

Entry No.1

Title of Essay: Akiyama Award

Theme: “How to improve my port’s efficiency/productivity”

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Position at IAPH: Member Port

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Brief summary

This essay is written in fulfillment of the International Association of Ports and Harbors (IAPH) contest for member states. The theme is basically what can and should be undertaken to boost the performance of the port of Mombasa. The essay highlights in my opinion, the genesis of the problems that have been observed, and their impact on the operations of the port and finally how they should be tackled to alleviate the same and in the process improve the performance.

Akiyama Award

Theme: “How to improve my port’s efficiency/productivity”

Mombasa port is a significant entry point for the East Africa region. However, the work performance has not been very satisfactory leading to disapproval by the major stakeholders and customers alike with regard to the services provided. Kenya and the landlocked countries neighboring her rely on the port of Mombasa for import and export of their goods. The need to deliver goods faster often can be plagued by capacity restrictions, labor issues and legislations. Not all ports, even along the same ocean coastline, face similar challenges. Various other factors combine to affect the performance of a port. It is important to note that strong performance by the economies of Kenya’s neighbors, particularly Southern Sudan led to increased activity in the port in the recent past. The growth was a remarkable 5% during that period.

In competitive markets where products and services on offer are similar, putting the customer first is a sensible strategy for building the business. Satisfied customers return and tell others. Most businesses intend to provide good service but this is not easy to achieve in practice. To boost the efficiency and or productivity of the port of Mombasa, various factors have to be considered so that the process is not jeopardized by resistance from the workers backed by their giant and equally powerful union. The Dockworkers union plays a significant role in any planned changes for improvement at the port and where they are not involved, there has always been confrontation between management and the workers.

On top of the priority list will be plans to improve the rail infrastructure right from the port all the way to Kisumu town where there is a dry port. No port can be efficient without a proper and efficient rail network. This is the current situation at the Mombasa port where the cargo moved by rail is a mere 5%. Rift Valley Railways (RVR) is a stakeholder in the port and ideally, they are required to move at least 30% of the cargo passing through the Mombasa port. The colonial era built railway should be rebuilt afresh with the proper standard gauge. RVR also needs to boost the number of wagons to increase off take capacity for containers destined for upcountry and other dry ports. With a railway line in place and sufficient wagons available, many containers will be moved faster by a single train. Customers will also incur less expenses since it is cheaper to transport cargo through rail than by road. A single train can haul along many container - loaded wagons in one trip.

According to my personal estimation, the port of Mombasa is 70% automated and to improve the performance further, it will be wise to automate the remaining manual operations. This is possible with System Application Product (SAP) system that has a module covering the entire port industry. The key challenge of the system has been lack of real time update of data that

has resulted in unclear data. The strength of (Container Automated Terminal Operating system (CATOS), which is used at the water front is in planning. It is a fact that the system is very efficient but only if used specifically for planning purposes. The way CATOS works is, once the structure of the port is uploaded into the system together with data on incoming vessels, baplies and manifests, CATOS will accurately display the layout of boxes in the yard, which containers are to be loaded at what time. With proper planning, every movement of a crane will be with a load, and every trip by a lorry or tugmaster shall be with either an import or export container. That way, there will be no waste through movement of Lorries without a load. It will be possible to load and offload a vessel with quick simultaneous movements. This process will shorten the time a vessel remains in the port thus creating room for other vessels. Currently the port of Mombasa uses CATOS system for Operations services, which integrates with System Application Products (SAP). SAP is a versatile program that performs Materials Management, Plant Maintenance, Human Capital Management, Sales & Distribution and Finance & Costing. CATOS came into operation in 2008 but due to user acceptance issues, CATOS has not been fully embraced. A smaller number of users keep using the CATOS system. SAP System on the other hand, went live at the port on 1st July 2002, and at present not all the modules of the system, are being utilized at the port. Considering the huge capital investment in the purchase of Information Technology systems and equipment, it is sad to note that some employees still prefer manual operations. Occasionally, requests for manual intervention crop up mainly after staff are faced with system challenges. While requests for changes in SAP system are performed by internal resources, any request for change in CATOS has to be escalated to the vendor who is based outside the country. Time zones and language barrier are some of the tasks faced when dealing with the vendor.

Over the years, the volume of container traffic has risen steadily to a point that the port is frequently experiencing congestion and the lifting equipment is overwhelmed with the influx of boxes. The contracting of Container Freight Stations is just a temporary solution for easing congestion at the port of Mombasa. In fact, it has merely transferred the problem to locations outside the port. CFS's are extensions of the Mombasa port and they were meant to reduce the congestion in the port of Mombasa which had become a perennial problem. However, since they are located short distances from the Mombasa port, traffic from the port clogs to a standstill on roads leading to and from the CFS's. To decipher the problem of congestion once and for all, a convenient location for one instead of the dozen CFS's would be to construct a big yard at Mariakani which is about 37km or half an hour's drive by road. The new yard at Mariakani town should be well connected and served by rail. All local containers should be picked / collected from there. This will resolve the heavy traffic jams problem experienced on all roads leading out of Mombasa port. Residential and social fields have been cleared to pave way for CFS's that are constructed within the Island. This denies local residents social amenities for relaxing after work.

Ideally, the port is not meant to be a storage area for containers lying uncollected. Consignees delay in lodging documents and arranging for transport in time for faster clearance of their boxes from the port of Mombasa. This habit by consignees is causing unnecessary occupation of the already scarce space in the port and the fact that the storage charges are not very punitive, consignees take their time to clear the cargo from the port. To counter this issue, the management should raise the storage charges to discourage keeping the boxes in the port longer than the allowed free grace period. Hence faster clearance of boxes to avoid the heavy charges. The consignees, who insist on keeping the boxes within the port while searching for market, will pay dearly. This will mean more benefit to the port in terms of earnings.

Single Window Sign In will eliminate the many clearance stamps and numerous offices within the Mombasa port one has to visit before the cargo moves out. Although, there are a couple of One Stop Centers within the Mombasa port, where almost all the clearing procedures can be conducted, still the system is not perfect. It should be possible to log in the system through a Portal for one to navigate to all the sites of stakeholders in the clearing process chain.

Knowledge is potential power and a trained and knowledgeable workforce is an asset to any organization. Training in the marine industry takes many years to complete especially pilots. There should be a database where all issues on problems encountered and their solutions are stored for easy reference in future. This way, there will be knowledge transfer for new members of staff, hence training will take a shorter period. A shorter period in knowledge transfer means the organization will spend less in training and workers will easily gel with the other qualified staff.

Lifting and Handling equipment undergoes rapid tear & wear because of 24/7 usage in the port. Due to this, some machinery tend to deteriorate at a faster rate than others. In order not to disrupt the set targets on performance, it will be wise to make procurement plans in advance so that the machinery is replaced immediately on expiry of the shelf life. Refurbishment of equipment tends to compromise on performance and may result in targets not achieved.

Motivation of staff plays a big role in the determination of staff performance. Cash bonus is a high motivator but it is not the only one. The Mombasa port has over seven thousand employees and ladies form 19% of the total workforce. Women have special needs which are different from men and these affect their performance if not catered for. Introduction of a Day Care Centre at the port will be a major stress reliever for young mothers and the ladies without house helps. Worries about the children left alone at home unattended or with inexperienced maids totally distract ladies; hence their performance dips to its lowest level. The management of Mombasa port should also consider rewarding best performers in Sections or Departments with tokens on quarterly basis or better still holidays to the peak performers. If the selection criterion for the best performer is done in a transparent and fair manner, chances are all staff

will double their efforts at work with the hope of being selected as the next best performer. In the process productivity of Mombasa port will rise above the expected level.

The current plan of the Mombasa port gates is that staff vehicles and import & export vehicles use the same gateways. This causes jams at the entrances especially during peak hours and the same extends up to Mombasa Road which is the only route for all cargo destined to other parts of Kenya and the neighboring countries. The jams are however caused due to manual checking of documents and Lorries carrying cargo into and out of the port. To alleviate this mess, it would be ideal to locate the headquarters of Mombasa port away from the port premises and leave port operators alone to work inside the port. This will reduce the staff cars traffic at the gates to the minimum and even the Operations staff could be dropped at the port via a shuttle bus so that they also do not use their vehicles while going to work.

The port of Mombasa receives motor vehicles on a regular basis almost every month. Discharge of motor units is a slow and tedious manual process. To expedite the process a computerized bar - code process of discharging motor vehicles will be a more efficient method and at any one time a customer should be able to monitor and know whether the unit is still within the port or has already been shifted to the CFS. This will enable real time reporting at a glance and will also assist management in planning.

Management needs to instill a sense of ownership of the organization by the employees. Therefore, the attitude of the workers has to change from “we are in employment so long as the ocean has not dried” to “what I can do to improve the performance of the Mombasa port”? Serious change management programs should be conducted continuously by experts and sustained for continuity purposes. The same should be monitored by management to be seen to be working so that the effort is not in futility.

An aerial view of Mombasa port



Gantry Crane at Mombasa Port



Cruise Ship Berthing



Entry No.2

Productivity Increases by Design Changes in Grab Ship Unloader (GSU)

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Summary: - Substantial reduction in vessel's port turnaround time can be achieved if innovative cargo unloading methods are employed for large bulk carriers. Bulk cargo, nowadays, is transported in large capsize vessels. Such ships can be handled at only a handful of ports. Construction & development of new infrastructure is a costly and long drawn out affair and therefore a great deal of thought should be given during the port facility planning stage. Continuous improvement in cargo handling technology is a must if productivity and efficiencies are to improve any further. In recent years, new cargo unloading systems (GSUs) have been designed. One such design is the offshore unloading system which is not only cost effective but also highly versatile equipment when compared to the traditional cargo unloading systems.

In order to further improve GSU productivity, it is proposed to build an attachment which connects to the hopper of the GSU. It is expected that this attachment will significantly reduce vessel turnaround time as well as reduce the deployment of additional resources by stevedores by reducing the Grab cycle time.

BACKGROUND

In almost all the ports around the world, either shore cranes or vessel cranes are used for unloading activities. In order to achieve high productivity most of the ports have deployed mobile harbor cranes or GSUs (**Gantry dry bulk ship unloader**) for unloading of cargo. Gantry dry Bulk unloader

gives high productivity as compared to the mobile harbor cranes. After closely observing the GSU operation, I am of the opinion that if some modification can be made, the productivity of the GSU can be increased by about 50 to 70 % without incurring any additional cost in modifying the GSU's SWL.

PRESENT PRACTICES & CONSTRAINTS

The productivity per vessel can be improved by the following method

- 1) Increase the number of cranes allocate per vessel
- 2) Increase the capacity of the cranes
- 3) Increase the back-up resources
- 4) Fast evacuation of cargo from storage yard to avoid storage like bottleneck.

However all the above methods results in higher cost. Instead of spending additional money on the above mentioned infrastructure, if it were possible to reduce the cycle time of the GSUs, similar results could be achieved at marginal cost. The reduction in cycle time of the GSU can be achieved with the help of a small innovative idea which will increase the productivity of the GSU without the need for increasing the capacity of the GSU or any major structural modification. There innovation requires a onetime investment for carrying out modification in GSU.

The existing GSUs in use worldwide encounter the following constraints which can be reduced by the proposed innovation.

- Maximum time is spent by the grabs in travelling from the vessel hold to the crane's hopper
- The grab travelling distances is about 30 meters.
- Due to the large distance travelled by the laden grab, the maintenance of the GSU also increases which directly impacts the operational cost
- Due to excessive grab travel time, the berth occupancy and the vessel turnaround time is adversely affected.

Let us, for the moment, consider the Capesize vessels which call Mundra Port, India. These capsize vessels have a DWT of 180000mt.

Most of the GSU's have a designed capacity of 2000 MTs/ hrs. The designed cycle time is 75 seconds. But the average discharge rate per crane achieved is only @ 1000 MTs / hr. If 3 shore cranes are used per vessel then a 180000 MT DWT cape vessel is completed within 2.5 days. However, it is possible to reduce the vessel turnaround time by as much as 40% using the proposed innovation.

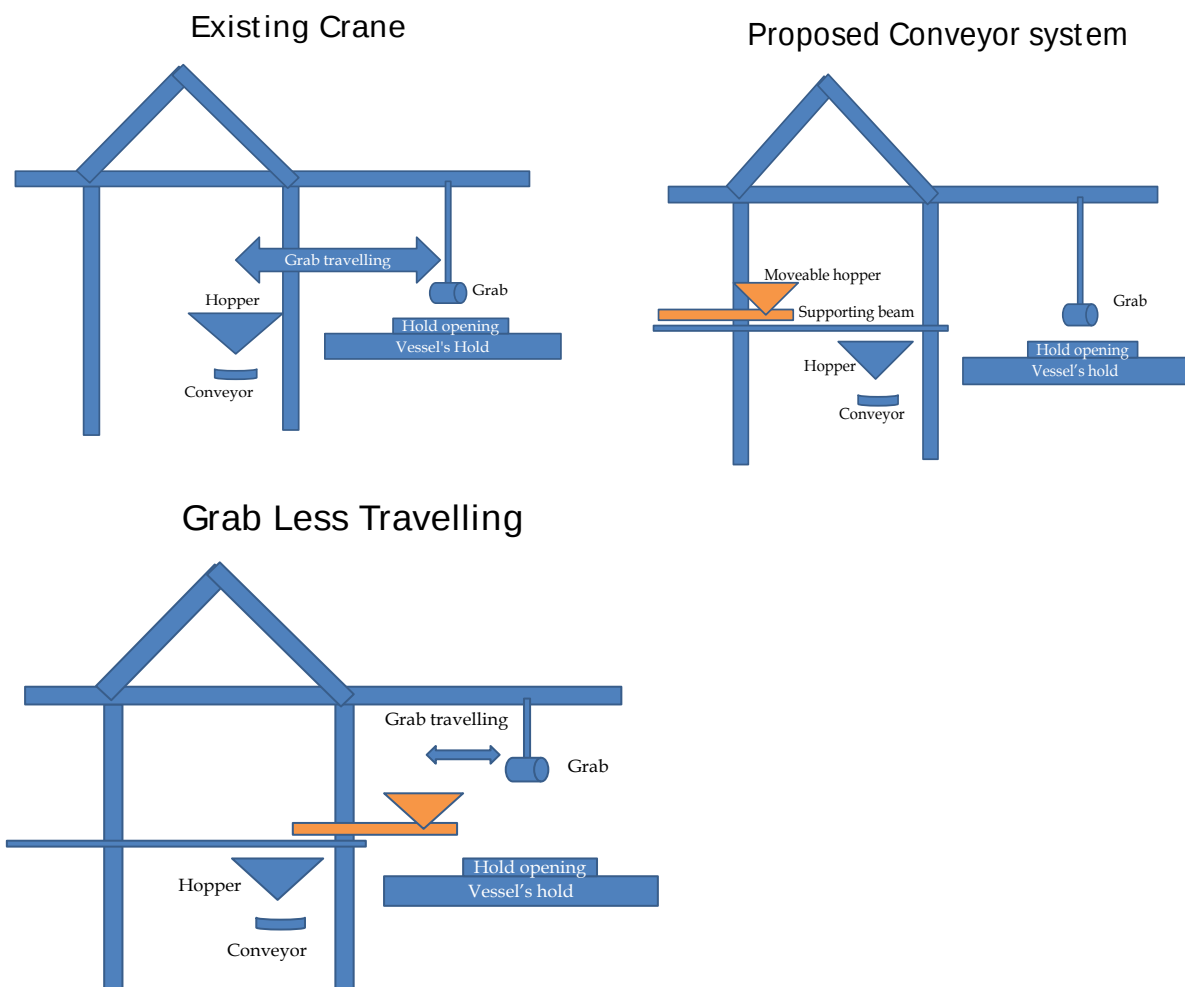
HOW TO OVERCOME THE AFORESAID CONSTRAINTS

