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Q1: Respondent details

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Q2: Country or Customs territory

KENYA

Q3: Organization

NGO

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Q4: Title of case story

Mombasa Port Infrastructure and Facilities Improvement Project: Gate18/20 and Yard 5 projects.

Q5: Case story focus

Trade Facilitation.

Q6: Case story abstract

The Port of Mombasa is the principal gateway to the Eastern Africa. The efficiency of the Port therefore has a major impact on the economies of the countries it serves.

Over the years, Mombasa Port recorded significant growth in traffic volumes which has put a strain on existing port infrastructure. The key challenges at Mombasa Port relate to low performance, lack of capacity (especially container storage capacity) and relatively slow clearing and forwarding. To this end, Trademark East Africa (TMEA) has been working closely with KPA to implement short-term and high impact projects including the improvement of Gate 18/20 which enhanced Port access and also the upgrading of Yard 5 which increased capacity at the Port.

Q7: Who provided funding?

Other (please specify)
Trade Mark East Africa with funds from DFID-Kenya

Q8: Project/Programme type

Single country

Q9: Your text case story

The Port of Mombasa is the principal gateway to the Eastern Africa region, serving a wide hinterland consisting of Kenya, Uganda, Rwanda, Burundi, South Sudan, Tanzania, Democratic Republic of Congo and Somalia. The efficiency of the Port therefore, has a major impact on the economies of the countries it serves, and can unlock the region's growth potential if operated efficiently and developed in step with growing trade demand. However, if undeveloped and operated inefficiently, it will remain a key constraint to trade and economic growth of the region.

Traffic at the Port of Mombasa has over the years, increased with a growth record of 6% per annum from 12.9 million

tons in 2004 to 24.78 million tons in 2014. In the same period, total cargo throughput increased 6.9% average annual growth rate. Increasing growth has strained existing port infrastructure, necessitating costly investments to improve operations and service delivery. Despite the efforts by Kenya Ports Authority (KPA) to expand capacity and improve efficiency in cargo handling, the port still faces capacity constraints and service delivery challenges.

The key challenges at Mombasa Port relate to low performance, particularly at the ship-to-shore interface; lack of capacity (especially container storage capacity); and slow clearing and forwarding arrangements, all leading to high cargo dwell times.

TradeMark East Africa's two pronged approach include prioritization of short term quick wins like improvement of Gate 18/20 to enhanced Port access and upgrading of Yard 5 to increase port capacity. Long term approach include support to a Green Port programme. TMEA put an investment of USD 2,987,776 to upgrade Gate 18/20 including construction of additional canopy for two extra lanes, installation of security equipment and construction of additional climbing lane. The expansion of the gate has led to improved Port Access and reducing congestion and truck turnaround times. Trademark East Africa (TMEA) also worked with Kenya Ports Authority (KPA) on the rehabilitation and repaving of Yard 5 at a budget of USD 1.9 million and completed works in December 2014 in order to increase efficiency and capacity at the Port.

A joint KPA-TMEA Technical Committee reporting to Steering Committee was established with membership drawn from TMEA and KPA to manage, co-ordinate and oversee the TMEA project implementation. The Steering Committee in TMEA's Mombasa Port Programme comprises of KPA's Executive Committee (EXCOM) with TMEA as observers. Its mandate is to provide overall strategic guidance and policy responsibility to the programme. With regards to Procurement, evaluations in the procurement processes of the projects were done jointly with KPA and funds were paid to the vendors directly.

The projects sought to improve efficiency and capacity through easing congestion at Gate 18/20, reducing truck turnaround time and increasing container ground slots at the Port.

The contractors were procured jointly by TMEA and the implementing agency (KPA) with regular briefings to the Project Implementation Team and oversight from a Technical Auditor. TradeMark East Africa is a partner driven organization and works hand in hand with the partners, however the partner takes the overall lead during implementation. TradeMark East Africa takes a private sector approach in implementing public sector projects and ensures value for money and monitors and controls the budget and timelines of the project.

Results:

Medium Term Impact: Increased Trade

Intermediate Outcome: Increased Throughput at Reduced Time.

Short –Term Outcome: Increased Efficiency and Increased Port Capacity

A TMEA survey undertaken by TMEA showed that truck turnaround at Gate 18/20 reduced from 8hrs in April 2014 to 4hrs May 2016. In addition, the capacity at Yard 5 increased from 1,110,000 TEUs to 1,187,778 TEUs indicating an increase of 77,778TEUs as a result of Yard 5 repaving.

TMEA also undertook a User satisfaction survey for Gate 18/20 showing that 86% of export drivers and 28% of import drivers were satisfied with the infrastructure changes at Gate 18/20. The delays experience by the drivers were due to KRA processes and drivers recommended improvement of KRA systems including the addition of scanners and more KRA staff at the gate.

The expansion of Gate 18/20 has had a positive impact on Operations dedicating lanes for empty trucks and imported vehicles thus reducing delays.

Former KPA General Manager Corporate Services Mr. J. O. Nyarandi noted that the expansion of Gates 10, 18/19, greatly transformed operations at the port; increasing efficiency and customer satisfaction. Initially, Yard 5 was used to stack empty containers to a maximum height of only 2-3 containers depending on the weather and condition of the ground surface. Currently the Yard obtained an additional 293 ground slots and is able to stack 20-foot containers at a height of four per slot in an average of four days. This has improved the ship turnaround time as the additional stacking space can now be used to stack export containers and trans-shipment containers. All of which were impossible to stack based on the condition of the Yard.

