



Business Plan for Chennai Port Trust

Final Report (Annexure)



Above and beyond
Creating a bright future

Contents

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----- Annexure-1 Port Layout -----

(Attached as dwg file)

----- Annexure-2: Land Use Plans -----

(Attached as dwg file)

----- Annexure-3: Detailed Project Sheets -----

Detailed Project Sheets

Planned Client Related Projects

| Project Title: | Developing Multilevel car parking facility for Automobile Export together with passenger cruise facility | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---------------------|-----------|----------------|-----------|------|-----------|-----------|-----------|-----------|-----------|-------------------|------|------|-------|-------|--------|-----------------|-----|-------|--------|--------|-------|---------------|--------|---------------|--------|---------------|--------|---------------|--------|---------------|--------|
| Project Owner: | Engineering | Project Type | | Client Related | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General and Technical Description | <p>Multilevel car parking facility No. of cars exported from ChPT in last 5 years are:</p> <table border="1"> <thead> <tr> <th>Year</th> <th>2001-2002</th> <th>2002-2003</th> <th>2003-2004</th> <th>2004-2005</th> <th>2005-2006</th> </tr> </thead> <tbody> <tr> <td>No of cars</td> <td>4635</td> <td>8432</td> <td>39868</td> <td>83121</td> <td>102692</td> </tr> <tr> <td>Growth %</td> <td>---</td> <td>81.92</td> <td>372.82</td> <td>108.49</td> <td>23.55</td> </tr> </tbody> </table> <p>Export of cars has grown by manifolds. Starting from a nil base, its surge during last three/ four years has been phenomenal. This is in addition to Cars in CKD (knocked down) that are moved in containers.</p> <p>The potential for further growth is enormous, with Hyundai and Ford on expansion spree using India / Chennai as the manufacturing hub. Further additional volumes can be expected from Toyota-Kirloskar, Ashok Leyland etc.</p> <p>Hyundai Motor India Limited (HMIL) aims to export 50 per cent of the cars manufactured in India. Currently one-third of the total production in India by HMIL is exported. HMIL's present capacity at its Chennai plant is 300,000 units per annum and the company is also setting up a second factory with an equal capacity, where mass production is slated to commence in mid-October next year.</p> <p>FORD too will change gear to export in larger numbers. A third auto-plant of Malaysian connections is reported to be in the process of setting up. This sector demands clean friendly environment and will nudge out the dirty ones.</p> <p>As elucidate in demand forecast tables, car export is expected to with a growth rate of around 12%. Using this growth rate, annual automobile traffic for the next 10 years is projected (in numbers) as follows:</p> <table border="1"> <tbody> <tr> <td>Year 2006-07:</td> <td>115015</td> </tr> <tr> <td>Year 2007-08:</td> <td>128817</td> </tr> <tr> <td>Year 2008-09:</td> <td>144275</td> </tr> <tr> <td>Year 2009-10:</td> <td>161588</td> </tr> <tr> <td>Year 2010-11:</td> <td>180978</td> </tr> </tbody> </table> | | | | | Year | 2001-2002 | 2002-2003 | 2003-2004 | 2004-2005 | 2005-2006 | No of cars | 4635 | 8432 | 39868 | 83121 | 102692 | Growth % | --- | 81.92 | 372.82 | 108.49 | 23.55 | Year 2006-07: | 115015 | Year 2007-08: | 128817 | Year 2008-09: | 144275 | Year 2009-10: | 161588 | Year 2010-11: | 180978 |
| Year | 2001-2002 | 2002-2003 | 2003-2004 | 2004-2005 | 2005-2006 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| No of cars | 4635 | 8432 | 39868 | 83121 | 102692 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Growth % | --- | 81.92 | 372.82 | 108.49 | 23.55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year 2006-07: | 115015 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year 2007-08: | 128817 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year 2008-09: | 144275 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year 2009-10: | 161588 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Year 2010-11: | 180978 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

| | |
|---------------|--------|
| Year 2011-12: | 202695 |
| Year 2012-13: | 227019 |
| Year 2013-14: | 254261 |
| Year 2014-15: | 284772 |
| Year 2015-16: | 318945 |

Above illustrated automobile volumes would demand a huge space for its safe and clean storage. In order to cater the increasing car volumes, vertical expansion of storage capacity is proposed as an apposite answer. The proposal of vertical expansion is conceptualized as Multi level parking facility. This is expected to provide sufficient storage space and would also be in conjunction with effective utilization of available land.

