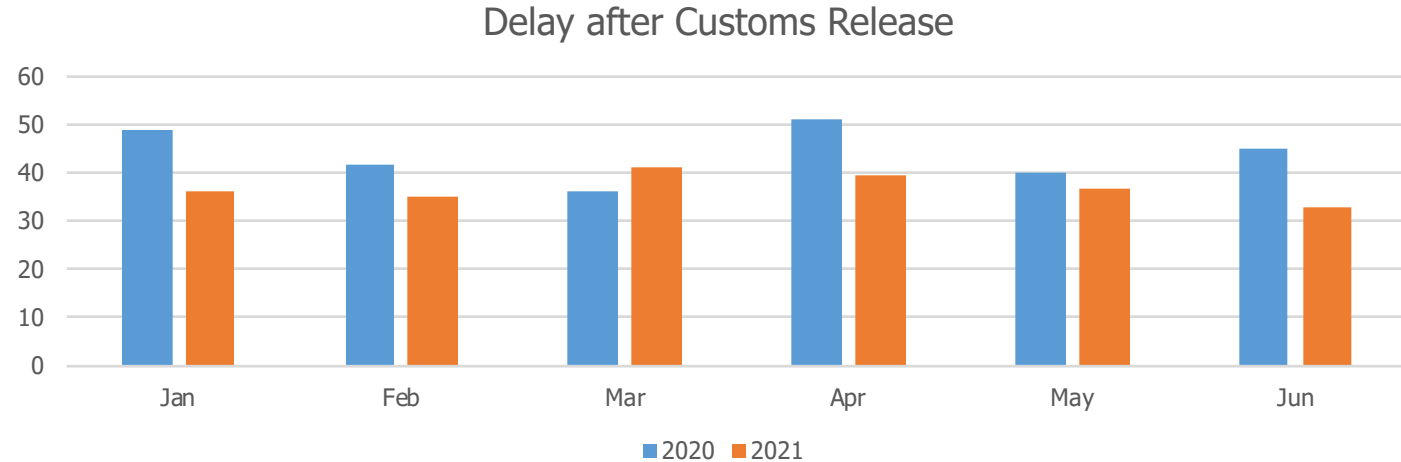


- The increase in average Transit Time was attributable to the disruptions caused by restrictions introduced in response to the COVID-19 pandemic containment measures including driver testing, lockdowns, curfews, and social distancing. These measures slowed down processes and contributed to high transit time.