In order to overcome the aforementioned constraints, my proposed solution involves modifying the present design by attaching a small moveable conveyor with hopper system just above the main hopper in the crane. The conveyor length would be about 15 meters from the main hopper to the vessel. Using this method the grab would unload the cargo onto the extended hopper and the cargo would be transferred to the main hopper by the conveyor. Every cycle, the grab would be moving 20 mtrs only instead of 50 meters (Calculating for both directions). This will reduce the average cycle time of the crane is reduced by about 50 %. This innovation can help increase cargo handling

productivity by up to 40% without any changes in the GSU capacity. I had approached the largest crane manufacturer of the world, FIGEE in Netherland for their consent. FIGEE showed a lot of interest in my proposed idea and accepted that my idea had the potential to improve the crane productivity. (Mail communication attached for evidence)

***Thank you very much for your request. Your presentation and short animation looks very impressive and requires some calculation. You are indeed a very innovative person.
Mr. Subbu you are at the right address to make such a modification with Figee.***

Marc Schinkel
Sales manager
FIGEE
Netherland



Evaluation (before and after modification)

Name	Before	After	Remarks
Grab travelling distance	50 meters	20 meters	
Cycle time (average)	75 seconds	45 mnts	
Max cycles per hrs	48	80*	
Max discharge rate per hrs	1680mt	2800mt*	Average 35 mt/ cycle
Average output per day per crane	24000 mt	40000 mt*	
Vessel Turnaround time (DWT 160000mt & 3 shore cranes)	2.22 days	1.33 days*	
Vessel owner Expense in port stay	USD 22200	USD 13300*	
More cargo handled per day	000000	106800 mt*	
Power consume for 3 cranes	31968 KW	19152 KW*	Per hrs per crane 200 KW. Savings 12816 KW per vessel

*-90% consider

Cost Benefits

By attaching a small conveyor on to the crane, we can reduce the average cycle time from 60 to 45 seconds. So discharge rate can be increased from 1000mt/hr to around 1400 mt/hr. This would reduce the vessel turnaround time by about 40% (considering all delays such as cargo sweeping by labors, Hatch change for vessel stability and stress, onboard equipment change, and back-up stacker change)

Nowadays the demurrage cost for a cape size vessel is approximately 10000 USD per day. If the vessel completes her cargo operations within 48 hrs instead of 72 hrs, the owner / charterer get a benefit of about 10000 USD. In a year if he can save 10 days, an approx additional earning of 100000 USD can be achieved per vessel even using conservative estimates.

At the same time using the proposed innovation a port or a terminal operator can handle higher number of vessels thereby increasing the cargo throughput through such berth. The income of the port / terminal operator is directly related to the volume of cargo handled. The port will be able to handle 50% more cargo without any additional capital investment required for creating an additional 60-70% capacity. If the crane output capacity increases, the ports / terminal operators will require lesser number of shore cranes to handle the same amount of cargo. This is also likely to significantly reduce maintenance cost of the GSU's.

For your reference, I have attached the Quotation received from FIGEE for engineering design.

Marine operation benefit

More number of vessels can be handled at the same berth which, in turn, will increase the port revenue by improving berth occupancy & optimal utilization of resources.

Pro-Environmental

- Some dry bulk cargoes such as fertilizers & animal feed have high concentrations of organic material and nutrients which have high biological demands. Large spillages of these can cause localized nutrient enrichment & oxygen depletion. This often results in suffocation of the marine life in the vicinity. If the proposed design is considered for GSUs, the spillage of cargo will be greatly reduced at jetty and will ultimately also lead to clean working environment on the jetty and the port.

Acknowledgement

I am very much thankful to

Capt. Sansar Chaube- AGM -Marine Dept- Adani Port & SEZL- Mundra

Mr. BG Gandhi- AGM Head, Coal Terminal – Adani Port & SEZL- Mundra

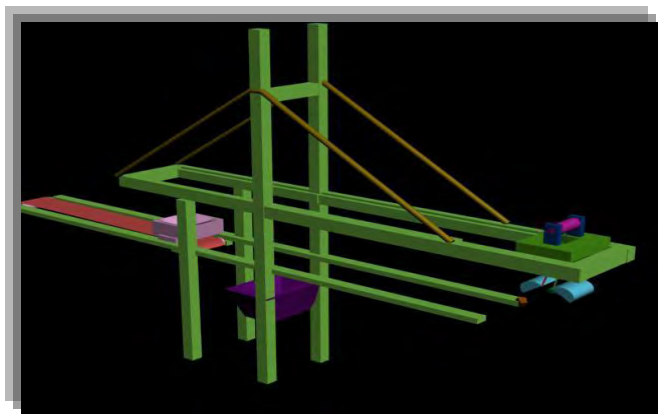
Capt. Unmesh Abhyanka- COO- Adani Port & SEZL- Mundra

who have guided & inspired me to accomplish this project.

Subramanian Nadar

Budget proposal

Feasibility study of moveable hopper system



Client : Mundra Port
Figuee : 0110207
Revision : 0
Date : December 5th 2011



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1 Introduction

HARBOUR CRANES

Figee Crane Services is founded in 1836. The company has earned a worldwide reputation as a leading designer and manufacturer of various types of harbour cranes and general hoisting systems.

Figee started as a manufacturer of machinery and hoisting equipment and bridges. During the years, Figee Crane Services has carefully followed up and anticipated on the expansion and development of loading/unloading in the ports and specialised as a manufacturer of harbour cranes. In the fields of general cargo, bulk- and container handling, Figee Crane Services has build up extended experience and has earned a good reputation as a high-minded and qualified supplier of cranes. In the mean time Figee Crane Services is specialised in rail mounted and floating cranes and is one of the well-known manufacturers of this equipment worldwide.

LEMNISCATE ®

Figee Crane Services is a leader in the design and manufacturing of advanced floating grab cranes. Our very successful range of Lemniscate® floating grab crane is convincing proof of this reputation. Both robust and reliable, Figee Lemniscate® cranes mounted on pontoons provide fast, independent operations, achieving transshipment capacities of up to 25,000 tons/day. Loading and unloading on-stream as well as at sea. Our cranes can handle both ship-to-ship and ship-to-shore operations swiftly and efficiently. Flexibility, reliability and progressive performance under all circumstances make Figee Crane Services' floating cranes stand out from other floating and harbour grab cranes.

Delivery program New Build Cranes

- Pedestal cranes
- floating cranes, including the unique Figee "Lemniscate®" Floating Crane
- single- and double boom cranes for bulk-handling and general cargo
- gantry grab cranes
- ship-to-shore container gantry crane - Rail mounted gantry cranes



THE GROUP

Figee Crane Services is a member of the  Group.

Today, Kenz Figee B.V. is a crane-building quality centre, serving the global market .

The four individual professional subsidiaries, all with their own characteristics, are specialists in the crane industry with activities worldwide for the Oil & Gas and Harbour industry.

Figee Crane Services B.V. has build up extended experience and has earned a good reputation as a high-minded and qualified supplier of harbour cranes. In the mean time Figee Crane Services is specialised in rail mounted and floating cranes and is one of the well-known manufacturers of this equipment worldwide.

Kenz Cranes B.V. Kenz Cranes is a long lasting name in cranes and lifting appliances for the offshore industry. The company has provided crane design and manufacturing to the strict specifications of the industry and international standards since 1960.

Kenz Offshore Services. An experienced team of multi-skilled maintenance and repair staff, backed up by our headquarters, serves as a 'flying squad' ensuring prompt response on land and offshore, wherever in the world a unit may need assistance. Several well-equipped mobile offshore workshops are on call with tools varying from hydraulic torque equipment to water bags and electronics load cells for on and offshore testing.

Dutch Crane Engineering B.V. Our engineering has expertise in hydraulics, electronics and control systems and has the disposal of state-of-the-art technical tools, such as Inventor, Finite Element programs and simulation software. Also, rely on us to comply with the requirements of classification societies, for outstanding project management and meeting the highest of QHSE standards.



2 Motivation

Some time ago we received a request for a study of a moveable conveyor hopper system on a ZPMC crane. Fige Crane Services is an organization, who is an expert in engineering modifications and upgrades on all types of cranes.

With such upgrade Mundra Port will increase their coal turnover with a substantial percentage, due to the fact that the cycle time will be shorter by unloading the cargo direct on the conveyor system. The conveyor system will be connected to the hopper. This ongoing process will improve and guarantees a unique and fast unloading process, which most likely knock out any competition in your area.

Our proposal to you is a feasibility study in order to see if this system can be realized on your ZPMC crane.

3 Starting points

Our proposal is based on the documentation received from Mundra Port

- General arrangement drawing (dr. nr. UL 7400) and PowerPoint document describing the cycle
- Crane, grab and conveyor specification
- The existing ZPMC crane
- The moveable hopper construction, which must be exchangeable with 4 cranes
- Standards are not taken into consideration at this moment
- Work will be done at our engineering department

4 Scope of work

Review and report for the concept of a ZPMC crane with moveable hopper.

The following scope of work will be realized

- Study and review of the delivered documentation
 - General arrangement drawing (dr. nr UL 7400)
 - Power point document describing the cycle
- Feasibility check
 - Interface between QC crane and moveable hopper
 - Structural construction
 - Cycle time
- Best solution check



5 Budget feasibility study

Above scope of work will amount **€ 9.100, -**

Above amount will be given as a discount when Figuee Crane Services receives the full order for production and commissioning of moveable conveyor hopper system.

Amount mentioned is excluding VAT

6 Contract conditions

Payment: 30 days after invoice date

7 Validity

Validity of this budget is 2 weeks and subject to order intake.

Appreciation mail from FIGEE - Netherland

"Marc Schinkel"

<m.schinkel@figee.com> To <Subramaniam.Nadar@mundraport.com>

10/25/2011 05:37 PM cc "Melvin Veen" <M.Veen@dutchcraneengineering.com>

Subj RE: Enquiry regarding innovative QC bulk crane
ect

Good afternoon Mr. Subbu,

Thank you very much for your request. Your presentation and short animation looks very impressive and requires some calculation. You are indeed a very innovative person. Mr. Subbu you are at the right address to make such a modification with Figee. We are a specialist in handling bulk. We build and find creative innovative solutions for all of our customers as pure specialist in fast cycle times in hoisting and lifting equipment in combination with conveyor systems.

I will inform you within this week what steps we can take in order to provide you with a suitable solution in order to increase the volume of bulk to be handled per hour.

Kind regards,

Marc Schinkel
Sales manager

Entry No.3

REPUBLIQUE DU SENEGAL

MINISTERE DE L'ECONOMIE MARITIME

PORT AUTONOME DE DAKAR



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How to improve my port's Efficiency /Productivity?

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How to improve my port's efficiency/ productivity?

Object of the essay

To broach this subject, should be well define the notions of productivity and efficiency which control enables a good approach to their measurement and guide the port manager in its decision to pilot a good use of port tool towards the performance and the expected success.

Productivity is the ratio between the production and the hours worked.

Efficiency is the ratio between the result obtained and the means used.

In other words, productivity and efficiency allied, will lead a competitiveness of the port of Dakar, and to this must be the port search performance as well as the safety and security of its facilities.

I / the situation of the Port of Dakar

1.1 Legal and institutional framework

- ☐ The port of Dakar is a national company, since 1987, with at its head a Board of Directors composed of representatives of the State, port stakeholders and social partners representing the workers are associated. This allows the port to have a flexible management and its direction of development.
- ☐ Handling of goods is liberalized, and there are two major companies that have been approved and that perform operations of boarding and disembarkation of goods.
- ☐ The maritime police act allowed the port to frame its rules of operation and to insure its security and functioning in respect of texts and regulations in force in Senegal and have some credibility for the respect

of the international standards for safety, security and sanitation of the business.

This institutional framework has enabled the port of Dakar to concede its containers terminal to DPW (Dubai Port World) for a period of twenty five years in the context of a public-private partnership.

- In regional and sub regional terms, organizations such as ECOWAS and the Western Africa Monetary Union (UEMOA) are frameworks that permit the harmonization of customs regulations and facilitate integration that would allow access to a market of millions of consumers.

1.2 Competitive position

The port of Dakar has a geographical position between the traditional sea routes of Northern Europe, to sub-Saharan Africa, South /North America, and vice versa. This situation naturally gives him with its sheltered Harbor, a favorable position for the reception of ships from or bound for these areas.

By against, the port of Dakar is heavily dependent on the economic situation of its hinterland, very low in terms of growth, with road and rail infrastructures which are lacking.

However, in advance, the Dakar Port may well play the role of hub with the recovery of this situation as part of the economic integration and political of this Western African sub-regional.

II / Our customers and our relations: partnership vertical and horizontal partnership

2.1 Different management of partnerships

- As in all ports, and depending on their type of services offered, the main customers of the port are the ships, that is to say ship-owners and shippers. These customers create around them other customers, which are the port players such the port community, consignees, freight forwarders, towing companies, those of naval repairs etc.

The Port has a partnership horizontal with these customers. Utilities such as goods handling liberalized, free movement of goods should be regulated with their characteristics: service continuity and equal treatment.

- **The second type of customers is the dealer of terminal, the only one being DPW (Dubai Port Word) with which the port has a vertical**

partnership with a contractual regulation between the latter and the Port.

2.2 Quality, productivity and efficiency of services at the Port of Dakar

The Port of Dakar has a quality service on:

- ☐ Reception of ships and their piloting are certified ISO 9001, version 2008;
- ☐ Towing is not mandatory and is also certified;
- ☐ The pilots and dockworkers are qualified and experienced;
- ☐ Ships waiting time is minimized today with the specialization of the docks, especially concerning container vessels with the practice of the window system, and a cadence of discharging and loading containers at a good level.