In addition to the improved handling capacity, the repaved Yard has reduced the previously experienced wear and tear of equipment such as Mobile cranes. In addition, KPA procured 3 new Rubber Tyred Gantry (RTG) cranes to be utilised in the Yard in the offloading and loading of containers. The RTG cranes were delivered in 2015 and procured at a cost of USD 1,833,853 and were expected to increase operational efficiency.

Challenges before Paving:

A survey with key users of Yard 5 to establish the gains made and lessons learned that can be used to improve future designs and Yard Paving was undertaken.

The challenges that existed prior to the paving of Yard 5:

- Inefficient utilization of space Due to the uneven surface at Yard 5, the area that was available for stacking of containers was small and scattered in various pockets around the Yard.
- Machine wear and tear The wear and tear of equipment was inevitable as they moved containers while navigating the uneven surface.
- Dust and mud during rain making operations difficult During the dry season, there was a lot of dust, creating a visibility problem during operations. During the rainy season some patches of Yard 5 were completely unusable due to the mud accumulated as a result of poor drainage.
- Safety concerns The uneven surface and the mud and dust resulted in a hazardous working environment. Safety concerns were a major issue for the staff working at the Yard.

Benefits after paving Yard 5:

- Increased ground slots/ storage space for containers both empty and full The even surface after the paving resulted to stacking of export and trans-shipment containers at Yard 5. Initially it could only be used to store empty containers.
- Ease of storage, accessing/retrieving containers It is now easier for the equipment like reach stackers to navigate while storing and retrieving containers
- Reduction in dust emission Dust has significantly reduced after the paving
- Reduction in operation and maintenance of equipment/ wear and tear especially for tyres The equipment operating at the Yard does not break down often due the reduced dust, uneven surface and mud during rainy seasons.
- Improved yard drainage The Drainage at the yard has improved after the paving
- Oil contaminated ground was improved. Contaminated soil was replaced with useful material. The oil contaminated ground was replaced by concrete after paving thus reducing the risk to operations staff at the Yard.

Key impacts of the upgrades as highlighted by users are summarized as follows:**1. Reduced wear and tear on equipment**

The improved surface now ensures the preservation of the equipment working at the Yard.

Previously, the heavy lifting equipment was not designed to work on an un-even surface and the navigation of the heavy equipment on uneven surfaces took a toll on the equipment. An empty container handler was damaged beyond repair during the period when it was operating on the unpaved surface. This constant repair and de-commissioning of equipment was resource intensive.

2. Improved ship turnaround time

Following the paving of Yard 5, the pre-stacking of export and trans-shipment containers is undertaken faster resulting in less delays.

Initially, Yard 5 was used to store a minimum number of empty containers. Export and trans-shipment containers were stored at the main Yard. This was a challenge because the ship loading the terminal trucks had to move back and forth between Yard 5 and the main Yard to fetch export and trans-shipment containers, resulting to delays of up to 12 hours before the paving. After the paving, the extra pre-stacking space has reduced the amount of delays caused solely by container (loading) logistics arrangement.

3. Improved staff safety

The paving has enhanced staff safety and there are now less accidents and a much better working environment

Previously, the safety of the staff working at Yard 5 was at risk as the un-even surface, mud and dust made the working conditions hazardous. When stacking empty containers, the staff risked slipping off and falling due to the unusual leaning.

Conclusion

The expansion of Gate 18/20 and the upgrading of Yard 5 have had a positive impact on the operations at the Port. With the drive to push productivity further, more and more trucks will be accessing the port through Gate 18/20 and the expansion of the gate will ease congestion due to the increase in trucks. Yard 5 has created additional space for pre-stacking of export and transshipment containers. Pre-stacking has helped tremendously improve ship turn-around time. Once the new container terminal is fully commissioned, larger vessels will dock there. It is anticipated that Yard 5 will be used mainly for conventional cargo operations. The paving of Yard 5 has created additional and much needed space at the Port. As the port continues to grow the Yard will play an even bigger role in improving efficiency.

Additional projects under the Mombasa Port Infrastructure and Facilities Improvement Project are in the pipeline including the facilitation of Berth Upgrading for increased capacity. In addition, TMEA is expected to complete the expansion of Port Reitz road and commence on the expansion of Kipevu Road and Magongo road. Kipevu road is the access road to Gate 18/20 and will provide additional efficiency at the Gate.

Q10: Lessons learnt

On site presence: TMEA has an office in Mombasa which allowed the organization to develop an in depth technical relationship with KPA to offer timely and more strategic advice that advance the projects more quickly.

Key Partner Involvement: Involvement of key partner from onset of the project ensured buy in and ownership. In addition, the long-term sustainability of the entire Mombasa Port Programme will depend on the ability of KPA to provide sufficient resources to maintain the infrastructure, equipment and other facilities. Towards this end, KPA planned between 2014/2015 Financial years up to 2018/2019 Financial year, to provide capital expenditure funding partly sourced from internally generated funds at a ratio of 3:1.