In addition to above proposition, we also propose to clubb this multi-level car parking facility with passenger/ cruise terminal. This shall enable the Port to have both the facilities with available space. We propose to develop a cruise terminal building at ground floor with car parking facility on the floors above the ground level.

The traffic forecast analysis indicates that the passenger traffic at the port is expected to grow at the rate of 5% and therefore estimated nos of passengers at the port is calculated as under:

| Year | Growth % | Traffic Forecast (in Nos) |
|---------|----------|---------------------------|
| 2005-06 | 5% | 96360 |
| 2006-07 | 5% | 101178 |
| 2007-08 | 5% | 106237 |
| 2008-09 | 5% | 111549 |
| 2009-10 | 5% | 117126 |
| 2010-11 | 5% | 122982 |
| 2011-12 | 5% | 129132 |
| 2012-13 | 5% | 135588 |
| 2013-14 | 5% | 142368 |
| 2014-15 | 5% | 149486 |
| 2015-16 | 5% | 156960 |
| 2016-17 | 5% | 164808 |
| 2017-18 | 5% | 173049 |
| 2018-19 | 5% | 181701 |
| 2019-20 | 5% | 190786 |
| 2020-21 | 5% | 200326 |
| 2021-22 | 5% | 210342 |
| 2022-23 | 5% | 220859 |
| 2023-24 | 5% | 231902 |
| 2024-25 | 5% | 243497 |
| 2025-26 | 5% | 255672 |
| 2026-27 | 5% | 268455 |
| 2027-28 | 5% | 281878 |

Multi level parking yard is proposed with the parking slots for around

| | | | |
|--|---|---|---|
| | <p>9000 cars.</p> <p>As per the present practice of parking the cars, ChPT has earmarked an area of around 47700 sqm only for automobile export. But as formulated in land use plan, this facility is proposed to be shifted to a new location near finger jetty on the North Quay in the Dr. Ambedkar Dock. At this new location, area earmarked as per the proposed land use plan is around 36000 sqm.</p> <p>This combined facility shall have a passenger cruise handling capacity of around 36000 sqm with Multi level stacking facility on further floors. This would be a 4 + storied structure with necessary provision of ramps and lifts.</p> | | |
| Expected Key Benefits | <ol style="list-style-type: none"> 1. Improved utilization of land 2. Release of land for other revenue generating business segments 3. Capability to cater further growth in car exports by consuming less ground space. 4. Friendly and clean atmosphere for car exporters. | | |
| Project Implementation Period (approx.) | 1.0 years | Estimated Project Cost | INR 133.32 Cr. (approx) |
| Project Returns (IRR), | 1. 15.31% | Net Present Value (NPV), Approximately | 1. INR 41.54Cr. |
| | 2. 14.08%* | | 2. INR 24.79* |
| | 3. 16.08%** | | 3. INR 52.14 Cr.** |
| | | Payback Period | <ol style="list-style-type: none"> 1. 9 years 2. 9 years * 3. 7 years ** |
| | <p>*- Sensitivity Analysis with 10% decrease in projected car export volumes and 10% decrease in tariff charged for parking the car at multi-level parking yard. Sensitivity Analysis with 10% decrease in passengers and 10% decrease in tariff charged for Cruise Terminal.</p> <p>** - Sensitivity Analysis with 5% increase in projected car export volumes and 5% increase in tariff for parking the car at multi-level parking yard. - Sensitivity Analysis with 5% increase in projected passenger and 5% increase in tariff for Cruise Terminal.</p> | | |
| Conclusion from Financial Feasibility | <p>Given the nature of operations and the IRR of the project and also in view of the relatively limited funding requirements, it is recommended that ChPT undertakes this project from its internal accruals.</p> | | |
| Need of Project | Essential | | |
| Project Evaluation | | | |

