Endline Evaluation

TradeMark East Africa's Cargo Tracking For Rail Project

A SUMMARY OF THE FINAL EVALUATION REPORT

TRADE MARK EAST AFRICA

Growing Prosperity Through Trade

Contents

Introduction

The purpose of the summative evaluation was to assess the extent to which the project achieved its intended outcomes and outputs and on a higher level, the extent to which it contributed to reducing trade barriers.

The evaluation's purpose was twofold; accountability to TMEA's development partners and other stakeholders and lesson learning.

The findings, recommendations, and conclusions will be used to inform similar or future project designs. The evaluation was guided by OECD-DAC evaluation principles and criteria of effectiveness, impact, relevance, sustainability, and efficiency.

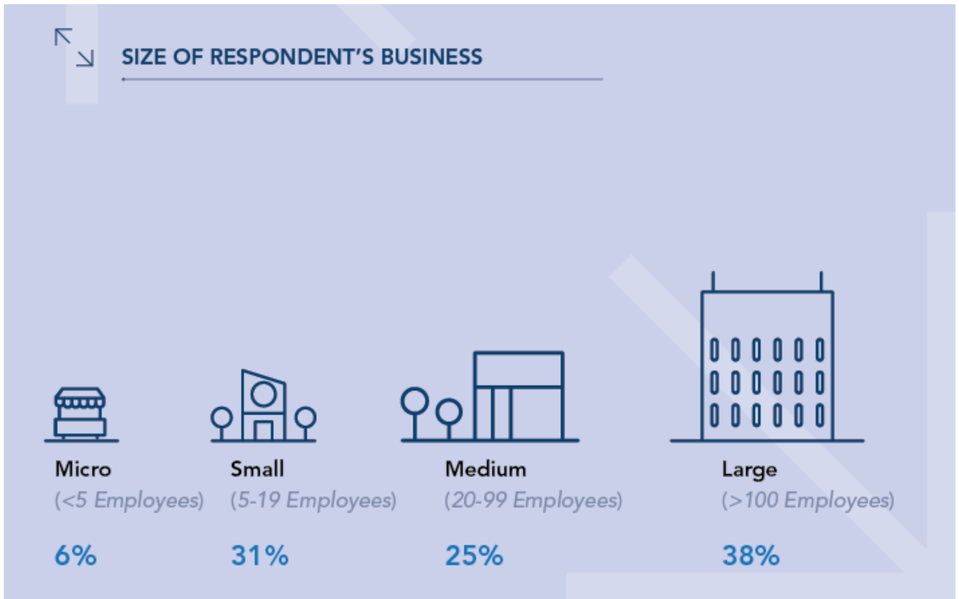
OVERALL ASSESSMENT AGAINST THE EVALUATION CRITERIA

Category	Category score	Confidence Level
Relevance	●●●●●	High
Impact	●●●●○	High
Effectiveness	●●●●○	High
Efficiency	●●●●○	Medium
Sustainability	●●●●○	High

Evaluation Approach & Methodology

The evaluation team used various quantitative and participatory qualitative data collection techniques, collecting both primary and secondary data. During data collection, ninety-four end-users filled in an online questionnaire and the team worked with 13 key informants who provided detailed information about the project.

Out of the 94 survey respondents 21 were females and 73 males, 38% were from large businesses with over 100 employees and 25% from medium companies, 31% from small and 6% from micro companies.



See page 6 diagram of TMEA's TOC

This entailed reviewing the project and TMEA's Theory of Change to determine causality or the extent to which the results were due to TMEA's intervention..

The team used the TOC to determine the project's demonstrable and attributable results and analyse the underlying assumptions. They critically examined the strength of evidence for the outcome and impact-level results to assess causality and attribution pathways. In addition, the team conducted value for money analysis, end-users and key Informant Interviews (KII) with TMEA/partner staff and other relevant stakeholders, desktop research, and satisfaction surveys and established the most significant change stories.

The evaluation used purposive sampling to select interviewees for online questionnaires and key informant interviews to target the direct and indirect beneficiaries, stakeholders, and end-users who may have experienced any negative impacts of the project. This methodology ensured high response rates, representative samples, practicability, and the collection of useful information for the evaluation.

EVALUATION FINDINGS

RELEVANCE

The project has scored a 5 in this category

Relevance refers to the extent to which a development intervention conforms to the needs and priorities of the target groups, the policies of the recipient countries and donors and TMEA's strategy.

The evaluation sought to answer the questions below -

1 Are the interventions consistent with TMEA's Theory of Change?

2 How important is the TMEA supported intervention regarding the facilitation of the efficient movement of goods within Kenya, across borders in the region, and beyond to establish a single, seamless, integrated, and digital end-to-end cargo process flow from the Port-to-SGR-to-ICD and vice versa?

3 How is the TMEA supported intervention aligned with the priorities of the EAC and the Kenya government's national policies and strategies and the needs of key stakeholders (Including the Partner States, the Private Sector, TMEA, and its donors)?

4 How was the TMEA supported intervention responsiveness to the challenges then, how relevant is the intervention today (including in the context of Covid-19)?

CONFORMANCE TO COUNTRY PRIORITIES AND POLICIES

Primary and secondary data collected during the evaluation indicate that project objectives, outputs, and activities were relevant to the Government of Kenya's policies and priorities. For example, the project aided implementation of a Presidential Decree in 2018 that all cargo from the port of Mombasa must be transported via rail.

The execution of the decree faced various challenges, such as uncoordinated efforts by the three key agencies, namely the Kenya Revenue Authority, Kenya Ports Authority and Kenya Railways Corporation.

There were also capacity limitations at the Inland Container Depot in Nairobi (ICDN) and the inability of end-users to track and trace their cargo once it arrived in Nairobi. The project complements other government systems like KRA-iCMS, Regional Electronic Cargo Tracking, KWATOS, and Single Window Systems.