Delay after Customs Release



Delay After Customs Release at the Port of Mombasa



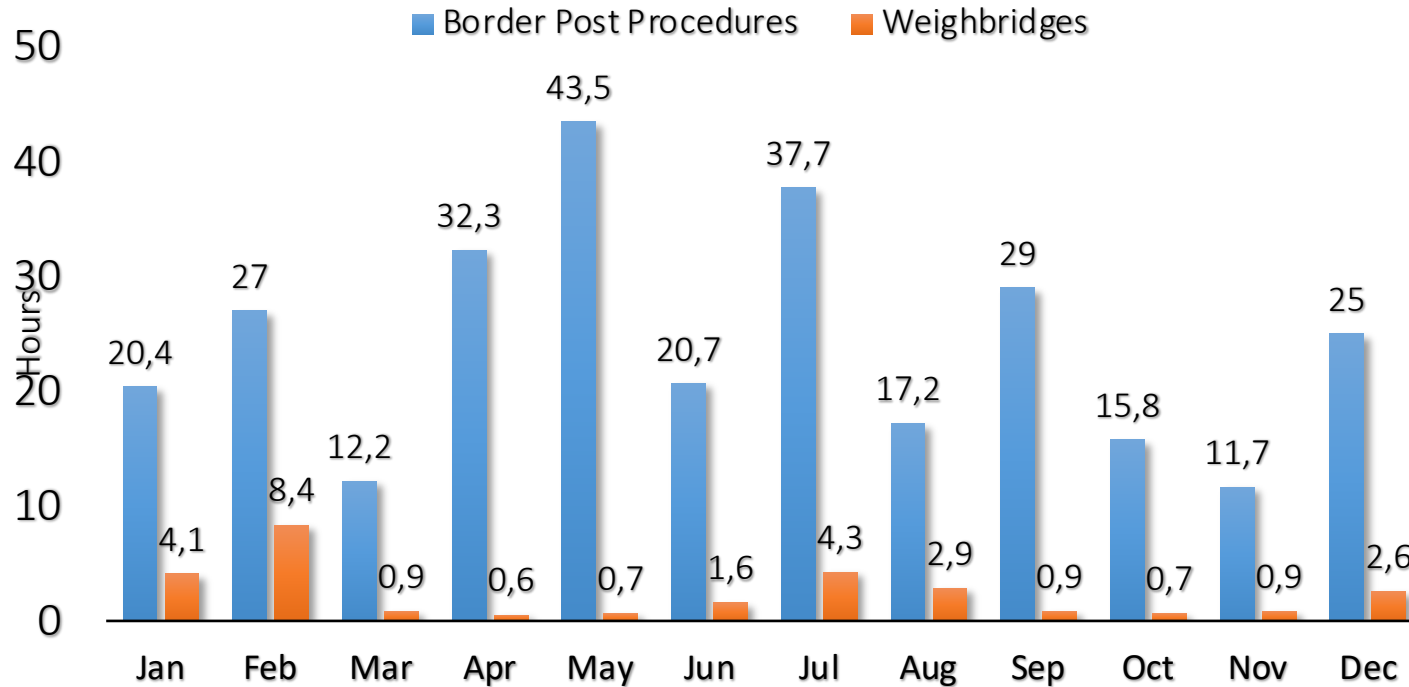
- The time taken to pick the cargo after Customs release has slightly improved when compared with similar months in 2020. This signals recovery from effects of COVID-19 which had negatively affected truck turnaround time.
- The improved performance comes in the wake of automating gate clearance procedures, dedicating special gates to Container Freight Stations (CFSs) and ensuring 24-hour operations.
- The performance indicator is within the set target of 36 hours.

Freight Charges for various destinations

From	To	Distance (KM)	Tariff Per Container/Km in USD			Number of trips	
			2016	2018	2020	2019	2020
Mombasa	Nairobi	481	1.78	1.62	1.77	8	6
Mombasa	Kampala	1169	1.86	1.79	1.88	4	2
Mombasa	Kigali	1682	2.16	2.23	2.08	2	2
Mombasa	Bujumbura	1957	2.55	3.07	3.07	1	1
Mombasa	Goma	1840	3.33	3.13	3.53	1	1
Mombasa	Juba	1662	2.86	3.01	2.29	2	2
Kampala	Mombasa	1169	0.68	1.97	1.97		
Kigali	Mombasa	1682	1.78	1.78	1.78	2.5	2.5
Bujumbura	Mombasa	1957	0.08*	0.082*	0.08*		
Goma	Mombasa	1840	1.98	0.99			
Juba	Mombasa	1662	1.81	2.106	2.11		

***Rate per Tonne per Km in USD 2020**

Weighbridge and Border Post crossing time



High border post procedures time was mainly attributable to the closure of some borders along the Northern Corridor as a measure to contain the spread of the COVID-19 pandemic.

Conclusion

- ❖ Automation of data collection process
- ❖ Validation is key before dissemination-
 - Opportunities for feedback mechanisms
 - Points where analysis & data could support decision making
- ❖ Need to have a data manual/operation handbook containing data requirements, definition, metadata etc
- ❖ Review of indicators on a regular basis
- ❖ Follow-up on implementation of policy recommendations
- ❖ Data management and sharing policy
- ❖ More details on the Northern Corridor Performance are available through the following online addresses: top.ttcanc.org or kandalaskazini.or.ke.



THANK YOU