2.3 The stay time-related issues and the cost of passage

The waiting time should be reduced as regards:

- ☐ Bulk carriers, mixed ships and conventional cargo, because:
 - The high rate of occupation of the quays for these ships;
 - Of the smallness of the dedicated quays for these ships;
 - The limit of draught at 11 metres and at high water;
- ☐ The Time of stay is relatively long for these vessels because of the lack of harmonization and regulation of the handling liberalized; **one of the handling companies practice the tariff to the tonnage and the other practical company tariff is the time.** That is not regular in competition and does not respect the principle of equal treatment which characterized the public service, and seriously reduces productivity and efficiency.

III. / Relations Port/State/City and Populations

African ports for most, such as the port of Dakar, are in their first design inherited from colonization, and because of this, they have been overtaken by the story of the development of maritime transports with also all the procession of constraints induced by :

1 / Relatively new concepts and that must be considered more and more, such as:

- ☐ **The sustainable development.** Today, it is necessary not only to ensure its development, but not anyway without consideration for the populations, including residents and environment.
- ☐ **Certification quality of port services,** the safety of people and facilities, and the environment. The port of Dakar, who has attended to the certification of its services, shifts now to quality, safety, and environment certification.

2 / The more and more important and pressing need in financing in innovations, infrastructures, and the maintenance

3 / The proximity of the city with the port without a framework of communication and formal consultation and adherence by all parties concerned in their respective projects;

4 / The lack of appropriateness and updating of laws and texts governing dockworkers function's specifications, and linking it with the port under the horizontal partnership, and the Port operating rules;

5 / The lack of regulation of the Port of its dealings with companies handling, and handling companies and they even;

These gaps cause a deficit of efficiency and productivity of the Port of Dakar, thus reducing both the cadences of handling and the flow of traffic in the direction of the port and around, with more time for the rotation of the goods.

Measures to take in order to boost the productivity and efficiency of the Port of Dakar

- ☐ **Private- public partnership** should be developed through **specialized terminals**; the vertical partnership is easier to manage because it's bilateral and the capital intensive; so the issues revolve around looking for the maximum benefit, and therefore profitability and more care are brought to relationships;
- ☐ Arrange with the support of the State concerning laws and texts y related the port handling with the support of the Port **as a licensing**

**authority for the regulation of the practice of the function;
implement the pricing to the tonnage;**

- ☐ **Dredging** of the access channel **to 13M**, and cleaning some Wharf area intended for bulk carriers of **11 M draught**;
- ☐ **To set up a framework for consultation and collaboration between the State, the Port and the city**, to clean up the vicinity of the Port, to make flow fluidly the movement of goods, and back the customs barrier;
- ☐ **Connection of port access** directly to the output of the city;
- ☐ **Rehabilitate the Rail to** take the break relay to the Interior of the country and the hinterland;
- ☐ **To insure very good and trusty operational statistics** in order to appreciate and get under control the efficiency and productivity parameters.

Entry No.4



Essay title: How your port service and efficiency can be improved?

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Brief Summary:

This project offers to the Port Authority of Dakar the opportunity to modernize its archaic Financial Information System, presently based on “Manual Work” and “heterogeneous software” in all processes.

It institutes a new concept: “ONE MANUAL INPUT, UPSTREAM-DOWNSTREAM, IN ONE SYSTEM”. This concept is focused on the computerization of all processes of “data input” (Sales and supply chain) and “controls” (Control Management, Treasury, Financial Management, Management Accounting and Human Resources).

In fact, it consists in acquiring a new dynamic and latest software named “SAGE-X3” which gives all modules (Sales management, Supply chain, Financial Management, Management Accounting, Control Management, Treasury, and Human Resources) with a new organization for having:

- a unique and homogeneous secure database
- an effective data treatment in real time
- a better traceability of information treatment
- a better control of port activity for managers with control panels, summary statements and reporting board in “one click”

This new system is feasible inasmuch as many companies even small achieved it.

REVITALIZATION OF THE FINANCIAL INFORMATION SYSTEM OF THE PORT AUTHORITY OF DAKAR

In this 3rd millennium where all international and famous companies possess an automated financial information system that requires only one manual input upstream in one system until the establishment of control panels and financial statements, the **Port Authority of Dakar**, a neuralgic structure of Senegalese economy deeply presents this requirement. This need of modernization is almost identified in all processes of the value chain. For example, we identify some operational structures such as Purchase and Stock evolving into « Manual Work» that generates systematically some long and infernal inputs, administrative slowness, hidden costs, absence of reliability etc....

Then we propose this project that offers to the Port Authority of Dakar, a new Financial Information System more effective, homogeneous and answering manager's expectations with a new concept: **« ONE MANUAL INPUT, UPSTREAM – DOWNSTREAM, IN ONE SYSTEM».**

This project includes five (05) parts:

- The main objective
- Deployment of the new financial information system
- The operating system of the supply chain process (furniture, services and fixed assets)
- The operating system of the sales process (Invoicing)
- Advantages and improvements waited by process

1°) The main objective of the project

The main objective of this project is the creation of a new financial information system based on the concept **« ONE MANUAL INPUT, UPSTREAM – DOWNSTREAM, IN ONE SYSTEM »** in order to revolutionize the present system essentially characterized by a slowness of « manual work» in all operational levels and an insecurity of paper documents archived.

The conception of this new financial information system consists in computerizing processes of data entry (**UPSTREAM**), there are **supply chain** and **sales** (invoicing) and to revitalize processes of analysis and control (**DOWNSTREAM**) such as the financial accounting, the management accounting, the treasury management and the control management.

This new tool will permit to institute a dynamic management of finances in real time, more effective and rigorous for the Port Authority of Dakar with a real updating of accountant and financial electronic data in order to anticipate as soon as possible on all failing generated by an absence of analysis or control.

2°) Deployment of the new financial information system (Picture n°1 attached)

Nowadays the financial information system of the Port Authority of Dakar is disparate with four (04) computerized processes:

- The financial module (ERP ANAEL/RAPPRO WIN/TRESO WIN)
- The sales management (ATLANTIS)
- The human resources management (AS400)
- The control management (SUIVI DU GETAIRE)

But these modules are not integrated. This situation engendered a lot of dysfunctions in the transmission of the financial information in real time. To palliate it, the deployment of the new system is based essentially on the acquisition of a new and latest generation of software package named **“SAGE X3”**, which offers all modules of computerizing management worthy to famous and international companies. This new dynamic software will offer:

- Accountant and financial management module
- Purchases and stocks module
- sales module
- Fixed assets module
- Human resources module
- Treasury module
- Control management module

The integration of all these modules in one system offers these following advantages:

- A standardization of all processes in one data base
- Data updating in real time to avoid reprocessing and manual imports that can generate losses, mistakes or omissions.
- An absolute control of financial information, for reliable and anticipative financial management.
- A total abolition of manual work in all operational positions with the principle « ONE MANUAL INPUT UPSTREAM – DOWNSTREAM, IN ONE SYSTEM »
- A master of production's statistical data, the heart of port activity.

The configuration aforementioned offers osmosis of financial data fluxes that will revolve around supply chain and invoicing, the main data entry for the new information system.

3°) The operating system of the supply chain process (furniture, services and fixed assets) (Picture n°2 attached)

This shows the different stages of financial data treatment of the new organization that will be set for the supply chain processes:

- Purchases and stocks
- Fixed assets
- Financial Accounting
- Management Accounting
- Treasury
- Control management

 **Main stages listed below:**

Stage 1: Order Form (OF) input

It is the « **UPSTREAM** » of the chain and the only stage that requires a manual input by the purchase office. Let's recall that the Port Authority of Dakar is always working with manual written Order Form (OF)

Stage 2: Transformation of the Order Form (OF) into Receipt Form (RF)

This treatment is done when furniture, fixed assets or services order are received by receiver Offices (Office of stock management, Office of fixed assets management or department's secondary accounting office) in conformity with the Order Form (OF) validated by the competent departments.

Stage 3: Transformation of Receipt Form (RF) into invoice (I)

At this stage, Receipt Form (RF) is transformed into Invoice (I) in accordance with documents of receipt (Delivery document, Acceptance certificate etc.). This operation is achieved by the stage 2 actors.

Stage 4: Invoice accountant recording

Invoice (I) is evolved into accountant data (charges or fixed assets accounts, VAT etc...) by:

- Voucher accountant
- Fixed assets accountant
- Treasury accountant

These officers will check:

- The exhaustiveness of accountant documents sheaves
- The conformity between accountant documents sheaves and data system

This stage provides accountant and financial data to departments of analysis and control (Financial Accounting, Management Accounting, Treasury Management, Control management and Taxation Office).

Stage 5: Preparation and automatic Generation of payment documents (check letter and wire)

At this stage, payment documents are prepared and generated in the system then published for authorized signatures.

The main actors are:

- The Treasury Accountant who prepares check letters and wires
- The Bank Treasury Officer who generates and edits check letters and wires

Stage 6: Accountant recording of payment documents

Payment documents (check letters and wires) are evolved into accountant data by the Treasury Accountant for the Banking Control Accountant and the Treasury Management.

4°) The operating system of the sales process (Invoicing) (picture n°3 attached)

Processes concerned by this new operating system are listed below:

- Sales
- Financial Accounting
- Management Accounting
- Treasury
- Control management

 **The main stages :**

Stage 1: Pro forma Invoice (PI)

This stage is the entry of sales process and will need only one manual input. Then we will have pro forma invoices typed by production department's agents or secondary cashier

Stage 2: Transformation of Pro forma Invoice (PI) into definitive invoice (I)

At this level two (2) invoices are created from stage 1 input:

1. Invoice «payable in term» generated by Invoicing officers
2. Invoice «payable by cash» generated by Main cashier Officer

Stage 3: Accountant recording of Invoice (I)

Cash and term invoices are evolved into accountant data by Automatic System Updating launched after final control. This action provides accountant and financial data to department of analysis and control (Financial Accounting, Management Accounting, Treasury, Control management and Taxation Office).

Stage 4: Preparation and automatic Generation of customer's collection statements

Collection statements are prepared, generated in the system and transmitted to authorized signatures.

The main actors are:

- The Collector agent who prepares, generates and edits customer's statements
- The Bank Treasury Officer who prepares, generates and edits cashier documents

Stage 5: Accountant recording of costumer's payments

Customer's payments (drafts, checks, wires and cashes) are evolved into accountant data by the Treasury Accountant for the Accountant Banking Control and the Treasury Management.

5°) Advantages and improvements waited by process

Purchases and stocks

- o A better management of Order forms (OF)
- o Secure of Order Forms archives with a new dynamic database
- o A better control of stock costs by permanent inventory for an objective, effective and reliable Accounting Management.
- o Optimization of stock valorization (WAM or FIFO)

Sales

- o Automated relation between Port Production Department and Invoicing Department
- o Abolition of kilometric and infernal typing
- o Invoicing officers oriented towards control in order to minimize mistakes risks
- o Invoicing in optimal and real time

Financial accounting

- o Abolition of Infernal and kilometric manual accountant recording
- o Accounting oriented towards controls and analysis by Excel extractions in order to make accounts more reliable, sincere and transparent
- o Facilitation and reliability of periodic accountant close (Ex: The latest accountant close is dated on august 2012, a late of 2 months)
- o Abandonment of accountant data manual imports, source of slowness, omissions and mistakes (Ex: the software of Accountant Banking Control « RAPPRO-WIN », none integrated to accounting software « ERP-ANAEL » and functioning with an obsolete operating system « WINDOWS 2000 »)
- o Perfection of accountant data (ZERO RISK OF MISTAKES)
- o Anticipation and systematic detection of embezzlements, especially in main and secondary cashiers

Accounting Management

- o Abandonment of Accounting Management's database manipulations with a fluidity and reliability of data that will be generated automatically and poured as invoices are evolved into data by Financial Accounting
- o Abandonment of accountant documents circulation between the financial and management accounting, sources of administrative slowness and losses
- o Better appreciation of management accounting distribution keys with reliable figures

Treasury Management

- o Abolition of infernal and kilometric typing by the Treasury Manager Officer in the software « TRESO-WIN », none integrated to the accounting software « ERP-ANAEL » and functioning with an obsolete operating system « WINDOWS 2000 »

- o Treasury Manager Officer focused on treasury tensions anticipation and treasury budget control
- o Setting up of a Ratios Control Panel
- o Stop of out delays inputs with an automatic and real time updating of the financial situation
- o Automation of the check and wire circuit
- o Treasury Manager Officer focused on a better control of operations between banks and the Port
- o Suppression of manual Payment Notice, checkbooks and wires, sources of mistakes and hidden costs (Ex: On average 5280 papers are destroyed per year either a loss of 2 200 000 FCFA)
- o Automation of Customer's checks slips that will have an appreciable impact on treasury balance
- o Abolition of repetitive mistakes noted in secondary cashiers



Control of Management

- o Abolition of infernal typing in the software « SUIVI BUDGETAIRE » none integrated to the management accounting module
- o Control of management oriented toward analysis of performance from the management accounting data, more detailed and meaningful than financial accounting



Taxation Office

- o Suppression of Infernal and kilometric typing for VAT returns
- o Exhaustiveness of returns with simple Excel extractions
- o Taxation Officer focuses on anticipation of tax adjustment

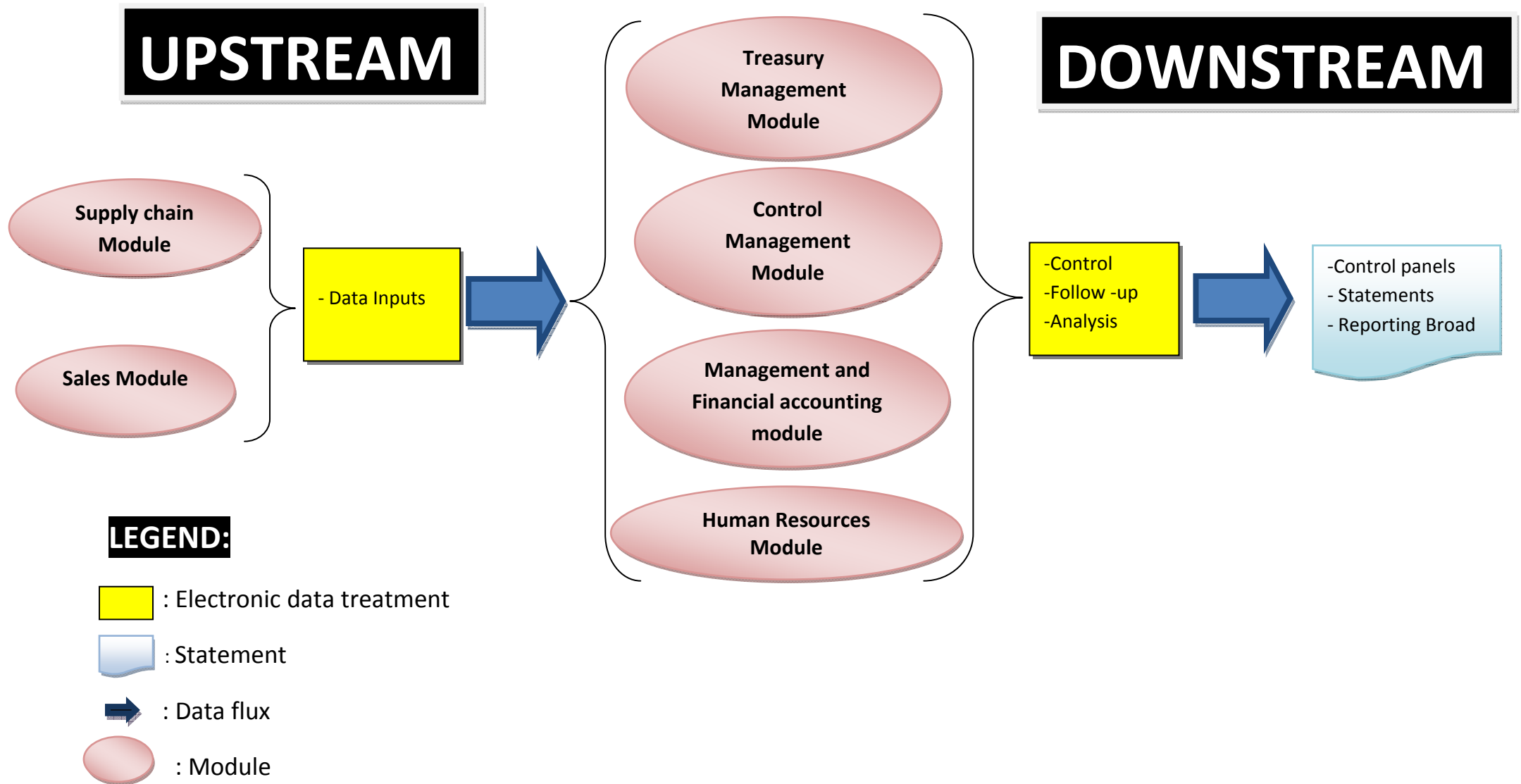
CONCLUSION:

It stays necessary and urgent to take measures to launch the project « **ONE MANUAL, INPUT UPSTREAM – DOWNSTREAM, IN ONE SYSTEM** » in order to eradicate the administrative slowness noted in different departments of the Port Authority of Dakar, unworthy for an international company.