In addition, the Cargo Tracking for Rail project supports government efforts in implementing the World Trade Organisation Trade Facilitation Agreement (WTO-TFA). Specifically, the project also facilitates the government to:

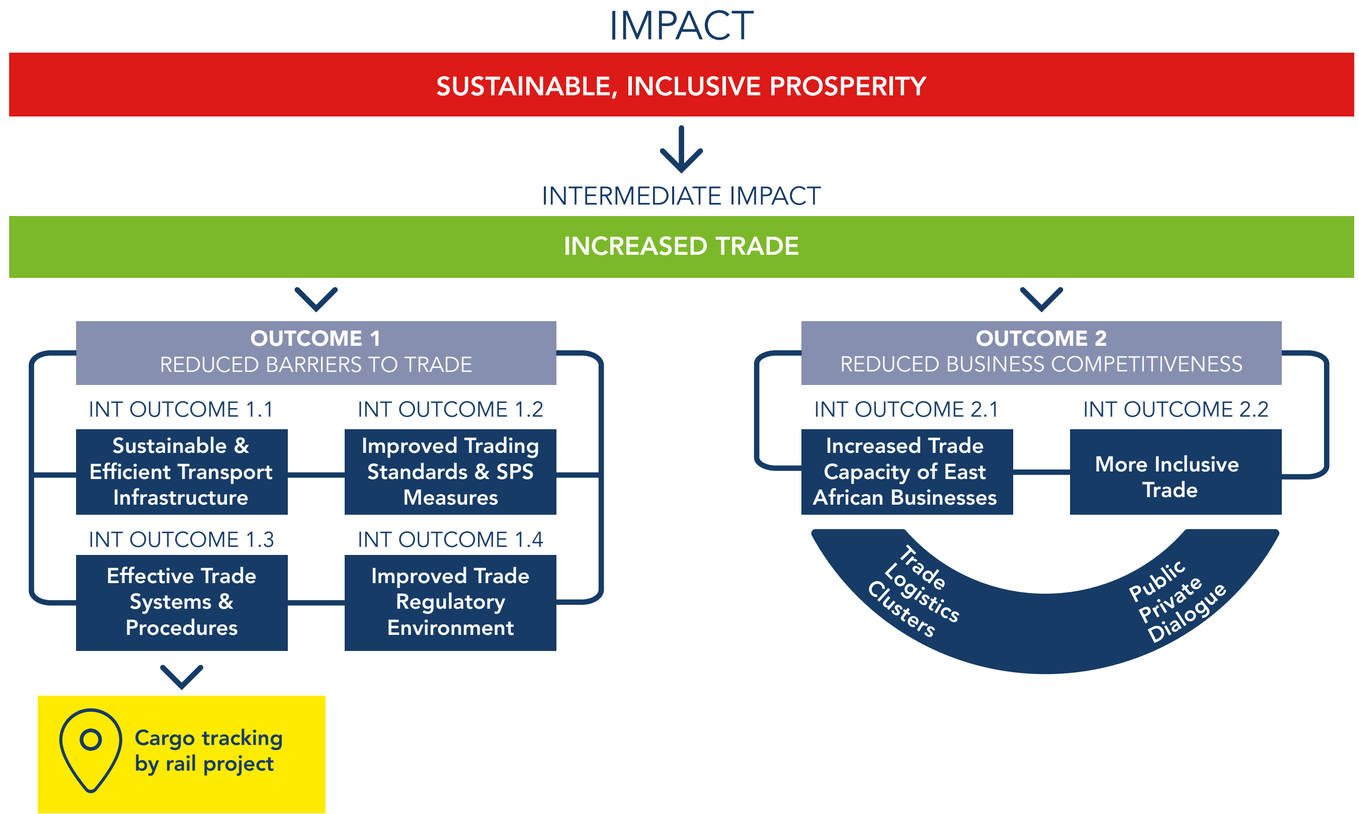
- Meet its trade facilitation commitments to enhance transparency, simplification, harmonisation and standardisation of trade processes and procedures,
- Implement the Big 4 Agenda, which includes the creation of a free market and improving the ease of doing business
- Vision 2030 aims to create a globally competitive and prosperous country with a high quality of life by 2030.

CONFORMANCE TO DONORS, STAKEHOLDERS AND TMEA STRATEGIES

The project fully aligns with TMEA's Theory of Change (TOC). The TOC has two high-level outcomes: reduced trade barriers and improved business competitiveness, which together are expected to lead to increased trade. Under the reduced barriers to trade outcome area, there are four intermediate outcomes(IO) under which this project maps, specifically IO 1.3 or effective trade systems and procedures.

This workstream includes all TMEA's information and communication technology for trade (ICT4T) work. Through its ICT4T programming, TMEA works to simplify, harmonise, increase transparency and, overall, improve efficiency of trade systems and procedures in Eastern Africa. TMEA does this through automating previously manual processes or enhancing existing processes and procedures. The project supports USAID's mission of promoting two-way trade between the US and Kenya and the rest of the EAC.

TMEA'S THEORY OF CHANGE



COMPLEMENTARITY AND CONSISTENCY WITH TMEA PROGRAMMES

The project's main target of reducing inefficiencies related to cargo evacuation from the Port of Mombasa to the ICDN via rail complement other TMEA projects, including:

1. Customs management systems upgrades
2. Mombasa port improvement programme
3. Implementation of WTO trade facilitation agreement (WTO TFA)
4. Automation of trade systems through TMEA projects, Single Window Information for Trade (SWIFTS) such as Kentrade.
5. The regional electronic cargo tracking project
6. Integrated border management
7. The project also supports projects mapped to strategic objective two, which aims to improve private sector business competitiveness by reducing trade costs to private sector organisations.

CONSISTENCY WITH THE EAC TREATY AND DEVELOPMENT STRATEGY

The project's objectives of enhancing efficiency in cargo tracking by rail are consistent with the Treaty for the Establishment of the EAC, which recognises establishing a common market and customs union (Articles 75 and 76). The customs union and common market aim to eliminate tariff and non-tariff barriers to trade in the region. This project also supports the 6th EAC Development Strategy of 2021- 2026, which seeks to facilitate regional and overall socio-economic development in the Partner States to transform EAC into a stable, competitive, and sustainable lower-middle-income region by 2030.

IMPACT

The project has scored a 4 in this category

The impacts are the tangible long-term outcomes to which the project contributed, positive and negative, intended and unintended.

The evaluation sought to answer the questions below -

1 How did or how will the Cargo Tracking for Rail project contribute to reaching higher level TMEA objectives related to the improvement of systems and procedures for trade?