| | Yes | No | | | | | | | | | | | | | | | | | | | |
|--|-----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| Strategic Feasibility | | | | | | | | | | | | | | | | | | | | | |
| Whether the project is strategic fit in the overall strategy? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project fits with policy guidelines of the central government? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project will help in strengthening the customer base? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project has a potential for private sector participation? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project will be able to attract competent players for patronage? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project requires any budgetary support? | | √ | | | | | | | | | | | | | | | | | | | |
| Does the project have any adverse environment impacts? If yes; explain. | | √ | | | | | | | | | | | | | | | | | | | |
| Whether the project will help in creating better public image of the Port? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project will help in serving the customers better? | √ | | | | | | | | | | | | | | | | | | | | |
| Technical Feasibility | | | | | | | | | | | | | | | | | | | | | |
| Whether the project helps in efficiency improvement? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project will help in improving employee morale? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project helps in better environment management or addressing environmental issues? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the in-house skills available for the project? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project can be outsourced or privatised for construction? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the Port has sufficient resources e.g. land, funds etc. available for the project? | √ | | | | | | | | | | | | | | | | | | | | |
| Financial Feasibility | | | | | | | | | | | | | | | | | | | | | |
| Whether the Port can raise debt for the project? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project needs to be financed entirely by internal resources? | | √ | | | | | | | | | | | | | | | | | | | |
| Whether the project helps in reduction of operation cost? | | √ | | | | | | | | | | | | | | | | | | | |
| Whether the project helps in realization of growth in revenue? | √ | | | | | | | | | | | | | | | | | | | | |
| Whether the project itself will be able to serve the liabilities of loans? | NA | | | | | | | | | | | | | | | | | | | | |
| Project Implementation Schedule (2007-08 to 2026-27) | | | | | | | | | | | | | | | | | | | | | |
| 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | |
| | | | | | | | | | | | | | | | | | | | | | |

| Project Title: | Development of Container Terminal-3 | | |
|-----------------------------------|---|--------------|----------------|
| Project Owner: | Management, Engineering | Project Type | Client Related |
| General and Technical Description | <p>The present Container Terminal with a quay length 885m and backup area was privatized under concession agreement with M/s. Chennai Container Terminal Private Ltd. (CCTL), on BOT basis for 30 year period. CCTL was expected to handle minimum container cargo of 0.8 million TEUs as per the indicated traffic projection and it handled 0.73 million TEUs in the year 2005-06.</p> <p>Development of second container terminal has already been taken up with a view to cater to the growing demand of container traffic. This terminal is expected to handle maximum of 0.8 million TEUs p.a. at its peak operations.</p> <p>As outlined in the section 2.2 of this report, container handling is identified as the most important thrust area for ChPT. To achieve that objective, this project proposes converting the existing berths JD-2, JD-4 and JD-6 into a container terminal with a berthing length of 655 m. The berths are presently being used for handling Bulk, Break-bulk and General Cargo. The above facility is have an extended back up area of approximately 25 ha and is expected to handle a throughput of about 0.6 million TEUs per year. This proposed terminal would involve:</p> <ul style="list-style-type: none"> - Conversion of JD2, JD4 & JD6 berths into container berths, - Conversion of balance portion of coal yard into container storage yard. - Shifting berthing face eastward by demolishing existing JD-2, JD4, & JD6. - Strengthening of berths so that dredging can be done to handle ships with draft of 14 m - Conversion of a portion of Marshalling Yard into container storage yard - Conversion of a portion of Marshalling Yard into container storage cum railway yard <p>The present draft is in the range of 10 to 11 m and will be deepened by dredging to -14m. The existing berths are proposed to be shifted eastwards by demolishing and the new container berths will have the width of 55 m in order to accommodate RMQCs.</p> <p>As the berths were constructed about 25 to 30 years ago and were not designed for moving cranes loads of modern RMQC, it would be necessary to assess the theoretical structural strength of the existing berths by detailed engineering and considering the reduction in the strength due to wearing can be estimated. In order to assess the present strength of concrete members, Non-destructive testing (NDT) would need to be carried out and</p> | | |