Furthermore, it will be essential to make financial and technical survey to realize this project that solves the problem of «MANUAL WORK » which generates hidden costs and slowing down Port's performances face to its rough competitors.

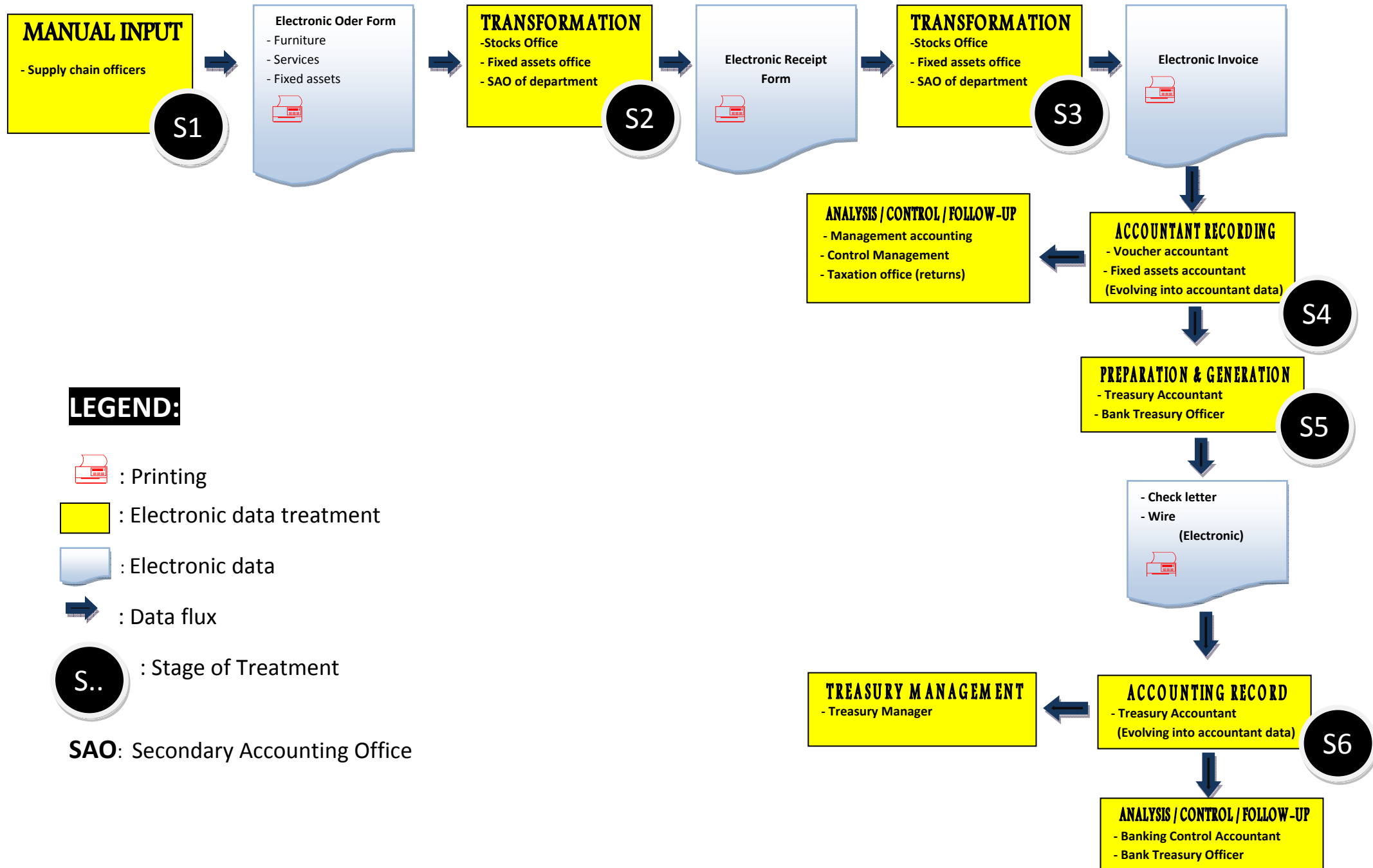
PICTURE 1

FLOWCHART OF THE NEW FINANCIAL INFORMATION SYSTEM DEPLOYMENT

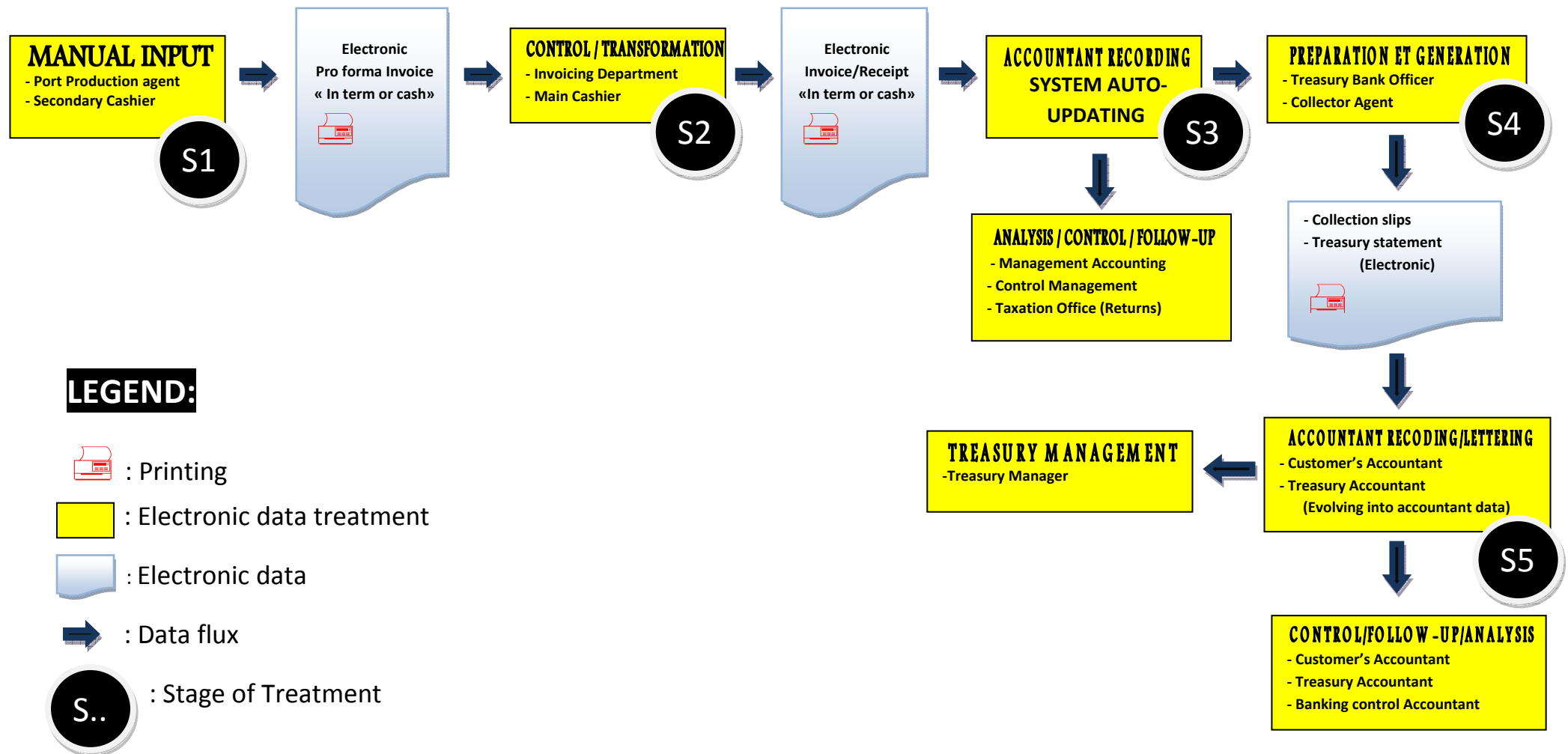


PICTURE 2

FLOWCHART OF THE SUPPLY CHAIN PROCESS OPERATING SYSTEM (PURCHASES & STOCKS)



PICTURE 3
FLOWCHART OF THE SALES PROCESS OPERATING SYSTEM (INVOICING)



Entry No.5

1. **Title of Essay** :- From Stagnation to Excellence –
Exploring Potential Within

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2. **Word Count of the Essay** :- 1,998 words, including table & chart.

3. **Brief Summary of the Essay:-** Haldia Dock Complex is presently experiencing low cargo handling and remarkable **deficiency in efficiency parameters**. The above is due to **extraneous factors** like declining river draft and socio-political interferences and due to **internal factors** like non-coherence in activities and inefficiency. Although HDC has a little control over the external factors and it needs all round development with respect to both external and internal aspects, it has not the resources to concentrate on all the aspects. As far as efficiency is concerned, the **present options** regarding **outsourcing and technological upgradation** have failed to bail out HDC from the present crisis. Although HDC is still hovering round the options of different methods of outsourcing and technological upgradation **only**, it has failed to notice the major internal factor like **deficiency in human resources**, which is mainly responsible for its inefficiency. Therefore, detailed **root-cause-analysis** has been made in the essay with the suggestion to concentrate on the improvement of the most important factor i.e. human resources, which can bail out HDC not only from the present crisis, but also could **ensure improvement on continual basis**. Besides, it has been suggested to look at “efficiency” in a **holistic manner**, where human resource is recognized as an important **input**, and where qualitative aspects of **output** including the **impact** HDC creates are recognized.

Although, ideally, the solution could be very complex and intricate involving both internal and external factors, this essay has chosen the path, which is **simple, inexpensive and pragmatic, having long-term effect**. A deep introspection into the functioning of HDC reveals how hasty decision-making, surrounding mainly the cosmetic items leads to recurrence of similar problems / lacunae. The **monopolistic attitude of HDC** in an almost **perfectly competitive world** is itself a threat to the organisation. Actually, the problem lies with the **thinking procedure** like, not really understanding the purpose of a port in the economy, the impact the port creates, lack of holistic approach, non-recognition of qualitative aspects, fragmented short-term outlook, lack of customer focus, and the list goes on. Therefore, it has been shown in the essay, how **human empowerment** across the organization can change the **thinking process** and **improve the port performance itself**.

Then, it has been suggested how a [well-focused](#) human empowerment could be made with the support of [well-laid policy, systems and procedures](#). The suggestions could have accompanied more philosophical, managerial and industrial psychological aspects, but the procedure has been kept [simple](#), so that HDC can comprehend and adopt the procedure easily. Thus, it has been aimed for continual development, rather being over-ambitious and achieving nothing. A [target](#) for improvement of certain traits, which can improve efficiency, has been set and a simple [procedure](#) for human empowerment and improvement of organizational culture has been suggested. It has been believed that human empowerment would lead to better understanding of the port functioning holistically, quality decision-making, empathizing with customers, improvement in implementation of systems and procedures, performance, innovation, etc. According to this essay, [technology, systems and procedures are very important](#), but its efficiency [can be achieved only with empowered human resources](#). Therefore, focus has been made on [enlightenment of the organization](#), rather than ensuring mere [corporate physical fitness](#).

Bibliography:-

- 1) 'A Textbook of Psychology' by P. N. Bhattacharya.
 - 2) 'Small is Beautiful' by E. E. Schumacher.
 - 3) 'Human Response in Organizations: Towards the Indian Ethos' by S. K. Chakraborty.
 - 4) 'Against the Tide – The Philosophical Foundations of Modern Management' by S. K. Chakraborty.
 - 5) 'Values and Ourselves' by Swami Yuktananda.
 - 6) Indian Port Association Circulars on Port Performance.
- N. B. My work is original. However, the aforesaid books from Sl. No. 1 to 5 had helped me to conceptualize the aspects during my days of Management Studies. The statistical data has been incorporated from the circulars as mentioned at Sl. No. 6.

From Stagnation To Excellence –

Exploring Potential Within

Haldia Dock Complex (HDC), a riverine major port of India is gateway to Eastern India having vast hinterland. Although, HDC was making steady progress in cargo handling till 2007-08, reaching the level of 43.59 million tons, cargo handling volume has gradually declined to 31.01 million tons in the year 2011-12. The decline, apparently, was reasoned due to reduction of river draft, government policies restricting export of iron-ore and overall stagnation in growth of the global economy. However, a deep introspection and comparison with other Indian major ports reveal that presently HDC is also [reflecting adverse condition in major efficiency parameters](#), which is a matter of serious concern.