2 What are the key project elements that can be considered successful, new, and innovative?

3 To what extent has the project generated unintended positive or negative impacts?

The project's interventions directly contribute to results under effective trade systems and procedures. This outcome underpins the assumption that the more trade processes, procedures and systems are automated, the more harmonisation, simplification, efficiency and transparency of services occur leading to increased predictability of time, costs and administration associated with trade processes and procedures which in turn reduce the costs to trade for the private sector.

COST SAVINGS AS A RESULT OF TIME REDUCTION

Evidence shows that the project directly influenced reducing clearance time at the ICDN for tagged containers from 12 days in 2018 to 4 days in 2021. This efficiency gain has led to a reduction in the cost that cargo owners pay for any extra days that their cargo remains at the ICDN from USD 52M in 2018 to an average of USD 3M in 2021, which is equal to a 94% reduction in costs to cargo owners.

In addition, 16 key performance indicators (KPIs) were developed and monitored by KPA, KRC, KRA, Shipping lines and agents to further enhance efficiency from one process to another, i.e. from manifest submission to cargo release at the ICDN.

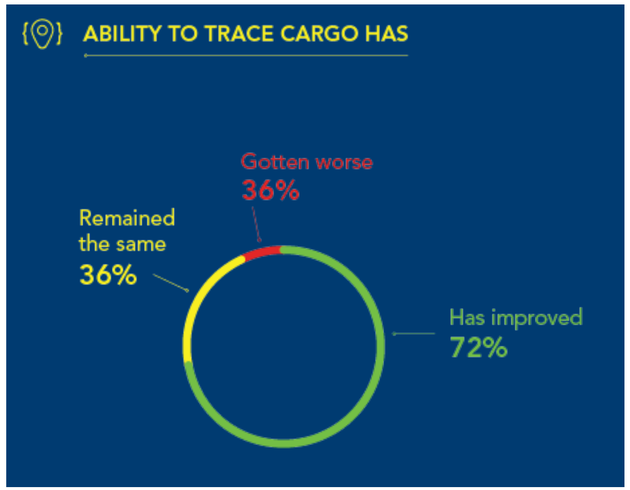
Truck turnaround time at the ICDN has reduced from 5.5 to 4.5 hours in 2021, and a further reduction is likely when both the full roll-out of the truck booking system and the construction of a marshalling yard are complete. It is important to note that the evaluation team could not establish the extent to which time savings translated to cost savings and for whom. With the full roll-out of the truck booking system, trucking companies will have better fleet management and decision-making due to the real-time management of containers and accurate data on container movements. The evaluation team established that the project did not reduce direct costs, that is, the costs emanating from transporting cargo and tariffs. The costs remained the same.

COST SAVINGS CALCULATIONS AS A RESULT OF REDUCED DWELL TIME

Year	Dwell Time at ICDN	Dwell Time not charged at ICDN (days)	Extra days	Rate per day (USD)	Charges for extra days (USD)	Actual Import TEUs MBSA-ICDN (as per KKRC data)	Total charges (In USD) for Extra days for all TEUs
2018	12	2	10	30	300	175,866	52,759,800
2019	7.3	2	5.3	30	159	256,918	40,743,983
2020	5.8	4	2	30	55	246,405	13,552,275
2021	4.42	4	0.42	30	12.5	250,169	3,127,113
Total							**110,183,171**

ENHANCED PREDICTABILITY AND TRANSPARENCY

The project aimed to improve transparency and predictability by facilitating access to reliable data and information to cargo owners. This cargo visibility gave shippers, terminal operators, and transport owners the business predictability needed to make business decisions. Out of the 81% of respondents satisfied with the services at ICDN, including tracking, about 25% mentioned that tracking on rail helped them make informed arrangements for cargo pick-up and delivery at the ICDN. In addition, respondents cited the tracking information as enabling them to know when to contact customers and truck drivers, with some stating that rail tracking was better than on the road.



One key informant who transports tea via rail to Mombasa (see annexed case study) reported that the predictability enabled the company, which transports 5.5 million tonnes of tea, to coordinate better with the Mombasa tea warehouses and shipping companies on tea arrival times for each consignment. Tagged containers were instantly located at the ICDN compared to untagged containers that would take about 4-7 hours to trace. As a result, cases of lost or untraceable containers have also reduced compared to before the project.

Tagged containers were instantly located while at the ICDN as opposed to untagged containers that would take about 4-7 hours to trace. Cases of lost or untraceable containers have reduced compared to before.

IMPROVED GOVERNANCE IN RAIL FREIGHT SERVICES

One of the indicators measuring success is the end user's satisfaction level. Out of 94 end users interviewed, 81% (75 respondents) indicated that they were satisfied or very satisfied with the services citing efficient cargo tracking, improved customer service and reduction in time taken to clear cargo. The second target under this outcome was a 75% reduction in reported cases of inability to trace cargo. 72% of respondents stated that their ability to trace containers had improved. 50 out of the 94 respondents who indicated they had lost a container and reported the matter, 88% (43 of them) said that the relevant authorities adequately resolved their issues.

EFFECTIVENESS

The project has scored 4 and a confidence level of high in this category.

Effectiveness is the extent to which the development intervention has achieved its objectives taking their relative importance into account.

The evaluation sought to answer the questions below -

1 What results (outputs and outcomes) against the planned results have been realized by the Cargo Tracking for Rail project comparing actual reported and data collected in the field?

2 Which results are attributable to TMEA and the stakeholders involved in this project?

3 What factors were critical for the achievements or failure of the project results?

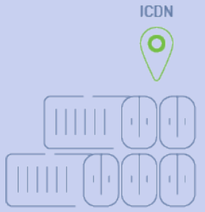
4 What went well? What didn't go as planned?

5 What are the significant achievements with regard to TMEA cross-cutting aspects such as gender, climate change, and poverty that were realized by the project?