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| | <p>accordingly the residual strength of these berths could be ascertained and the design of modified/wider berths could be finalized.</p> <p>While finalizing the design of new berths, provision would be made for possible future dredging to -16 m. For estimating purposes, the widening of the berths are considered to be in the form of a piled structure with RCC deck and suitable fender arrangement will be provided using cell dock fenders.</p> | | |
| Expected Key Benefits | <p>The existing container terminal and proposed second terminal may face saturation in the next 10 years because of growing demand and existing trade pattern. The container handling capacity of the ChPT can be increased through this project with supporting infrastructure like road/rail connectivity and back up space.</p> | | |
| Project Implementation Period (approx.) | 3.0 years | Estimated Project Cost | INR 815.17 Cr. |
| Project Returns (IRR) for the BOT Operator, | 1. 16.77% | Net Present Value (NPV) for the BOT Operator, Approximately | 1. INR 11.6 Cr. |
| | 2. 10.84%* | | 2. INR (75.12) Cr.* |
| | 3. 19.84%** | Payback Period for the BOT Operator | 3. INR 58.39 Cr.** |
| | <p>*- Sensitivity Analysis with 10% decrease in tonnage expected to be handled and 10% decrease in revenue per ton. **- Sensitivity Analysis with 5% increase in tonnage expected to be handled and 5% increase in revenue per ton.</p> | | |
| Conclusion from Financial Feasibility | <p>The Project appears to be financially feasible and should be taken up on a PPP Basis.</p> | | |
| Need of Project | Essential | | |
| Project Evaluation | | | |
| | | Yes | No |
| Strategic Feasibility | | | |
| Whether the project is strategic fit in the overall strategy? | | ✓ | |
| Whether the project fits with policy guidelines of the central government? | | ✓ | |
| Whether the project will help in strengthening the customer base? | | ✓ | |
| Whether the project has a potential for private sector participation? | | ✓ | |

| | | | | | | | | | | | | | | | | | | | | | |
|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| Whether the project will be able to attract competent players? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Whether the project requires any budgetary support? | | ✓ | | | | | | | | | | | | | | | | | | | |
| Does the project have any adverse environment impacts? If yes; explain. | | ✓ | | | | | | | | | | | | | | | | | | | |
| Is the project adding any competitive advantage? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Whether the project will help in creating better public image of the Port? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Whether the project will help in serving the customers better? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Whether the project will help in improving employee morale? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Technical Feasibility | | | | | | | | | | | | | | | | | | | | | |
| Whether the project helps in better environment management or addressing environmental issues? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Whether the in-house skills available for the project? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Whether the Port has sufficient resources e.g. land, funds etc. available for the project? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Financial Feasibility | | | | | | | | | | | | | | | | | | | | | |
| Whether the Port can raise debt for the project? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Whether the project helps in realization of growth in revenue? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Whether the project itself will be able to serve the liabilities of loans? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Project Implementation Schedule (2007-08 to 2026-27) | | | | | | | | | | | | | | | | | | | | | |
| 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | |
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|--|--|---------------------|----------------|
| Project Title: | Converting existing Iron Ore Berth to a Container Terminal facility: Container Terminal-4 | | |
| Project Owner: | Management, Engineering | Project Type | Client Related |
| General and Technical Description | <p>The targeted cargo forecast indicates that the three terminals will be just meeting the requirements till Phase-2. Therefore there is a need of additional terminals cater increasing containerized volumes.</p> <p>As illustrated in section 1.4 of this report, existing container terminal (CCTL) together with proposed container terminal -2 on East quay and container terminal-3 in Jawahar Dock shall be able to meet the terminal requirements upto 2.5 Million TEUs i.e. by the end of Phase-2. But it is forecasted that by the end of Phase-3, total capacity requirement may go upto 4.1 Million TEUs. In order to cater this increased requirement of 1.7 Million TEUs, Container terminal-4 is proposed by the way of converting the existing iron ore berth into container handling facility. The shift of Iron Ore</p> | | |