Present Status:-

The important performance indicators during the following period reflects the abysmal condition of the port:-

Efficiency Parameters	Apr to Sep		Apr to Aug		Apr to July	
	2012	2011	2012	2011	2012	2011
Average pre-berthing time (under port account) (hrs.)	18.66	17.68	18.06	16.92	16.87	16.96
Average turn round time (under port account) (days)	2.88	2.81	2.87	2.76	2.83	2.73
Average turn round time (days)	3.73	4.21	3.73	4.15	3.65	3.99
Average output per ship berth day (tons)	6,417	6,608	6,431	6,704	6,468	6,965

Even though, HDC required to achieve higher efficiency parameters for combating the declining river draft and to retain and increase its customer base, HDC has miserably failed. Inspite of great promises made every year, the overall condition w.r.t. efficiency in the fronts like pilotage, lock operation, berthing, unloading, evacuation of cargo and allied services to customers is worsening continually. Considering the resource crunch, it is high time that some innovative yet simplistic steps be taken to bail out HDC from the present imbroglio.

Efficiency – a holistic approach:-

Although, the prevailing definition of efficiency stresses on the relation between input and output w.r.t. productivity, the holistic approach should include concern for customers, environment, safety, health and the economy alongwith productivity. The organization is not meant for surviving for a particular term - its aim should be for surviving eternally. Mere focus on productivity oriented efficiency may help the organization to grow in the short run, but [a sustainable aim needs holistic approach](#) - where the organization needs to grow and progress alongwith its customers, society, environment and the world. Therefore, each stage, from planning to implementation, needs [concern for choice of resources](#) (including human resources) to be utilized as inputs. In order to be truly efficient, HDC should also concentrate on the [quality and quantity of output](#) to be produced alongwith the resultant all encompassing [impact it creates](#).

Root-cause for the abysmal status:-

A detailed analysis of the reasons behind the deplorable efficiency parameters of HDC reveals that the following are the root-cause for the abysmal status:-

a) General shortcomings:-

1. Lack of communication between planners and implementers.
2. Lack of delegation of authority – almost all decision making power, even the minuscule ones rest with the apex level.
3. Lack of resources – financial and other resource-constraints.
4. External interference by both socio-political and external interested parties.
5. Low river-draft resulting in less cargo volume, less economies of scale and less efficiency.
6. Less mechanization leading to less cargo throughput.

b) Human-oriented shortcomings:-

1. Short-sighted outlook having concern for immediate gains.
2. Fragmented outlook – focus on units and not on systems, resulting in lopsided development.
3. Hasty decision making and not giving reasonable time in the planning stage.
4. Lack of focus – resulting in continual drifting away from one issue to another.
5. Focus mostly on visible and tangible aspects, like cargo-handling. Intangible aspects like customer satisfaction, training and development, learning, maintenance, back-up office services remain under-prioritized.
6. Concern for quantity rather than quality – volume of cargo handled is viewed as more important than efficiency parameters.
7. Lack of co-ordination amongst employees leading to difficulties in synchronization of activities.
8. Rigidity of the employees in not opting for multiplicity of jobs and new technologies.

Solution:-

In the above backdrop of problems across the organisation, both horizontally and vertically, HDC is continually failing to sustain customers' confidence and is losing grounds on all major efficiency parameters. The most fearful aspect is that HDC is **losing its employees' confidence** who are the key operators in bailing out the port from the present crisis. Although, resource crunch exists in most of the ports of developing countries, a deep introspection at HDC reveals that the **main problem is attitudinal** – related to focus, approach, leadership, learning, confidence, reliability, etc.

In this situation, generally the conventional alternatives appear to be opting for technology-driven efficiency, outsourcing, adoption of port-community-system, terminal operating system, backward and forward integration, and the list goes on. But, HDC has already experienced low

productivity in fully mechanized areas, in outsourced areas and upon technological upgradation. Therefore, the **main problem lies with the technically competent yet attitudinally strived manpower**. So, to start with, the thrust should be on empowering its manpower, supported with well-laid policy and organizational culture, in order to reap optimum efficiency. This **empowered human resource would efficiently mobilize other resources** to get the desired outcome. Thus, the panacea of HDC's ailment lies in exploring the potential of its employees through ethico-moral transformation in a simplistic, pragmatic and sustainable manner alongwith technological upgradation.

Process of Human Empowerment:-

Human empowerment involves development of both competence and attitude of the human resources supported by well-laid policy, systems and procedures.

A) Policy, Systems & Procedures:-

- i) **Vision, Mission & Objective:-** HDC should frame **pragmatic and ethical** vision, mission and objective and percolate them to the lowest strata. The divisions and units should frame their objectives accordingly. Regular review system should be developed to ensure that all the areas function in the desired direction.
- ii) **Delegation of authority:-** Authority regarding **decision-making and allied activities** should be suitably delegated to the lower levels for efficient **arrangement and management** of resources.
- iii) **Customer-focus** should be given priority. Regular interaction with the customers should be encouraged to get customers' feedback, which should be closely monitored even by the apex level management.
- iv) **Communication:-** A well-laid electronic and other communication system should be implemented, so that all are well-informed about the organization's vision, mission, objective, performance and impact. A well-informed competent person can make right decisions and right implementation **synchronizing with everyone**.
- v) **Supervision and monitoring:-** While giving adequate independence to perform; supervision and monitoring should be strengthened to ensure achievement of desired result.

B) Development of Human Aspects:-

i) Human Competence:-

Competence, an essential precondition for efficiency, is based on education, experience and training. Although, the HDC employees are already competent in their own field, regular training is required to ensure that they perform their job **coherently** and **are updated with new procedures and technology**. The aspect of developing **"thinking faculty"** should be encouraged.

ii) Attitudinal Development:-

The intangible yet most dominant factor for efficiency is the **ATTITUDE**. Attitudinal development has an all-encompassing effect on organization, nation and the human civilization as a whole.

Going by Cattel's classification, a deep insight into the industrial psychology would reveal that addressing the **"source traits"** like intelligence, integrity, confidence, conscience, responsibility, etc. for their manifestation through **"surface traits"** like maturity, clarity, creativity, commitment, independence, determination etc. is essential for **improvement of efficiency**.

a) Target:- The management may first decide as to what it wants to achieve through attitudinal development. To start with, focus may be made on development of [leadership qualities, holistic approach, innovation and learning](#).

i) Focus on leadership qualities may include development of confidence, courage, determination, maturity, clarity, commitment, independence, empathy, [social-awareness](#) and inculcation of belief that [everyone has immense potential](#), that [all are leaders in their domain](#) and that [everyone is extremely important](#) to the organisation.

ii) The development of [holistic approach](#) may refer to the ability to see things from the top, so that one can visualise all the factors of production and the outcome – be it tangible or intangible, located distantly or nearby. One should be able to visualise how various inter-related elements, through interaction creates something meaningful whole.

Through holistic approach, HDC should enable itself to be value-based with ethical guiding principle. The employees should be able to focus not only on “[what to achieve](#)” and “[how to achieve](#),” but also on “[what impact it creates](#).”

iii) Innovation:- Everyone should be made to realise that they are the persons most acclimatised with the environment of their work area. Therefore, they are the best persons to make improvement in their field of performance. Even [miniscule improvement should be encouraged](#) and required independence should be given.

iv) Learning:- There is a need for shifting from the idea that one is omniscient. Learning should be considered as [an important pillar of foundation of the organisation](#). Learning on continuous basis should be developed.

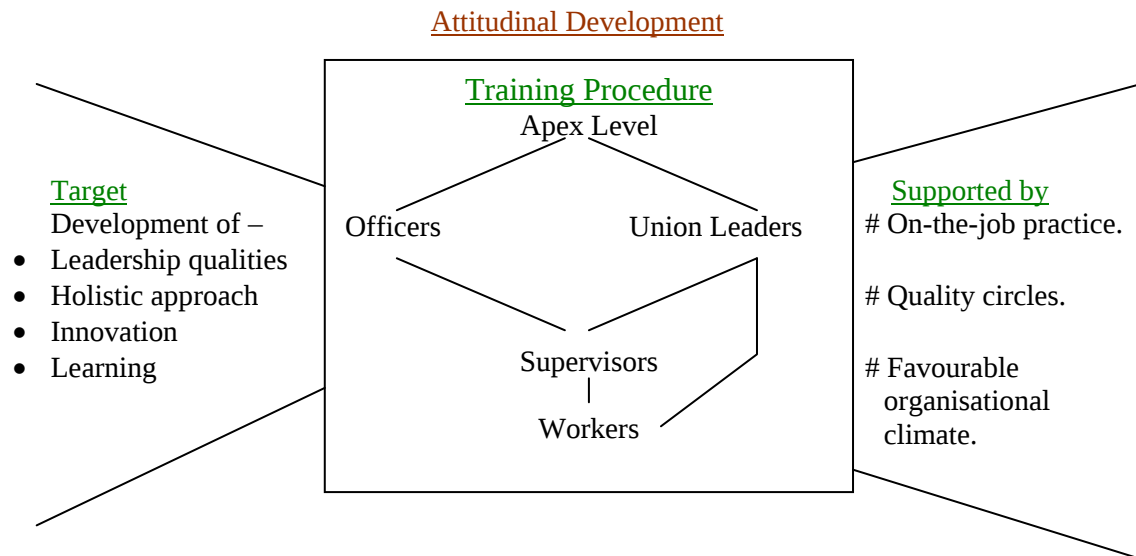
b) Procedure:-

Once [convinced about the target](#), the procedure for attitudinal development may be framed. [Training on behavioural modules](#) need to be imparted on a continual basis. Besides, [on-the-job practice](#) should be encouraged. This may be supplemented by creating a [favourable organisational climate](#), where demonstration of positive attitude is encouraged by rewarding / recognising.

With 2,970 employees of HDC, it is not feasible to undergo human development within a very short period. Hence, it is desirable that the [apex level of management](#) first undergo such training followed by the officers and trade union leaders. Since they have considerable influence on their subordinates, their behavioural change would have immense impact on others. The trained personnel would then [percolate](#) their learning to their subordinates during on-the-job performance. While classroom training for the next round of supervisors and section-in-charges would continue, [a favourable organisational climate would continue to develop](#). Thus, simultaneous existence of training, demonstration of positive attitude and the organisational climate would have a [multiplier effect](#) in creating an environment of increasing efficiency. The above process should be well-documented and be continually monitored to bring the element of sincerity and progress.

The aforesaid exercise would be strengthened if unit-wise [quality circles](#) are formed and activated. Then, inter-unit quality circles may be formed, so that it has an all-encompassing effect on the organisation.

Once improvement in behavioural aspects are achieved, automatically there will be significant improvement in the attitude to lead, learn and practice, decision making, concern for intangible aspects, concern for customers, etc. There will be radical positive transformation through “[inspiring empowerment coming from within](#)” rather than through “[compulsive extraneous trust](#),” in the journey beyond excellence.



Conclusion:-

Every organisation has a 'corporate soul'. Each organisation has a different level of awareness and this awareness or lack of awareness makes all the difference in reflecting true efficiency. An organisation that becomes aware and develops a 'universal perspective' becomes an 'enlightened organisation.' Transcendence of human potential from physical to intellectual self can ensure enlightenment of the organisation.

In the present competitive era of globalisation, vicissitudes are natural in any organisation. Expectations of the customers and the demands for efficiency keep increasing, resulting in the need for better planning, upgradation of the systems and higher technology. Although procedures, systems and technology can ensure 'corporate physical fitness,' the organisation cannot be enlightened unless the human resources are empowered. Though the conventional decisions centre round the physical aspects, the panacea lies in the technically competent and attitudinally enlightened human resources. Therefore, the most cost-effective way of leading the port from stagnation to excellence is by listening within and exploring the potential of every employee. The enlightened work force then can determine the right focus, innovate and plan properly and implement it efficiently in the desired direction in a synchronised manner to create the right impact. The process of enlightenment involves extensive training – both in-house and during on-the-job performance under a visible and felt leadership supported by a favourable organisational climate. The process may be multi-dimensional requiring extremely sincere efforts with holistic approach, but it is cost-effective and within the reach of the ports in the developing countries.

Entry No.6

“How to improve the value of my port services: a joint effort and new segment to improve services of Port of Muntok in Bangka Island”

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Word count: 1216

Summary: Port of Muntok, a small regional port under the auspices of Port of Pangkal Balam, can offer more to community as well as generating more revenue by going hand in hand with stakeholder involved in the area. The essay is based upon Business Model Canvas.

How to improve the value of my port services: a joint effort and new segment to improve services of Port of Muntok in Bangka Island

There are twelve branch ports under PT. Pelabuhan Indonesia II (Persero) a.k.a IPC. Some of the branches, like that of Port of Pangkal Balam, are responsible for managing smaller regional ports. Muntok Port a.k.a Mentok is one of Port Pangkal Balam's regional ports, other than Belinyu and Sungai Selan ports. Muntok, or Mentok as local people fond of calling (mentok means end of the island, as it is situated at the western tip of Bangka Island) is an old town with its glory from the colonial past.

Compared with other bigger branches under the management of IPC, Pangkal Balam is considered small; it generates Rp. 17 billion out of Rp. 4 trillion of corporate revenues in 2012. The figure, however, is not as small as it appears in the balance sheet as the port is situated on Bangka Island, an island that is inhabited by less than 1.5 million people (out of the country's 250 million inhabitants) and is a port of destination rather than a transshipment one. Annually, Port of Pangkal Balam and its regional ports handle 1.9 million Ton of cargo, and 270.000 Passengers. The number of domestic passengers declines as airlines fare is going down and more people are enjoying higher income from the improvement of the region's economic growth over the last decade and no overseas passengers are debarking.

Coming up from the background, the essay is trying to bring about a potential of Mentok by developing its port facility to cater for more passenger and creating it a new destination for tourists from all over the world.

Value Proposition; Mentok was once a hub for tin mining industry, dating back from Dutch colonial era up until 1990s. The Dutch developed this tiny town into their tin industry machine with infrastructure and facilities that ensured its dwellers (locals, Chinese, Europeans) to cohabit in harmonious fashion. The colonial ruler also used the town for exile of two founding fathers of Indonesia: Sukarno and Hatta. Once tin deposit depleted, the town was abandoned by its travelers and workers, leaving behind open tin mines, facilities, and most important of all: its glorious historical remains. Old Chinese temple stands right in front of old Grand Mosque in the town's epicenter. Dutch mayor's house is facing the bay still intact, although in need of much attention not to mention restoration. Old Firehouse is as faithful as sailor's wife waiting for their love ones to come back from venture at sea. There are also some remains from Islamic history as well as rich cultural performance around the area. Its sandy beaches are as scenic as Mediterranean with all year sun is a guarantee.

Once the port is furnished with adequate facilities to cater for big vessel, people will come from all over the world and enjoy this magnificent area. Local tourist may opt to visit the town via land transport, two hour drive from Pangkal Pinang, the island's capital, however it is far more romantic and of nostalgic fashion to visit the town from sea, the way people in the old days had been doing.

Activities and Resources; Right now, the port has passenger terminal, the one that was once used in its heyday, hence old and poorly maintained. There are a 42 meter concrete berth, with 1 (one) meter draft. In order to cater big cruise ship, the port must be furnished with longer berth, and far deeper berth. Existing passenger terminal must be refurbished to welcome incoming traveler, as much as one thousand passengers per call is expected.