TABLE: PLANNED VS ACHIEVED OUTCOMES

INTERMEDIATE OUTCOME 1	Kenyan trade actors improve the effectiveness and efficiency of handling, clearance and movement of goods along the Mombasa-Nairobi Rail Freight Logistics Corridor.	
Overall Score	**Score: 5 Confidence Level: High**	
Indicator 1	**Baseline & Target**	**Actual**
Corridor cargo dwell time	Baseline: 21 days (2018) ICD Dwell time - 12 days Target: • 11 days by 2019 • 9 days by 2020 • 7 days by 2022	ICDN Dwell time- 8 days • 2020- 6 days • 2021- 4 days
Indicator 2	**Baseline & Target**	**Actual**
Cost related to handling, clearance, and movement of Goods along the Rail Corridor border formalities	Baseline:2018 dwell time was 12 days with KPA charging cargo owners from the 3rd day, USD 30 per container (total of 300 USD) 2018 charges for all containers past Day 2 (See table 1)= 110.2M Target: 7.5% reduction by 2019 10.5% by 2020 13.5% by 2021 15% by 2022	Extra charges paid for delayed clearance reduced from 52M in 2018 to 3M in 2021 translating to a 94.1% reduction 2019 reduction -costs paid by cargo owners for extra dwell times reduced by 23% of the baseline 2020- the costs reduced by 74% of the baseline figure 2021- the costs reduced by 94% of the baseline figure (see table 1)

According to stakeholders interviewed and data obtained from project documents, there was a significant difference in dwell time for containers tagged compared to untagged containers.



The average cargo dwell time for the tagged containers was an average of 3 days for imports and 2 days for exports, compared to an average of 14 days for imports and 4.5 days for exports of untagged containers in 2019.

Overall, the dwell time reduced by 25% in 2019 and by 75% in 2021 (KPA data).

View the full table on the main report.

PLANNED VS ACHIEVED OUTCOMES - **CONTINUED**

INTERMEDIATE OUTCOME 2	**Kenyan trade actors improve the governance of handling, clearance, and movement of goods along the Mombasa - Nairobi rail freight logistics corridor**	
Overall Score	**Category Score: 4 Confidence Level: High**	
Indicator 1	**Baseline & Target**	**Actual**
Average improvement in the satisfaction levels of Mombasa - Nairobi rail freight services users with government service delivery.	Target: 80% satisfaction levels .	Satisfaction levels increased to 81% (75% satisfied and 6% very satisfied (Source Survey data)
The number of incidences of challenges to trace cargo along the Mombasa - Nairobi rail freight logistics corridor.	Target: 75% reduction in number of incidences.	72% of respondents stated that their ability to trace containers had improved. Of the 50 out of 93 respondents who indicated they could not trace at least one container in the past and had reported the matter, 88% (43 of them)

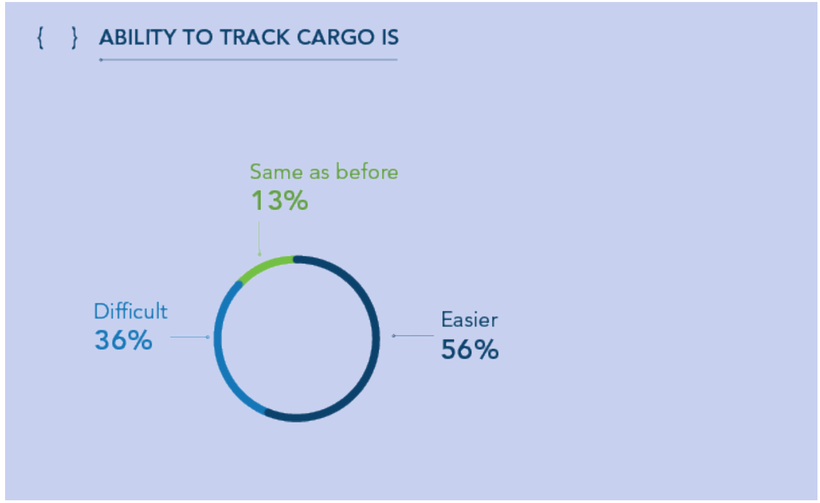


TABLE: PLANNED VS ACHIEVED OUTCOMES - CONTINUED

SHORT TERM OUTCOME 1	**Kenyan Trade Actors improve joint visibility of cargo and vessel handled, cleared, and moved along the Mombasa - Nairobi Rail Freight Logistics Corridor**		
Overall Score	Category Score: 2 Confidence Level: High		
Indicator 1	**Baseline & Target**	**Actual**	**Comments**
Number of containers being tagged and tracked disaggregated by customs regime (imports, exports & empties) along the Mombasa - Nairobi Rail Freight Corridor	Target: 100% of import and export containers	On average 24% of both import and export containers were tagged from 2018 to 2021 against a total of 974, 182 containers that were handled during the period, this excludes about 470,000 empty containers). In 2018, only 6.3% of the containers were tagged, this rose to 28% in 2019, and decreased to 22% in 2020 and 2021. This drop was caused by the global Covid-19 pandemic that disrupted trade and restricted movement in the country and counties.	The project operated on half the budgeted amount having received a total of USD 5.5M. This led to purchase of much less tracking devices than anticipated.
Indicator 2	**Baseline & Target**	**Actual**	
Levels of cargo and truck congestion at Mombasa port and ICD - Nairobi. (truck turnaround time - ICDN)	Baseline: 6.7 hours in 2018	5.5 hours in 2020 4.5 hours in 2021 (KPA)	

SHORT-TERM OUTCOME 3	**Kenyan Trade Actors Improve their competencies in the Use of Logistics Processes & Services Along the Mombasa-Nairobi Rail Freight Logistics Corridor**
Indicator 1	**Actual**
Number of trained stakeholders able to use the logistics processes & services	30 staff from KRC, KPA, KRA were sensitised and trained on the cargo system[3] 60 representatives of cargo transport companies were trained on the traffic management system
Indicator 1	**Actual**
Number of interconnected logistics processes and services between government agencies along the corridor	6 logistics processes were interconnected To support cargo tracking from port to ICD, last mile cargo delivery, truck booking and resource planning and KPIs, the cargo tracking by rail was successfully integrated with the 1) KRA iCMS and MMS, 2) KPA- KWATOS /CYROS, 3) KRC- CIYOS. The planned integration with KEBS system did not take place, it is planned for the next phase of the project. The following logistics processes are carried out jointly by the agencies **1. Cargo Manifesting** – Sea Manifest information automatically shared between all the agencies on approval 2. Train manifest management and information sharing **3. Cargo Tracking** **4. Information sharing to external stakeholders** – e.g., in the rare cases of missing containers or disputes on when cargo was transported from Port to ICD 5. Information reconciliation 6. Cargo Release Process