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|---|---|---|---|
| | <p>facility is also envisaged due to likely depletion in present boom and possibility of a ban on iron ore export due to major thrust on requirement of iron ore for domestic steel plants.</p> <p>The existing iron ore berth is located in Bharathi Dock, north of existing Container Terminal No-1 i.e. CCTL. The length of the existing iron ore berth with minor extension northwards will be about 360 m. The present available draft in front of iron ore berth is around 17.4 m.</p> <p>As the draft is already 17.4 m and the structure has already been designed for such dredged depth, the assessment of the structure capacity of the iron ore berth is to be made only for the increased wheel load due to operations of RMQCs and the reduction in strength due to ageing.</p> <p>The iron ore berth would be widened to 55m by extension on either side of existing berth or only one side based on the strength of structural elements of RCC deck. It may be necessary to strengthen both pile foundations as well as RCC deck. Since the development is planned in the Phase-3, which will result in substantial reduction in strength, as it would have served for almost 35 to 40 years at the time of conversion. Therefore while estimating of project cost; the major component is considered requiring reconstruction instead of restorative repairs or upgrade. This project comprises of:</p> <ul style="list-style-type: none"> - Conversion of Iron Ore berths into container berths, - Conversion of back-up storage area for iron ore into container storage yard. - Conversion of existing CFSs into container storage yard <p>It is also proposed that existing CFSs, north of Bharthi Dock to be shifted outside the port premises and this whole area till upper revetment can be used as back-up storage area for this terminal.</p> | | |
| <p>Expected Key Benefits</p> | <ol style="list-style-type: none"> 1. The existing container terminal and proposed another two terminals may face saturation by the end of Phase-2. The container handling capacity of the ChPT can be expanded through this project to cater increased container volumes and with the availability of 17.4 m draft, the main line vessels can be called at the ChPT. 2. The shifting of iron ore will result in cleaner environment and will considerably reduce dust and pollution, affecting the city population. | | |
| <p>Project Implementation Period (approx.)</p> | <p>3.0 years</p> | <p>Estimated Project Cost</p> | <p>Approx. INR 749.47 Cr.</p> |
| <p>Project Returns (IRR) for the BOT Operator,</p> | <ol style="list-style-type: none"> 1. 20.3% 2. 13.8%* | <p>Net Present Value (NPV) for the BOT Operator, Approximately</p> | <ol style="list-style-type: none"> 1. INR 87.31 Cr. 2. INR (42.77) Cr.* |

| | | | |
|--|---|--|--|
| | 3. 23.6%** | | 3. INR 157.49 Cr.** |
| | | Payback Period for the BOT Operator | 1. 6 years 2. 10 years* 3. 5 years** |
| | <p>*- Sensitivity Analysis with 10% decrease in tonnage expected to be handled and 10% decrease in revenue per ton. ** - Sensitivity Analysis with 5% increase in tonnage expected to be handled and 5% increase in revenue per ton.</p> | | |
| Conclusion from Financial Feasibility | The Project appears to be financially feasible and should be taken up on a PPP Basis. | | |
| Need of Project | Essential | | |
| Project Evaluation | | | |
| | | Yes | No |
| Strategic Feasibility | | | |
| Whether the project is strategic fit in the overall strategy? | | ✓ | |
| Whether the project fits with policy guidelines of the central government? | | ✓ | |
| Whether the project will help in strengthening the customer base? | | ✓ | |
| Whether the project has a potential for private sector participation? | | ✓ | |
| Whether the project will be able to attract competent players? | | ✓ | |
| Whether the project requires any budgetary support? | | | ✓ |
| Does the project have any adverse environment impacts? If yes; explain. | | | ✓ |
| Is the project adding any competitive advantage? | | ✓ | |
| Whether the project will help in creating better public image of the Port? | | ✓ | |
| Whether the project will help in serving the customers better? | | ✓ | |
| Whether the project will help in improving employee morale? | | ✓ | |
| Technical Feasibility | | | |
| Whether the project helps in better environment management or addressing environmental issues? | | ✓ | |
| Whether the in-house skills available for the project? | | ✓ | |
| Whether the Port has sufficient resources e.g. land, funds etc. available for the project? | | ✓ | |
| Financial Feasibility | | | |

| | | | | | | | | | | | | | | | | | | | | | |
|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| Whether the Port can raise debt for the project? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Whether the project helps in realization of growth in revenue? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Whether the project itself will be able to serve the liabilities of loans? | ✓ | | | | | | | | | | | | | | | | | | | | |
| Project Implementation Schedule (2007-08 to 2026-27) | | | | | | | | | | | | | | | | | | | | | |
| 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | |
| | | | | | | | | | | | | | | | | | | | | | |