Partners; IPC does not have to do it by itself to make the improvement happen. Local government and, government Ministry of Tourism must be involved to make a joint marketing effort for dressing up this area's potential; renovation of historical sites, preservation of natural site, arrangement of traditional marketplace, cultivation and promotion of traditional performances, maintenance of the town's infrastructure to name a few would add up tourism attraction. Ministry of Transport, as mandated by new regulation, would have to make it possible to deepen the draft of channel so that cruise ship can make a call to the port frequently, let's talk about -5 to -9 meter draft. Cruise operators must be contacted and maintained to make sure the regular call of cruise ships to this port, once in a month call for initial period would open up more frequent future calls.

Customer relations and channels; Easy access to town and places of interest from port would make sure that passengers feel at home away from home, want to stay longer, and spend more money for lubricating economic wheel of the region. Shuttle services as well as traditional passenger carriages can be utilized to add more fun. IPC can arrange the whole services and bundle them into single package; one passenger terminal ticket holder will be driven to certain places of interest with shuttle services. Communities are challenge to offer the world unique value or tradition or even local story to lure more visitor.

Segments; tourists and vessel passengers would enjoy the facilities and services as well as generates more revenues for IPC. On the other hand, deeper draft of channel and berth would enable the port to cater cargo ship, another revenue stream source.

Cost and revenue; lengthening the berth and deepening the channel would cost billions of rupiah, 16 billion rupiah and 7,5 billion rupiah respectively are rough figures, however, with the involvement of ministry of transport (centre government budget) the port may not have to pour the cash out of its own pocket. Marketing effort can be jointly taken by ministry of tourism and local government along with IPC in the international fora to open the attention of wider market, hence the repatriation of the fund splashed is guaranteed.

All things said and done, IPC would generate revenue from more ship calls, package passenger services and more cargo handling. Local government would open more employment from tourism sector, generating income from wider market segment, utilizing long "abandoned" attractive sites. Community would have its share in cultivation of their cultural performance as well as economic improvement. Hence, the port services improvement would benefit the whole stakeholders.

PS. : with the help a novel by Andrea Hirata: Rainbow Troop, the nearby island of Belitung is flocked by tourists thus make the island a new destination from domestic and international tourist. IPC renovated

and dubbed the passenger terminal “Terminal Laskar Pelangi”, meaning Rainbow Troop Terminal, and make more revenue out of it. With joint effort from its stakeholders, Mentok will achieve more.



MERCUSUAR

Tanjung Kalian





八相戴德











Upacara Ritual

PERANG KETUPAT

Entry No.7

Title of essay:- How to improve Chittagong Port's efficiency/ productivity.

Prepared and submitted by-

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Historical background of Chittagong Port: The history of Chittagong Port dates back to the 4th century B.C. Chittagong was known in the 9th century onwards to 15th century as “SHETGANG”. During the 16th century the Portuguese took great interest in the locality around Chittagong. It was then popularly known as “PORTE GRANDE”. The present location of the port was, however, established in 1887. At that time, the port was administered jointly by Port Commissioners and Port Railway. To avoid the dual administration of Port Commissioners and Port Railway, the “Port Trust” was formed in July, 1960. The Government of the People's Republic of Bangladesh promulgated the Chittagong Port Authority Ordinance in 1976 and dissolved the Port Trust and Chittagong Port Authority came into existence under Ministry of Shipping.

In Chittagong Port of Bangladesh, as a tool port, we are facing several sorts of challenges for achieving the standard of port efficiency and productivity which are comparable to the developed one. That's why I intended to elaborate the problems which we are facing and how we can solve these.

Challenges of Chittagong Port:

1. Expansion of jetties on the opposite bank of the river Karnaphuli: The Chittagong Port, only main sea port of Bangladesh, is situated in the estuary of the river Karnafulli of Chittagong; its main berths being around 8 nautical miles inshore from the port's outer anchorage of the Bay of Bengal. The port and its jetties/berths/terminals are on the west bank of the river where the main metropolitan city is situated. Reasonably, all the roads traffic towards the port and leaving from port to hinterland create severe traffic jam in our city life. For that reason the dwellers suffer a lot in different ways.

Continued page-2

Of late, passengers going to Hazrat Shah Amanat International Airport (Chittagong Airport) frequently miss their flights due to unavoidable traffic jam on the roads to airport which ply through the port area.

On the contrary, our port is an over loaded port in comparison with the cargo handling and to be handled. Some times, I saw the port became congested and the vessels had to stay in queue for a long time to have a berth for discharging and loading of cargo or containers or both. We have several experiences of imposing extra congestion surcharge on freight of cargo, containers and vessels calling at Chittagong Port by 'The Chittagong Feeder Trade Committee (CFTC)' of Singapore. Consequently, port cost i.e. the cost of goods carried by sea or exported was raised significantly and our trade possessed a negative impact and ultimately the consumers had to pay extra money for having goods and services. In that type of worsen situations our government, specially high officials from ministry of shipping, Chittagong port and concerned trade representatives had to sit for talk with the 'The Chittagong Feeder Trade Committee (CFTC)' in Singapore and Chittagong several times to withdraw the imposed extra congestion surcharge which was embarrassed for us.

To overcome these problems and limitations, Chittagong Port can make required terminals/jetties/berths with necessary back-up facilities on the east bank of the channel and connect both bank by building link road and tunnel under the river Karnaphully but still Chittagong Port is not thinking to do so even did not include the matter in the future development plan. By doing these we can make our port more functional to improve efficiency and productivity.

2. Grow confidence between importers and port custom: In Bangladesh, almost 99% of cargo is imported for local consumption i.e. very poor volume of trans-shipment cargo is handled in this main sea port. Here the importers are deprived from the blessings of Multimodal Transport System i.e. door to door facility of container system. Because in our country the port customs do not allow the consignee or his nominated clearing & forwarding agent to take their imported FCL (Full Container Load) containers directly to their factory premises from the quay or port container yards except the factory is situated in the custom bonded Export Processing Zone Area (EPZ) of the country. For that reason, the consignees have to un-stuff the cargo from container and then take

loose delivery of their containerized import cargo from the port premises by using their own trucks and lorries. Consequently, every day thousands of trucks, covered vans and lorries enter into the port terminals to take delivery of their cargo and it makes hazard in the port operational activities, more over it occurs frequent accidents and creates severe traffic jam in the container terminals.

In this regard, to improve the container handling efficiency and productivity of our port, I propose to adopt one of the followings-

a. The port customs of Bangladesh may kindly be allowed the consignee or his nominated clearing & forwarding agent to take their all imported FCL (Full Container Load) containers directly from the quay or container yards of the port to their factory premises or warehouses by using long trailers/vehicles and subsequently back the empty containers to the port after un-stuffing the cargo from containers. Or

b. Chittagong Port Authority may kindly construct a separate large container yard adjacent to the container terminals in order to store FCL (Full Container Load) containers which will be delivered immediate after discharging from the container vessels. This will help the port highest order to keep smooth vessel operation on the quay and other container handling activities within the terminals. As a result, certainly the efficiency and productivity of the port will be improved.

*****End*****

Entry No.8

HOW TO IMPROVE THE QUALITY/VALUE OF MY PORT SERVICES

by

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SUMMARY

In the global logistics chain, ports form an integral link between a region and its markets and suppliers, thereby making them indispensable catalysts of growth and development of the port city and its hinterland. Modern ports focus on enhancing their competitive position as logistics hubs and industrial complexes, not only in terms of size, but also quality.

The Port of Mombasa is no exception and it expends efforts towards achieving its strategic mandate to develop and manage the port sustainably by maintaining an efficient and effective delivery of services to its customers. With a captive market for shipping services covering Kenya and a competitive market encompassing the transit regions of Uganda, Rwanda, Congo and South Sudan, having a well thought out and planned customer service strategy is critical to the development of a strong service culture to meet expectations of these customers.

This essay aims at outlining ways of improving quality of services to the customers of the Port of Mombasa taking cognizance of its undertaking to provide effective and reliable logistics services. Essentially, the essay is intended to give practical insights into ways of improving quality of services to customers and contribute to knowledge on port service strategy, a field that is bereft of information, with attention to unique challenges facing developing ports thereby sharing experiences and service strategies with other port officials facing similar challenges and resolve in surmounting them.

HOW TO IMPROVE THE QUALITY/VALUE OF MY PORT SERVICES

1. INTRODUCTION

A port represents a collection of physical facilities and services designed to serve as an interchange point between land and sea transport. The Port of Mombasa is no exception to this assertion hence impacting positively to the economy of the region it serves. This region stretches from the East African Coast into the Kenyan hinterland and beyond into the *transit* countries of Uganda, Rwanda, Southern Sudan and the eastern part of the Democratic Republic of Congo. The logistics activities related to the port not only represent a considerable share of metropolitan employment but also add value to businesses that are dependent on shipping services. The indispensable role of the port is best exemplified by its contribution to regional development since establishment of the Old Port by the Portuguese navigator Vasco da Gama during the famous spice trade between the Arabian Gulf, the east coast of Africa, the Indian subcontinent and the Far East when navigators were looking for a new route to the Far East.

The modern era for the port began in 1895 when work began on a railway from Mombasa to Kampala in Uganda to open up the hinterland for coffee, tea, ivory and skins. As trade expanded demand grew for a fully fledged seaport with a spacious deepwater harbour. As a result, a new port was created at Kilindini Harbour in 1896 with the building of a jetty which was used mainly for transferring goods between seagoing vessels and the Kenya to Uganda railway. Further development of the modern Port of Mombasa began in earnest in 1926 with the completion of two deepwater berths supported by transit sheds and an oil terminal. With the onset of the container age, two deepwater berths entered service in 1975 marking the beginning of the container trade in Mombasa. Container handling operations were extended to the capital city of Nairobi in 1984 in form of an Inland Container Depot (ICD). With the collapse of the East African Community (EAC) in 1977, the running of Kenya's ports was taken over by the government, which established the Kenya Ports Authority (KPA) in 1978. The Authority's major responsibility is to manage, operate and develop the modern Port of Mombasa to provide multi-use, safe, sustainable and attractive services that meets the high demands of its customers.

2. CHALLENGES FACING THE PORT OF MOMBASA

In 2011 the Port of Mombasa handled about 20 million tonnes of cargo which included 771,000 TEUs which implies the design capacity of the port is now being exceeded by annual throughput with periodic congestion being experienced. Congestion generally means over-crowding, and in the context of ports and containerized cargo, it is a situation where demand for stacking space approaches terminal capacity as a result of progressively higher discharges from multimodal transport relative to deliveries/shipping halting operations. As such, limited capacity coupled with slow off take of cargo to the hinterland has conspired to erode the quality of services provided to shippers and forwarders of cargo.

On the documentation front, cumbersome processes involving numerous stakeholders are a source of customer dissatisfaction with services at the Port of Mombasa. Yet to succeed in trade and gain competitive advantage arising out of implementing a value creating strategy, organizations must realize there is no place for bureaucracy in the new dynamic world – a world that is driven by knowledge, speed, action, flexibility and responsiveness to customer requirements. Delays in documentation add up to total costs and is a drawback to achieving competitiveness of regional products in global trade.

Cargo off take to hinterland destinations is heavily reliant on road transport due to limited railway functionality in East Africa leading to losses and inability of regional shippers to compete favourably on the global business arena. Thus for the region to prosper regional governments need to fast-track the revamping of the dilapidated railway system as it hurts business operations across the region.

As cargo became increasingly containerized, the nature of dockside labor changed as well, with container operations demanding more technical skills in operating heavy machinery such as Ship to Shore, Rail/Tyre Mounted cranes, straddle carriers and empty container handlers. In Mombasa, like other ports in developing countries there are challenges in ensuring a strategic fit between technology and labour skills to ensure consistency in service delivery and minimize costly equipment breakdown and depreciation. Modern port equipment is a prerequisite of quality port operations and it requires massive capital investment outlay that is a challenge to developing ports.

3. QUALITY/VALUES STRATEGY

As a result of the increasing awareness by customers of their rights as business partners at the port, the port authority has been facing a continuous barrage of requests to improve quality of service delivery. Accordingly, we can reverse the perception by customers that performance of the Port of Mombasa has been falling short of their expectations and is below world average by expending efforts to ensure gradual progress of the port in key areas to address inherent challenges as part of its business strategy. Parasuraman et al. (1985) have reported that excellent service is a profitable strategy because it results in more new customers, more business with existing customers, fewer lost customers, more insulation from price competition, and fewer mistakes requiring the performance of services. This statement holds true for the port industry, and those that want to join the league of best run ports that offer value plus to its customers must deliberately expend efforts to align strategy to customer expectations.

Currently, the Port of Mombasa's policy goals and objectives center on operational efficiency and customer focus, therefore, the quality strategy implemented will determine what operational units will be used to achieve these deliberate intentions, how the units will be structured and what resources will be required. Implementing a three pronged strategy covering capacity expansion, adoption of information technology as a platform for documentation, "co-opitition" with other stakeholders and training will ensure gradual progress of the port in improving the quality of customer service.

Capacity expansion is the key to solving periodic congestion that is increasingly becoming a source of customer frustrations. In the short term, planned "co-opting" of competing Public Private Partnerships (PPPs) in offering port services especially for containerized and bulk cargo should be boosted and regulated using institutionalized Service Level Agreements (SLAs) to promote standardized efficiency. These PPPs provide storage facilities for dry bulk, liquid bulk cargoes and container freight service stations (CFSs) which complement the existing capacity managed by the port authority. These external medium term measures will serve to ensure shippers do not suffer unnecessary costs occasioned by congestion while plans to build other higher capacity terminal facilities are implemented. For Mombasa, a second 1.2 million TEU terminal is under construction while a new mega port in Lamu is being developed as part of the Lamu Port and South Sudan Ethiopia Transport (LAPSSET) Corridor project.

According to White (2005), the need to have communications between computers culminated in the services that we now call the internet in the mid 1980s. It is therefore a combination of computerization and telecommunications that emerged as Information Technology (IT), a term authored by Leavitt and Whisler (1958) when they speculated its rapid rise into the managerial scene, with definite and far-reaching impact on the organization. The dimension of use of IT for processing large amounts of information rapidly employing a convergence of personal computer with fiber optic cable and the rise of work flow software has drastically simplified documentation and improved service delivery. It is therefore not a surprise that the Port of Mombasa adopted an IT strategy hinged on Enterprise Resource Planning System (ERP) and Container Terminal Operations System (CATOS) to fast track its evolution into a best run organization.

As the remarkable Jack Welch (2005) put it, “Change is great, and there is no reason to turn away from it”. In today’s first changing world, the Port of Mombasa has to shed the old “big dog owns the street” rule in the eastern seaboard of Africa in favour of being agile in order to succeed. To achieve this, the port must focus on becoming paperless and constantly review and update the enterprise model by aligning the enterprise architecture to reflect business processes and relationships to enhance interoperability, portability, scalability and security. The cumbersome documentation across many parties can be tackled by fast tracking the implementation and operationalization of the Single Window System that aims at facilitating trade by serving as a single entry point for parties involved in trade and transport to lodge documents electronically for processing, approvals and payments.