[3]-*About 30 staff trained staff are supporting core operations at any given time. They are rotated as part of their HR policy and therefore their replacements have to be trained. The project also has about 80 trained contracted staff offering managed services such as tagging and untagging containers, seals maintenance etc*

Indicator 2	Actual
Number of joint-agency activities along the corridor	The three agencies carry the following processes jointly: 1. Cargo verification 2. Train loading 3. Train offloading 4. Cargo removal from port/ICD 5. Cargo movement to peripheral facilities

Indicator 1	Actual
Ratio of stakeholders compliant to KPIs to uncompliant stakeholders	100% of the stakeholders were compliant with the set KPIs. A set of 16 KPIs were set each agency had its own KPIs as follows. KPA - 7 KPIs KRC - 4 KPIs KRA - 4 KPIs Shipping lines - 2 KPIs Agents - 2 KPIs

PROJECT RESULTS CHAIN

Assumptions:

- Better management would result in more effective, efficient systems and procedures. The system is fully rolled out as per the design and covers 100% of cargo moving via SGR
- No other delays and breakdown of the SGR Train/Systems
- Continued goodwill by the 3 agents to deploy staff to JMC
- KPA will continue funding the project once they take ownership
- No delays by agents/cargo owners in clearing goods.

Assumptions:

- KRA, KPA, KRC systems were operating optimally with minimal downtime
- Trained staff would not be deployed
- Trained staff would use the new competencies and skills
- KPA would fully own the project after completion
- Construction of a truck marshalling yard at ICDN
- All ouputs would be fully funded

Assumptions:

- Activities would be completed as planned
- There would be no scope creep
- Users would be available for sensitization

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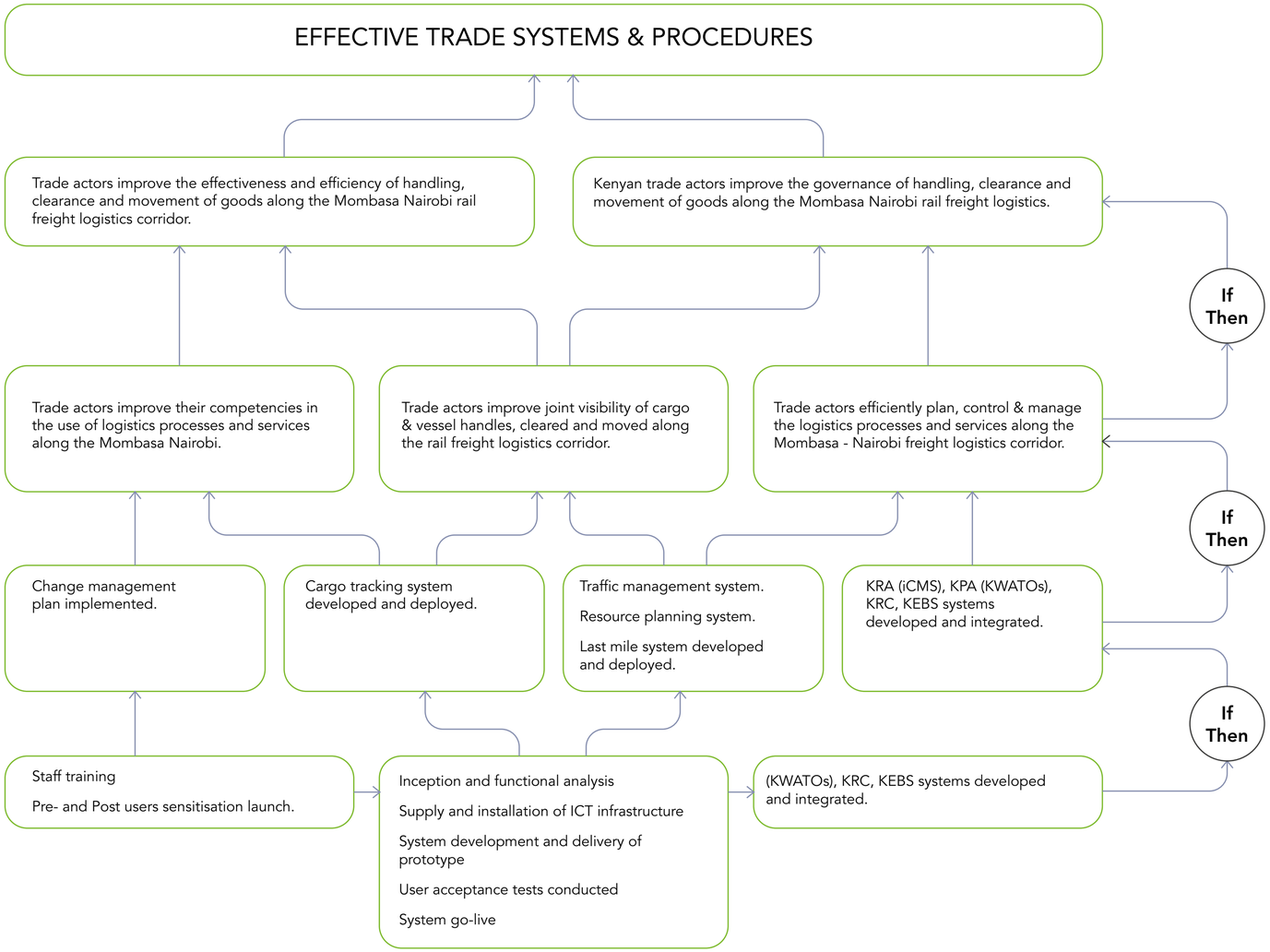


EFFICIENCY

The project has scored a 4 in this category and a confidence level of 5.

Efficiency is the extent to which the project achieved maximum output from a given level of resources used to carry out an activity.

The evaluation sought to answer the questions below -

1 How has the Cargo Tracking for Rail project results been achieved?

2 Were the results achieved with good value for money? Value for money is measured in terms of costs and benefits and considers economy, efficiency, effectiveness and equity.

3 Did the project achieve planned outcomes within the budgeted resources?

4 How does the Cargo Tracking for Rail project complement other TMEA and other donor initiatives along the Northern and Central Corridors?