| | | | |
|--|---|-------------------------------|----------------|
| Project Title: | Construction of Container Terminal 5 | | |
| Project Owner: | Management, Engineering | Project Type | Client Related |
| General and Technical Description | <p>The total container cargo that is expected at Chennai port in the Phase-3 is 4.1 million teu With four terminals in operation; three till Phase-2 & one in Phase-3, there is a need of additional terminal facility to meet this demand.</p> <p>In order to cater this increased requirement of around 0.9 Million TEUs, Container terminal-5 is proposed by the way of converting berths WQ1, WQ 2, WQ 3, WQ 4 & CB in Dr. Ambedkar Dock into container terminal.</p> <p>This project comprises of:</p> <ul style="list-style-type: none"> - Conversion of WQ1, WQ 2, WQ 3, WQ 4 & CB berths into container berths, - Reclamation of a small area in front of west quay to create additional back-up land - Strengthening of berthing face to handle ships requiring drafts of 14 m <p>The berthing length available at this terminal is 853 m with draft varying from 11m to 12 m. It is observed that, back-up area can be a constraint for conversion of this quay at container berth. In order to deal with this deficiency, we propose to shift the berthing face eastward by reclaiming additional area in front of these West Quay berths of Ambedkar Dock.</p> <p>As also depicted in section 1.4 and 1.6 of this report, an area of around 18.82 ha can be provided at this location and this is expected to increase the overall throughput of the port by about 0.9 million TEUs.</p> | | |
| Expected Key Benefits | The existing container terminal and newly proposed terminals may face saturation by phase-3. The container handling capacity of the ChPT can be increased and matched with increased demand of container volumes. | | |
| Project Implementation | 3.0 years | Estimated Project Cost | INR 1129 Cr. |

| | | | |
|--|--|--|---------------------|
| Period (approx.) | | | |
| Project Returns (IRR) for the BOT Operator, | 1. 16.3% | Net Present Value (NPV) for the BOT Operator, Approximately | 1. INR 8.41 Cr. |
| | 2. 10.7%* | | 2. INR (125.62)Cr.* |
| | 3. 19.2%** | Payback Period for the BOT Operator | 1. 8 years |
| | | | 2. 11 years* |
| | | | 3. 7years** |
| | *- Sensitivity Analysis with 10% decrease in tonnage expected to be handled and 10% decrease in revenue per ton. | | |
| | **- Sensitivity Analysis with 5% increase in tonnage expected to be handled and 5% increase in revenue per ton. | | |
| Conclusion from Financial Feasibility | The Project appears to be financially feasible and should be taken up on a PPP Basis. | | |
| Need of Project | Essential | | |
| Project Evaluation | | | |
| | | Yes | No |
| Strategic Feasibility | | | |
| Whether the project is strategic fit in the overall strategy? | | √ | |
| Whether the project fits with policy guidelines of the central government? | | √ | |
| Whether the project will help in strengthening the customer base? | | √ | |
| Whether the project has a potential for private sector participation? | | √ | |
| Whether the project will be able to attract competent players? | | √ | |
| Whether the project requires any budgetary support? | | | √ |
| Does the project have any adverse environment impacts? If yes; explain. | | | √ |
| Is the project adding any competitive advantage? | | √ | |
| Whether the project will help in creating better public image of the Port? | | √ | |
| Whether the project will help in serving the customers better? | | √ | |
| Whether the project will help in improving employee morale? | | √ | |
| Technical Feasibility | | | |
| Whether the project helps in better environment management or addressing environmental issues? | | √ | |