To mitigate the complaints by customers of the Port on the inadequacy of the inter-modal transport infrastructure, we need to closely engage our counterparts in railway transport and other responsible agencies to ensure traffic flow outside the port and transport logistics to the hinterland are seamless and efficient. Such co-operation will curtail congestion and improve off take of cargo from the port as long term solutions are explored. Such Long term solutions include construction of a by-pass for cargo to skirt city traffic and construction of a modern high speed, high capacity standard gauge railway for passengers and freight within the Northern Corridor with the objective of transferring freight from roads to rail thereby reducing rapid roads damage and provide safe conveyance of cargo.

As increasingly more and more cargo is transported in containers, ports in developing countries are grappling with training and development of labour to keep pace with operating and maintaining the modern equipment acquired to serve cargo interests. In other words, today's business climate and the exponential growth in technology make the need for training more pronounced than ever. For companies seeking to gain a competitive advantage, training is a prerequisite and the Port of Mombasa has to enhance in-house capacity for continuous training and establish mutually beneficial relationships with leading global maritime academies as part of its staff training strategy. To alleviate damage to and rapid depreciation of modern cargo handling gear, preventive maintenance of equipment and facilities should provide for systematic inspection, detection, and correction of incipient failures, supported by requisite IT systems.

4. CONCLUSION

With an overarching ambition to offer quality services to its customers, the Port of Mombasa ought to ensure customer focus is at the heart of its business strategy with capacity expansion ensuring availability of port infrastructure, development of IT programmes favouring hassle free and efficient documentation, partnership with stakeholders to resolve inter-modal logistics challenges and labour training and development to guarantee sustainability of the service quality offered to customers. However, it is important to note that there are no easy solutions to achieve a service quality that incorporates dimensions such as reliability, tangibility, responsiveness, assurance and empathy. At the final analysis, the impact of any efforts by players at the port will be measured by the extent to which customer's respond and perceive as improvement in service quality and ultimately reduced cost of shipment and improved regional competitiveness.

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Entry No.9

Title - How to Improve My Port's Productivity/Efficiency?
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Summary -

Main focus of this report is given to find out a suitable strategy to improve current productivity level up to the industry standard in Port of Colombo, ultimately minimizing the vessel stay at port as shipping industry is becoming competitive in every single day, with the expectation of high return of Investment. One of the major problems that hinders the improvement is identified as non-operational times included in the 24/7 operation and factors that create those issues are defined in this report with the objective of finding out a most suitable and practical solution.

Solution was defined as enabling 100% hot seat practice in the shift changeover by creating equipment pooling concept initiating with the prime mover operators, which is analyzed and expressed in detail throughout this report. Finally, the benefits and crane productivity improvement is measured to analyze the ratio of success in this resolution.

By writing this report, it is expected not only to define factors negatively affecting to the improvement of my port but also to redefine those issues with practical and appropriate elucidation to achieve its vision of becoming an iconic port in the whole maritime sector by being the most preferred hub port in South Asian region.

“How to Improve My Port’s Efficiency/Productivity?”

Introduction

Jaye Container Terminal (JCT) is a separate business entity attached to Sri Lanka Ports Authority which is one of few state owned container terminals in the world. It opens up the global gateway to Sri Lanka, an island surrounded by the Indian Ocean comprised of various natural wonders. Port of Colombo (Ranked 32nd) is the heart of Indian Sub-continent connecting transshipment cargo from East to West and vice versa. JCT is the main Container Terminal which accounts for more than 60% of 4.26M TEU handled within Colombo. As a transshipment hub it is mandatory to keep a smooth flow in operation and berthing agenda to avoid the discrepancies when connecting cargo from feeder to mainline & vice versa.

Productivity levels are measured mainly with the Crane Productivity which is clarified as gross moves handled by a certain crane within an hour. The current productivity level maintained in JCT is 21 Moves per hour for Mainline Vessels and 18 Moves per hour for Feeder Vessels. Compared to Previous four year records the Level of Service have upsized with the introduction of Terminal Management System and the purchase of new machinery.

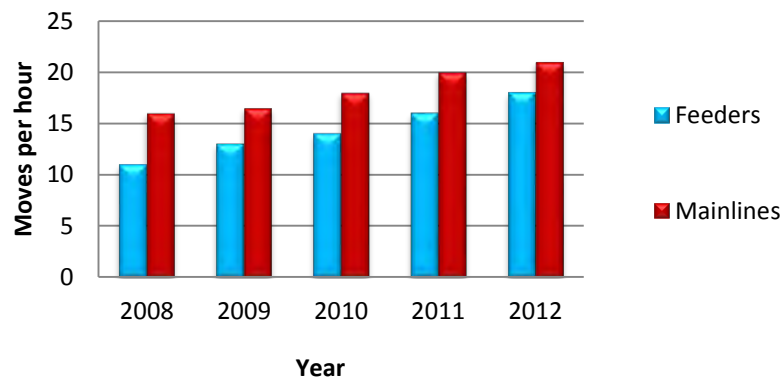


Figure 1 – Average Crane Productivity of Feeder & Mainline Vessels

But with the economic down turn all over the globe, shipping lines and vessel operators are seeking for cost reduction through scrunching vessel turnaround time. Therefore, the demand for higher vessel productivity is pressured to terminal operators directly. The competition among regional transshipment centers determined mainly through the quality of service which they can provide. For an instance vessel turnaround time is determined through Ship Waiting Time to occupy a Berth, Berthing/ Sailing Time and Vessel Productivity.

Problem Identification

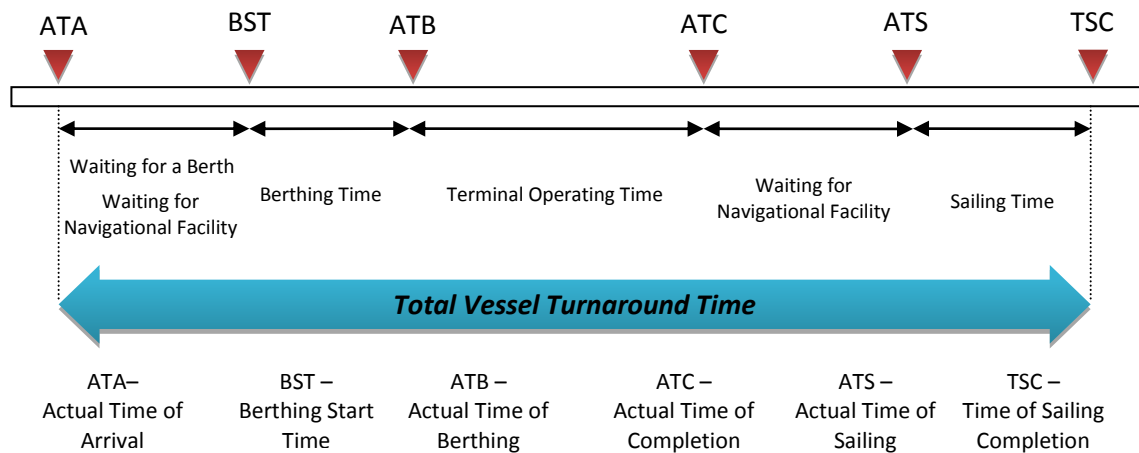


Figure 2 – Particulars Included in Total Vessel Turnaround Time

Vessel Operators always demand for minimum time between Actual Time of Arrival (ATA) to Time of Sailing Completion. As a Terminal operator the productivity of the vessel operation directly involved to the Terminal Operating Time and the Time Waiting for a Berth. Therefore by implementing new methodologies and innovative ideas, Jaye Container Terminal should approach continuous development concepts to upsize the productivity level. In south Asian region the expected crane productivity level varies around 25 moves per hour therefore the current productivity level of 21 moves per hour should be improved in JCT.

Identified Problem

Considerable Amount of Non-operational Time During the Vessel Stay Hinders the Overall Operation, Scrunching the Objective Crane Productivity 25mph.

Modern day container terminals has to operate 24/7 under hot seat practice, but JCT current operating procedure of Prime Mover (PM) Operators, Rubber Tired Gantry (RTG) Operators, and Quay Crane Operators cannot be claimed as a 100% hot seat operation. During Shift Changeovers, Meal times, and Tea times the operation lags behind in a significant manner. This phenomenon has to be modified under the continuous development plan of JCT. The nonoperational times of the JCT are as follows;

Table 1 – Non –Operational Times Included in 24 hour Operation in JCT

Non-Operational Time	Time	Duration(Mins)
Morning Shift Change	0700-0720	20
Changing for Lunch	1215-1235	20
Evening Tea Break	1500-1520	20
Evening Shift Change	1800-1830	30
Changing for Dinner	0900-0910	10
Midnight Snack	2400-2420	20
Staff Change	0200-0210	10
Early Morning Snack	0400-0420	20
Total		150 Mins

The Table 1 gives a clear indication upon the total nonoperational time proceeding in a particular 24hr clock, therefore it clearly illustrate that 2.5 hours or 10% of a certain day is lost due to this problem. In order to achieve the target productivity level of 25mph it is certain to mitigate above nonoperational time losses in a strategic manner. The nonoperational time during shift changeover is unavoidable because during that time operators are checking the oil and water level of the equipment, clean glasses and check for damages (Tire Punches) before starting the operation.

When monitoring closely, all the above nonoperational time indications are bounded by employee welfare related matters therefore the solution to mitigate those challenges should be tactful and compromised with a win-win approach to overcome them successfully.

Current Working Procedure at JCT

There are two shifts in a certain day, Day Shift (0700-1800) and Night Shift (1800-0700), two operators are manned for each dedicated equipment in a certain shift. The staff changeover in the day shift is at 1200hrs and in the night shift is 0200hrs. The time of change is most applicable to the PM operators because they park in-front of the muster point to change their partner.

The bottleneck comes when the operators are changing their shift because the two operators who are working for the same machinery are reluctant to change, therefore the first operator

park the equipment in the parking area and he goes to rest, only then the next operator comes and gets in to the machinery. By the time the second operator comes there are lots of PMs parked in the parking area therefore he will have to wait until other operators drive away from the parking lot creating huge gaps in the shift change over which hinders the 25mph crane productivity. The target productivity levels can be achieved only if the JCT can match the time difference when changing in the same shift.

Introducing Prime Mover Pool Concept to JCT

By the PM pool concept the PMs are manned by a PM operator pool which is assigned according to their time of arrival. A queue of PM operators should be formed and the driver who is in-front of the queue must get in to the first PM which is arriving to the parking area. By that the congestion in the parking area will be minimized in a huge manner enabling the PM operators to get their PM out of the parking area rapidly. But in order to apply pool concept, all the PMs should be nearly identical in facilities or in the same comfort level of driving, else the operators will hesitate to accept the implementation pool concept.

JCT overall PM fleet is not nearly identical to each other in comfort levels in driving or facilities; Therefore PM operators will hesitate upon working in a common pool. In order to make them agreeable to operate under pool concept, the environment and the tactic of implementation should be modified to suit the situation. In order to do that the total fleet should be categorized in to several groups based on the facilities they have. The PM operators also should be grouped according to the current PMs which they are operating. As per the data collected from the PM operators, their demand for facility category is as follows,



Figure 3 – Prime Mover Categories for the Pool Concept according to Facility Category

Separate four queues should be formed at the muster point according to their group and the first one in line should go for the first PM which comes according to their facility category. For an instance if the first PM is a Normal UD PM the first operator in the line at normal UD PM Queue should go for it. Stickers can be used to easily identify the category of the PM. Furthermore, to smoothen the changeover four lanes can be used extensively, through that the operator can swiftly get in to his machine and continue operation as soon as possible.

When implementing the custom pool concept to JCT initially, an awareness program should be conducted separately for operators and Muster supervisors. They should be well educated upon the methodology and they should be convinced as this is a win-win approach for both terminal and operators. A tactful approach should be taken when dealing with the unions in order to implement such measures. Two way communications is very much important when dealing with operators and supervisors prior implementing the concept. The muster supervisors have a major role when operating according to the concept where he has to always coordinate with employees upon making queues and parking PMs in the lanes.

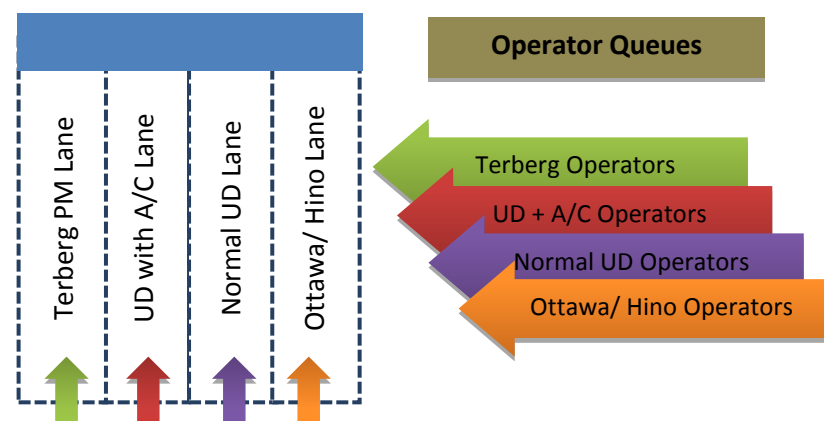


Figure 5 – Allocation Method of PM Pooling Concept

Expected Outcome

Currently it takes 40 minutes to complete the changeover per day, but with the pool concept the changeover will be negligible therefore the current productivity level of 21 mph will be increased by 4%, which the productivity at the end of the day will be little less than 22 mph. The continuous flow of PM operation not only reduces the operational time but also keep the momentum in operation at a steady rate.

The outcome can be upsized if the terminal can apply the same methodology for other major nonoperational times which will create an opening to achieve more than 25 mph. Furthermore as a benefit of this methodology, the idle time of the PM engine will be utilized directly towards efficient fuel consumption and indirectly to the lower maintenance costs. Most of all due to the good productivity the vessel turnaround time will be drastically reduced eventually.

Conclusion

With the overall cost reduction concepts emerged mainly with the economic downturn, every single person involved in shipping business is finding ways to minimize cost, which accounts for the minimum vessel turnaround time. In order to achieve that, first thing that any port should encompass is high level of productivity in operations at a sensible operational cost. Jaye Container Terminal, as a major container terminal in port of Colombo, developing transshipment hub in south Asia, should highly concern on improving its level of productivity. But, the scenario is still quiet lagging behind due to several reasons; one of the major factors identified is non operational times generated mostly in shift changeover and shift breaks which can be fixed.