5 How well did the project achieve the following-?

i **Adaptive management** - how well did the project apply and improve its decision-making and practices based on lessons learned?

ii **Relationship management** - Relationship management - How well did the project manage its partners, donors, and other stakeholders?

iii **TMEA's project management processes** – how well did they enhance or impend project planning and implementation?

iv **Delivery model** - Determining if another implementation methodology would have been more cost-effective

v Determining if the selected implementation partners implemented the project adequately and, if not, how were gaps handled?

To determine whether the Cargo Tracking for Rail Project results have been achieved with good Value for Money (VfM), the evaluation team conducted a Cost Benefit Analysis (CBA). The CBA results were based on benefits in form of reduced dwell time because of the cargo tracking rail project intervention that was supported by TMEA that resulted into cost reductions. The cost reductions culminated into savings/benefits by the importers and exporters and the related trade agencies. The key assumptions used to derive the CBA were:

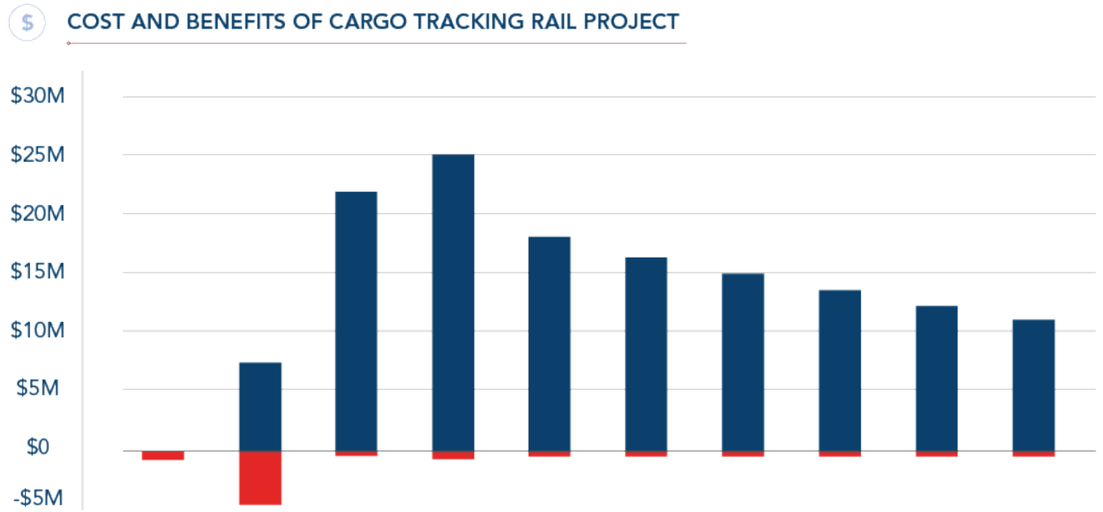
1. The baseline average dwell time at ICDN was 12 days in 2018.
2. The dwell time for the projected period (2022 to 2027) was the average of the actual dwell time for 2019 to 2021.
3. The free days for the projected period for cargo will remain at 4 days before extra charges are imposed.
4. The charges for extra days will be maintained at US$30 for the project period.
5. The projected import TEUs growth is assumed to be 1% (lower than KR projections of 3%) and is based on the actual import TEUs of 2021 (250,169 TEUs).
6. The benefits attributed to electronic cargo tracking system was assumed be 70% and the rest were due to other improved operational efficiency.
7. A 10% discount rate was applied to costs and benefits.
8. A 10-year lifecycle of the ECTS project benefits– that is, the benefits would continue for 10 years of effectiveness from the time the intervention started.
9. Systems maintenance cost (which include user trainings, systems enhancements, systems support and technology upgrades) during the 10-year period was estimated to increase by 10% annually. The maintenance cost up to 2021 was part of the project costs.

The findings from the computations of the cost and benefits indicated that the Cargo Tracking Rail Project had net benefits and was economically feasible as evidenced by the high Net Present Value (NPV), good net Return on Investment (ROI) and Internal Rate of Return (IRR) as shown in table below.

COST BENEFIT SUMMARY

Project Start Period	Discounted Cost (US$), A	Discounted Project Induced Benefits (US$), B	Project Net Present Value (US$), (B-A)	Net Benefit to Cost Ratio (Net Return on Investment)	Internal Rate of Return (IRR)	Pay Back Period
2018	6,235,426	138,056,502	131,821,077	21.1	1177%	2 years (2019)

The Net Present Value (NPV) for the Cargo Tracking Rail Project is about US$132 million (after deducting cost), and Internal Rate of Return (IRR) of 1177% and net return on investment (net return per US$ invested) of US$21.1; the payback period was within 2 years (2019) and the break-even point was in the year 2019 (within 2 years). This indicates that the project was economically viable and profitable as shown in the graph below.



The Cost Benefit Analysis indicates that overall, the Cargo Tracking Rail Project achieved good Value for Money (VfM in terms of costs and benefits with a ratio of 21.1 of net benefits per dollar invested.

SUSTAINABILITY

The project has scored a 4 in this category and a confidence level of high.

Sustainability is the continuation or longevity of benefits from the Cargo Tracking by Rail Project after TMEA exit.

The evaluation sought to answer the questions below -

1. How sustainable are the positive effects or impact of the Cargo Tracking for Rail project?
2. What key lessons have been learned? What worked well and what needed to be improved?
3. What conditions (including the delivery model) are needed to make this type of project succeed?
4. Under what conditions and in what context is the project replicable or transferable?
5. Is there any evidence that there will be the sustainability of institutional capacity after the end?
6. Has there been sustainable capacity built among the partners who could be built on in the case of a future partnership?

SUSTAINABILITY

While calculating CBA, the evaluation established that the positive effects of the project would last long after TMEA exits

Project implementation was anchored by a joint team from KRC, KRA and KPC that formed the Joint Monitoring Centre. Each agent seconded staff to the JMC, up to the time of the evaluation, the staff were still in the JMC. The 3 agencies also have a set of indicators that they monitor to enhance efficiency in cargo evacuation, transportation and clearing. The planned joint resource planning system will strengthen coordination and joint implementation.

The project continues to work closely with public national bodies whose mandate is trade facilitation, trade infrastructure development and enhancement of an enabling environment for the private sector.

The evaluation team identified several markers of sustainability.

- Kenya Ports Authority has since taken over some of the costs amounting to USD 230,000 for running and maintaining the system and allocates annual budgets to ensure continuity.
- The project team mainstreamed knowledge transfer to participating agencies and users.
- The KPA ICT team was involved in enhancing the truck booking system using open-source technologies.
- System components were integrated and interfaced with existing government systems to ensure that the intervention was not standalone, further enhancing the sustainability of the new intervention.
- Once TMEA exits, KPA will independently support, maintain, and improve the truck booking system.
- KPA hosts the system, which is also integrated into the KPA storage infrastructure, a tactical decision that TMEA facilitated and eliminated third-party hosting costs. The system will therefore benefit from any infrastructure enhancements that KPA will undertake in the future, including after TMEA exits.

Once TMEA exits, KPA will support, maintain, and improve the truck booking system independently. The evaluation team also established that the system is hosted by KPA, eliminating third-party hosting costs, and is integrated into the KPA storage infrastructure. The system will benefit from infrastructure enhancements that KPA will undertake in the future, after TMEA exits.

Knowledge transfer to key agencies and users was mainstreamed in the project.

CHALLENGES DURING IMPLEMENTATION ICDN /SYSTEM

1. System downtime/offline/delays- almost a third of the respondents indicated that the system was sometimes off or notified them hours later. They also indicated that they were forced to incur additional charges to track containers manually.
2. Intermittent notifications on the status of the cargo- half of the respondents indicated that they had not received any type of notifications about the cargo status
3. Limited space at the ICDN that sometimes leads to longer clearing time due to congestion
4. The system sometimes does not indicate the time the cargo arrives at the port
5. The system does not correctly indicate the time the cargo arrives at the port, this may cause one to incur charges for extra days. End users indicated that they sometimes got notifications after 4-6 hours after cargo has arrived.
6. The banks at ICDN and KRA staff do not work 24/7 leading to delays in cargo clearance after working hours

CAPACITY CHALLENGES

1. Limited number of tracking devices vs the total number of TEUs due to inadequate funding. Only 22% of containers are tagged. There is also a shortage of staff to support tagging especially if more than one ship is offloading.
2. Shortage of key agency staff. At the time of the evaluation, KRC had not seconded someone to the JMC in Mombasa
3. Frequent transfer of key staff especially KRA staff, which leaves gaps in project implementation and stakeholder engagement as well as a need for periodic capacity strengthening.
4. KPA JMC reported that tagging devices are sometimes lost or loaded to a departing ship with the empty containers. The team has to wait until the tags are found or returned by the shipping line.
5. Lack of enough wagons leading to delays in discharge & transfer of containers from the vessels to wagons.
6. End users reported that communication from KPA was minimal during delayed cargo evacuation from Mombasa to ICDN or tracing of cargo.
7. Some end users indicated that there were still challenges in transporting export cargo from ICDN to Mombasa
8. According to KRC, some devices remained offline due to insufficient internet coverage along the corridor.
9. Initial challenges of uploading manifests due to resistance from shipping lines.
10. End users reported invisibility of status of cargo between offloading from ship to uploading on the train.

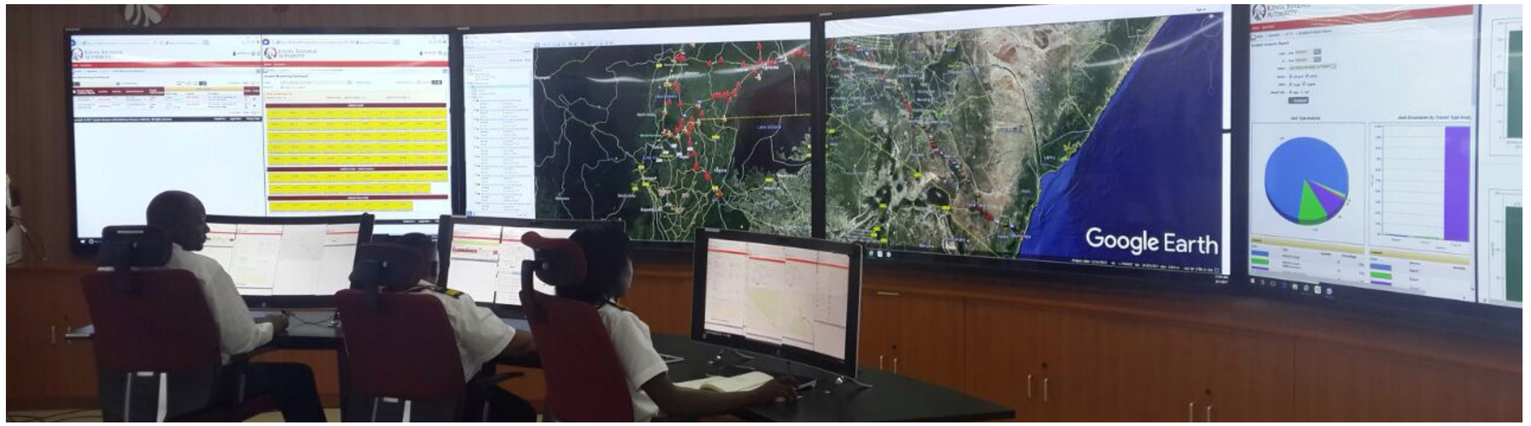
FINANCIAL/COSTS

1. End users indicated that transporting cargo by rail was more expensive than road due to additional costs for last mile delivery.
2. The project was funded half of what it had planned for, hence some outputs that were crucial in providing an end-to-end solution were not implemented.
3. Customer notification system encountered challenges where the initial plan of having KRC absorb SMS costs did not materialise. An email notification process was implemented instead.

Lessons Learnt and Recommendations

The evaluation team derived the following lessons on what went well and what can be improved in future to enhance project planning, implementation, and management. End users reported the following key successes of the cargo tracking system.

1. Improvement in the ability to trace and trace containers and predictability
2. Reduced turnaround time at truck congestion at the ICDN
3. Less transit time of cargo from offloading to transportation at ICDN
4. Some end users indicated that transporting cargo by rail was cheaper and more efficient
5. They indicated that cargo security had improved due to the tracking device and ability to trace it
6. Predictability of the arrival times for cargo



Key informant interviews with stakeholders, including TMEA, highlighted the following successes or what went well.