In this report main concern is given to the prime mover operator change over, which is one of the major links of total operation. Current procedure is described and the non operational times are identified in order to find a suitable solution with the expectation of increasing to the expected level of productivity, 25 moves per hour. Concept is defined as Prime Mover Pool Concept, where operators are assigned to the prime movers categorized in to four, defined according to the type and the facilities of prime movers, avoid using same prime mover of his employment life time.

This concept can bring lots of improvements to the JCT operation since it will reduce the congestion in shift changing ultimately reducing the changeover time to a minimum and time saved by 4%. It will directly affect the vessel operation where waiting times for the Quay Crane Operators and RTG operators are avoided, improving the crane productivity. Finally, by implementing this method for other operator categories, non operational times involved in shift change over can be avoided which will result in improving vessel turnaround time, the prime factor considered in improving productivity of my port.

Entry No.10

**IAPH ESSAY CONTEST 2012
AKIYAMA AWARD**

**“PUBLIC COMMUNICATION AND CORPORATE SOCIAL RESPONSIBILITY TO SUPPORT
CONTINUITY OF OPERATIONS
IN THE PORT OF GRESIK”**

Abstract

Gresik Port is the largest coal port in the province of East Java, Indonesia. Coal unloaded at the port of Gresik serves thousands of industry in Surabaya which is the second largest city in Indonesia and surrounding cities such as Sidoarjo and Gresik, which has thousands of manufacturing plants. Increased activities of loading and unloading in the port of Gresik, certainly increasing revenue but on the other hand cause conflict to the people around the area of the port. Conflicts with local communities has been shown interfered the port operations and if not treated immediately will always have the potential disruption to port development while economic growth continues to increase. Handling this can not be partial but through a comprehensive approach to aspects of public communications and corporate social responsibility.

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PUBLIC COMMUNICATION AND CORPORATE SOCIAL RESPONSIBILITY TO SUPPORT CONTINUITY OF OPERATIONS IN THE PORT OF GRESIK

INTRODUCTION

Port of Gresik is located at the position 112°39'30, 60" East longitude and 7°9'27, 40" south latitude line, exactly at the Madura Strait or northern part of Port of Tanjung Perak Surabaya. Tanjung Perak seaport located in Surabaya is a major port in the eastern part of Indonesia. Both the Port of Tanjung Perak and Gresik Port is managed by PT Pelabuhan Indonesia III (Persero) a.k.a. Indonesia Port Corporation III, which is one of the four state-owned port companies in Indonesia.

Port of Gresik is the buffer port for Tanjung Perak Surabaya. Relying on dry bulk commodities of coal unloading activities up to 70% the needs of the province of East Java, Gresik port is an important part of the logistics chain. In 2013 the Port of Gresik is planning to build a liquid bulk terminal to anticipate the rising trends of Crude Palm Oil / CPO unloading in recent years.

While the other countries hit by economic hardship, Indonesia's economic growth over the past decade ranged from 4-6%. In 2012, Bank Indonesia estimated growth by 6.3% and in 2013 is projected at 6.3 - 6.7%. Encouraging national economic performance on the other hand provide a challenge to the port management across the country.

PICTURE OF THE PROBLEM

Economic growth would be followed by increased activity of loading and unloading at ports throughout Indonesia, including the Port of Gresik. Recent years, the main commodity in this port is coal. Problems arising from the commodity is coal dust generated during the unloading process. This is a chronic problem for Gresik Port because nearby lies a dense and slums residential areas. Demographics of the population which mostly work as fishermen, have insufficient income with average education levels.

Densely populated settlements that are located too close to the port is a thing that is not ideal at all. Some land of those settlements are actually owned by the Gresik Port but illegally occupied by migrants. Law enforcement is still a serious issue that follows along the learning of democracy in developing countries like Indonesia.

Before 2011 almost every year there is a conflict with surrounding communities that sometimes turned into street protest that led to the disruption of port operations. This of course can not be allowed to occur continuously.

So what exactly happened ? Why do people seem uncooperative to the activities of the port ? Is this simply because the level of people's lack of knowledge of the company's activities or are there other causes ? If traced, the cause of social conflict between Gresik Port and the surrounding communities is related to environmental issues in this case air pollution and accusations of the lack contribution by the company to the local community.

Aware of the problems mentioned above, it is necessary to perform the steps of a comprehensive public relations including communication and corporate social responsibility to support operational activities. It is urgent to be done in order to increase the productivity of Gresik Port.

RESOLUTION OF THE PROBLEMS

A. Improving Corporate Public Communication Strategy

Public communication is absolutely necessary to provide information to external parties of the organization. In addition, to establish good relations and mutual trust between the organization and the people outside the organization such as service users and the public. Port of Gresik in the last 3 years intensively reform this by focusing on three things : the organizational structure, repositioning stakeholders and media relations.

1. Adjusting The Organizational Structure

Despite conflicts with the surrounding communities has been going on for so long but just in 2009 there are employees assigned to handle public relations. PR does have an important role in establishing reciprocal relationships with various stakeholders. Their job is to build a good relationship for the sake of supporting the achievement of the objectives for the company. Here is starting to look pretty significant communication dynamics. Number of street protest declined since the opening of two-way communication channels that have been clogged for years.

2. Mistake In Determining Stakeholders

If traced, most conflicts originated from the failure of the Port of Gresik establish good communication with stakeholders. This failure stems from an error in doing social mapping, aspirations that are not accommodated in the model of two-way communication and execution of social responsibility that is not appropriate.

Clearly they are exposed or potentially exposed to the negative effects arising from the activities of loading and unloading ports are people living around the harbor area. Ironically, companies tend to approach government agencies. Local bureaucracies that are not rooted and representative of the interests of the affected communities. Companies prefer to put government agencies as key stakeholders who should be served well and put the affected people at the bottom.

Along with the opening of communication channels since the year 2009, Gresik Port do social mapping to determine who the key stakeholders are supposed to be partners in managing issues became an impediment in developing good relations with the surrounding community. In addition scanning independently, starting in 2012 the Port of Gresik involving university research institutions as an independent party in making strategic short, medium and long term companys' public communications programs on the implementation of corporate social responsibility. Independent third party involvement is important to bridge the corporate interests and aspirations to obtain a comprehensive settlement formula.

3. Media Relations

Originally Gresik Port relations with the media is not in harmony. Deadlock communication is also occur with the journalists so that were statistically almost all news appeared in the mainstream media was negative press.

The presence of PR in the port of Gresik since 2009, increasing the companys' understanding of the importance of media relations. Began to build an extensive network with a lot of media. Do good quality lines of communication with journalists, including the editor and editor in chief. The meaning of quality here, not only familiar with, but have a good relationship, even close as possible.

Specific ports' business process thus makes journalists have less sufficient knowledge. Since 2010, every year the Port of Gresik provide training for local journalists' organization. Invites all members of the organization to some other larger ports to

make a comparative study. By looking how the major port operating, they can see the developing direction of Gresik Port.

Beyond that, Gresik Port started using information technology. Websites and social media began to managed seriously for the purposes of public communication. In addition to advertorials publication in the mainstream media, all the activities of corporate social responsibility exposed on social media websites and managed by PR.

B. Reforming Corporate Social Responsibility Program

1. Corporate Philanthropy Program

Corporate philanthropy may be the oldest form of Corporate Social Responsibility. In this program Gresik Port provides direct donations for charity to particular society.

Various corporate philanthropy programs implemented including :

- a. Corporate philanthropy program in the form of a cash donation.

Usually granted to the orphans from orphanages before the religious holiday.

- b. Corporate philanthropy program in the form of goods donations.

Donations package of basic needs materials given to the less fortunate people around the religious holidays. Several times a year regularly held bazaar that sells basic goods subsidized by the company.

- c. Corporate philanthropy program in the form of grant aid.

Donations in cash or in kind to the local government agencies, communities and places of worship in the area around the port to support the day-to-day operations or incidental activities.

2. Socially Responsible Business Practice

The Company exercises the business activities beyond the business activity obliged by law and implement investments that support social activities with the aim of improving the welfare of the community and preserve the environment. Some of the activities undertaken include:

- a. Encourage the improvement of the transport process. So far the biggest contribution is the pollution arising from coal trucks. Although transport is an activity undertaken by the owner of the goods themselves but the company remains responsible to provide oversight of every truck that comes out from the harbor meet the standards so it does not make coal scattered in the streets and blown into the settlements.
- b. Conducting activities to maintain public health. Port of Gresik operates a free health clinic for local residents who can not afford. The clinic is open three days a week to improve the standard of public health.

3. Partnership Program And Community Development

Partnership Program And Community Development (PPCD) is a form of Corporate Social Responsibility for state-owned company in Indonesia. As stipulated by the law that every state-owned company shall establish a special unit that deals directly with issues of community development and the amount of the allocation PPCD is worth 2% of net income. Until now Gresik port are not given the task to distribute the funds PPCD independently. PPCD Funds are distributed in the area around the port of Gresik by the headquarters of Indonesia Port Corporation III that makes often imprecise due to a lack understanding of the real condition to the surrounding communities. It continues to be pursued in order to distibute PPCD funds itself, on the basis of belief in a more in-depth knowledge about the condition of society with

social mapping and comprehensive strategy that has been formulated with an independent third party. Proximity also makes two-way communication on this matter can be well maintained.

PPCD program that has been and will be done with the advice and assistance of the Port Gresik include:

a. Partnership Program with the small and medium enterprises.

Will be done if the distribution of the funds handed over to the Port of Gresik. Mapping the economic potential of the surrounding communities such as processing of marine products has been attempted.

b. Community Development Program, including:

- Natural Disaster Relief

Port of Gresik has provided assistance in the management and prevention of severe drought. A fleet of company-owned tank trucks deployed to disaster-affected areas during the dry season. Water deliveries conducted in 81 villages in 8 districts who was experiencing drought and difficult to get clean water. In addition the company has also built a water reservoir in drought-prone areas to mitigate potential disaster happening again in the coming years.

- Public Health

PPCD funds distributed to conduct activities increasing infant nutrition in the area around the port of Gresik.

- Community Education and Training

Program in 2013 to empower fishermen around. In collaboration with university research institutes will be conducted educational and practical training such as processing of marine products or repairs fishing boats engines.

- Conservation of Nature

At the end of 2011 provided hundreds of tree seedlings and planting has been done in the port area along the border with the locals.



Street protest that led to the closure of dry bulk terminal



Gresik port management negotiate with protesters in the dry bulk terminal gate



Police officers guard the gates of general cargo terminal prevent protesters blockade



Basic commodities aid delivery



Basic commodities aid delivery



Training for journalist



Drought disaster aid



Drought disaster aid



Water tank to help overcome drought



Water tank to help overcome drought



Tree planting by employees of Gresik Port



Tree planting by employees of Gresik Port

Entry No.11

TITLE OF ESSAY - How to improve my port efficiency/productivity

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Summary - The essay high lights the importance of ports,their roles in the region, how the ports infrastructure can be increased,and utilized, challenges facing the port and how they can be corrected

Ports are important in trade facilitation, services to local, transit and transshipment traffic,services to shipping lines,shippers and consignees,value adding activities and also employment opportunities.

Sea ports play a crucial role in provision of services for vessels, and inland transport,they are an essential link in the international maritime chain, they are a gateway and nodes within international transport networks and serve corridors for materials and resources,they are also a major interface in the whole logistic chain hence a major generator of foreign exchange and a prime mover of industrial and agricultural development.

Ports infrastructure include, port entrance channels, access to the port for inland transport e.g roads,railways etc,quays walls and jetties and port land excluding super structure.

Impact of increase in trade will result in increased pressure on port capacity,port will need deeper water drafts and larger berths and a demand for more investment in port infrastructure.

Investing in ports will entail future projections of a potential port, cargo traffic volumes increase will demand an increase in handling capacity,an increase in ship calls and sizes will demand an increase to the port in terms of sizes and drafts at entrance channels ,berths and equipments.

private sector involvement is paramount in financing port projects and port commercial activities.

Projecting in port capacities will mean creating adequate port capacities ahead of demand,while port expansion will entail right amount and type of

port equipment, port area land and dwell time. Dwell time of cargo/container is important in influencing terminal capacity i.e. the lesser the dwell time the more the capacity.

Improving port operational efficiency will involve,

- Faster and more efficient handling equipment
- Improving labour skills through training in accordance to fields of specialization
- Expansion of port capacities and inter modal infrastructure
- Acquisition of new technologies covering ship, yard, gate planning and operations
- Effective and timely equipment maintenance
- Improvement of security and safety
- Organized work force supported by smooth industrial relations
- Setting good leadership
- Planned investments in port/terminal facilities
- Optimisation of human resources and port facilities
- Efficient cargo off- take and overflows resulting in low cargo dwell time of ports/terminals
- Always devise non- capital intensive measure to improve capacity
- Adjust and re- arrange current infrastructure to fit new traffic
- Reduce free periods to make customers collect their cargo in time
- Reassess port and other infrastructure capacities and their performance indicators

Port productivity will be measured with the following indicators,

- Service
- Utilization
- Productivity

Performance indicators will,

- Help to provide high quality services to port users
- Help to know how much business a port is doing
- How well the business is being carried out and
- What customers perception about the services being provided

Reasons for using performance indicators are,

- To know how effectively and efficiently a port will operate
- To know how present performance compares with past performance
- To compare own performance with that of competitors
- To promote business and attract new customers
- To adjust targets for future periods by using present performance
- To show how productively, facilities and resources are being used so that corrective

measures can be taken

- To show how extensively facilities and resources are being used so that planners can decide when extra facilities and

resources are needed

- To show how the quality of services is being given to ship owners,shippers and other port users

Service indicators will,

- Measure the quality of service provided i.e customer to ship owners

- Measure ship, importers, transporters operations

Most important measures of service are the ship turn round time and container dwell time

Output(production) Indicators will measure the level of activity of the business at a terminal over a period of time Examples

include gang output, ship output etc

Utilization indicators will measure how intensively port facilities are being used and will be expressed as a a percentage,examples

include berth occupancy,equipment utilization, gate utilization etc

Productivity indicators will measure efficiency and cost- effectiveness of the terminal operations, examples include,

cost/tonne of cargo, labour cost/ tonne, crane productivity(container moves/crane per hour),ship productivity(containers/man-hours) etc

Challenges facing ports include,

- 1.Capacity constraints.

These can be resolved by,

- Reduction of dwell time

- Create adequate port capacity ahead of demand

- Construction of Inland Container Depots

- 2.Coping with shipping technological changes

These can be resolved by,

- Dredging to increase draft in order to handle larger vessels

- Provision of appropriate cargo and vessel handling equipment

- Computerization of shipping/cargo operations and supporting services

- 3.Sustained high productivity and efficiency levels

- Can be achieved by networking with stake holders in reducing cargo dwell time,and capacity building through training

There will be continued demand for investment in port/terminal infrastructure,public

private partnership will therefore be a promising vehicle for port investments. One of the strategies to increase port production will therefore through measuring performance, this will be the first step towards successful management of the business.