1. Improved coordination and collaboration between the three agencies worked well, leading to faster implementation and joint issue resolution.
2. The private sector interviewed indicated that the project was what they had been waiting for after frustrations encountered at the ICDN soon after the presidential decree since they could not trace containers and had no information on their whereabouts.
3. Periodic meetings were held between the three agencies, the private sector, and other stakeholders to resolve emerging challenges.
4. Staff from participating agencies appreciated the project's capacity-building activities and the private sector's involvement. Involving private sector end-users ensured that they knew how to use the system. Knowledge transfer from the system consultants to staff from the three lead agencies was appreciated, as was the interfacing of the cargo tracking system to the existing agency system to reduce duplication.
5. The project was implemented as an emergency solution to decongest the ICDN and improve efficiencies. It was successfully executed and is appreciated by key stakeholders and end-users.
6. In 2020/2021, KRC and KPA TEUs targets were affected by the Covid-19 pandemic impacting projected growth as described in their documents.
7. Some KPA stakeholders that were interviewed felt that KPA did not fully own the project. Yet, TMEA indicated that they had handed over the project to KPA.

STRATEGIC LESSONS LEARNED

1. Partnering with the key agencies responsible for trade logistics along the rail corridor enhanced project success. These partnerships enhanced the government and private sector goodwill to own and support the project. As a result, working with the relevant agencies mandated to improve efficiency and effectiveness in cargo evacuation, transportation and clearing remain a critical success factor for implementation and sustainability.
2. TMEA's understanding of the Kenyan socio-economy is a strength as TMEA can quickly create linkages and networks that complement projects. In addition, TMEA has significant goodwill from its partners and stakeholders. TMEA should capitalise on this as a comparative advantage.
3. TMEA's response time in designing a solution relevant to challenges experienced as a result of a well-intentioned presidential decree, which resulted in increased congestion at ICDN, should be replicated. The trading environment in Kenya and the rest of the EAC is dynamic and innovative, and responsive solutions are needed to keep trade moving.

PROGRAMMATIC LESSONS LEARNED

1. Building the technical capacities of relevant stakeholders enhanced project sustainability. TMEA strengthening the capacities of relevant stakeholders, including the private sector, contributed to the project's sustainability because the skills and interventions were integrated into the existing private sector and government systems.
2. Periodic review of the results framework for the project, including the causal theory underpinning the project, may have helped to identify and document the necessary project adjustments and adaptations caused by changes in implementation perspectives and the underlying context.
3. Baseline data collection enhances attribution and contribution evidence. Due to the project's emergency configuration and roll-out, baseline data collection at the outcome level was not carried out, and some indicators did not have data. However, since there are opportunities to collect baseline data or use secondary data, even when a project has progressed, this lesson should inform future projects.

RECOMMENDATIONS TO IMPROVE CURRENT IMPLEMENTATION

#	Recommendation		Action point
1.	**Clarity on project ownership**	TMEA needs to consider discussing with KPA specially to clarify project ownership as they reported not to fully own the project. Consider developing an exit plan with clear details on which components and costs have/will been transferred by when.	TMEA, KPA
2.	**Improve cargo tracking and related systems and procedures based on feedback from end users**	A thorough review of the feedback from end users on issues they are experiencing using the system, at the port and ICDN should be done with an aim of enhancing further the system and procedures. The system needs to be monitored and reviewed continuously for performance to ensure robustness and stability of the system. Some end users recommended notifications by phone /mobile app so that one is able to track the cargo from his phone.	TMEA, KPA, KRC KRA
3.	**Consider promoting more adaptive and flexible project management**	Periodic review of the project's theory of change, results chain and monitoring tools is important. If the project will continue under KTLN, consider reviewing the results chain, milestones, and targets. For example, the target of having 100% of containers tagged was unrealistic and should have been revised based on budgets.	TMEA, KPA, KRC, KRA
4.	**Periodic creation of awareness to end users and key agency staff**	The project team should consider inexpensive ways of raising awareness to the end users of the system as they were unaware that they should receive notifications about cargo status. Key agency staff are also rotated/ transferred, there is a need to build the capacity of fresh staff to little disruptions in project implementation.	TMEA, KPA, KRC, KRA
5.	**Resolve capacity gaps in installing tracking devices in containers**	TMEA should consider leading the other 3 agencies in resolving issues of staff capacity experienced by KPA and BSmart as it leads to less containers getting tags since staff are overwhelmed. Tracking devices were reported to get lost or loaded with departing ships, consider having a more effective way of collecting them after use.	TMEA, KPA, KRC, KRA

RECOMMENDATIONS TO IMPROVE FUTURE DESIGN

#	Recommendation		Action point
1.	**Address Sustainability TMEA and the 3 agencies need to consider ways in which they can make future project more sustainable to reduce the operating costs of internet, system maintenance.**	Various business models had been proposed in the project PAR, consider developing them soon after project implementation. The cost of tracking in future will have to be borne by the private sector as opposed to KPA.	TMEA KPA
2.	**Expansion/scaling up of the cargo tracking Reduction in costs due to time savings is one of the key success factors of the project.**	TMEA and stakeholders should consider expanding the project and funding the remaining components for end users to benefit further from the efficiencies. Increasing the tracking devices and staff tagging containers can further improve project's performance. A greater percentage of containers (70%) remain untagged, there is scope to expand. Tagging about 70% of the containers would mean almost doubling the current devices (5,000 purchased by TMEA and 12,000 by KRA) to 34, 000. One device is approximately USD 400 with additional annual costs of USD 120 for internet and USD 10 for maintenance.	TMEA
3.	**Explore alternative solutions to tracking devices.**	As recommended by one of the stakeholders, for future projects, consider for cost effective latest solutions like the bar code system of DHL	TMEA
4.	**Conducting a deeper analysis**	Conducting a deeper analysis at a higher level (programme/intermediate outcome level) to establish the cost savings from the projects have led to reduction of consumer goods. Similarly, TMEA should consider conducting an analysis of the project's contribution to overall time reduction along the corridor.	TMEA

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