| | | | | | | | | | | | | | | | | | | | | |
|--|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Whether the in-house skills available for the project? | ✓ | | | | | | | | | | | | | | | | | | | |
| Whether the Port has sufficient resources e.g. land, funds etc. available for the project? | ✓ | | | | | | | | | | | | | | | | | | | |
| Financial Feasibility | | | | | | | | | | | | | | | | | | | | |
| Whether the Port can raise debt for the project? | ✓ | | | | | | | | | | | | | | | | | | | |
| Whether the project helps in realization of growth in revenue? | ✓ | | | | | | | | | | | | | | | | | | | |
| Whether the project itself be able to serve the liabilities of loans? | ✓ | | | | | | | | | | | | | | | | | | | |
| Project Implementation Schedule (2007-08 to 2026-27) | | | | | | | | | | | | | | | | | | | | |
| 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 |
| | | | | | | | | | | | | | | | | | | | | |

| Project Title: | Converting Tondiarpet Housing colony into an Off-Dock facility for containers | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|----|---------|----|---------------------|----|---------|----|----------------|----|---------|----|------|---------|--|---------|--|---------|--|---------|--|---------|--|---------|--|------|----|----|----|----|----|----|----|----|----|----|----|----|---------------------|---|----|---|----|---|----|---|----|---|----|---|----|---------------------|---|----|---|----|---|----|----|----|---|----|---|----|
| Project Owner: | Engineering | | | | Project Type | | | | Client Related | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| General and Technical Description | <p>Presented below is the statistics on share of transportation modes in the past for containers cargo volume i.e. Rail (RL) and Road (RD)</p> <table border="1"> <thead> <tr> <th>Year</th> <th colspan="2">2000-01</th> <th colspan="2">2001-02</th> <th colspan="2">2002-03</th> <th colspan="2">2003-04</th> <th colspan="2">2004-05</th> <th colspan="2">2005-06</th> </tr> <tr> <th>Mode</th> <th>RL</th> <th>RD</th> <th>RL</th> <th>RD</th> <th>RL</th> <th>RD</th> <th>RL</th> <th>RD</th> <th>RL</th> <th>RD</th> <th>RL</th> <th>RD</th> </tr> </thead> <tbody> <tr> <td>Export: Container %</td> <td>8</td> <td>92</td> <td>5</td> <td>95</td> <td>6</td> <td>94</td> <td>6</td> <td>94</td> <td>6</td> <td>94</td> <td>6</td> <td>94</td> </tr> <tr> <td>Import: Container %</td> <td>7</td> <td>93</td> <td>6</td> <td>94</td> <td>6</td> <td>94</td> <td>12</td> <td>88</td> <td>6</td> <td>94</td> <td>7</td> <td>93</td> </tr> </tbody> </table> <p>Average modal transportation by rail is observed to be only around 6.2% for exports and 7.3 % for imports.</p> <p>Excessive dependence on road as a mode for transporting containers has resulted into the problem relating to evacuation and congestion. These problems with non-existence of good road connectivity are identified as some of the biggest weaknesses during SWOT analysis.</p> <p>Though ChPT is connected to its hinterland both by rail and road, there is an immediate need of upgrading the external connectivity to the national highways and the Indian railway network to be able to cope with the future projected traffic volumes.</p> <p>The proposed Off-Dock facility with around 9 ha land at the Tondiarpet Housing Colony (THC) is situated on the eastern side of VOC Nagar railway station. It is an added advantage that the location for the proposed Off-Dock facility is adjacent to the</p> | | | | | | | | | | | | Year | 2000-01 | | 2001-02 | | 2002-03 | | 2003-04 | | 2004-05 | | 2005-06 | | Mode | RL | RD | Export: Container % | 8 | 92 | 5 | 95 | 6 | 94 | 6 | 94 | 6 | 94 | 6 | 94 | Import: Container % | 7 | 93 | 6 | 94 | 6 | 94 | 12 | 88 | 6 | 94 | 7 | 93 |
| Year | 2000-01 | | 2001-02 | | 2002-03 | | 2003-04 | | 2004-05 | | 2005-06 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Mode | RL | RD | RL | RD | RL | RD | RL | RD | RL | RD | RL | RD | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Export: Container % | 8 | 92 | 5 | 95 | 6 | 94 | 6 | 94 | 6 | 94 | 6 | 94 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Import: Container % | 7 | 93 | 6 | 94 | 6 | 94 | 12 | 88 | 6 | 94 | 7 | 93 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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|--|---|--|--|
| | <p>southern railway main line running between Korrukupet and Attipattu, which makes it possible to develop the railway line inside the land earmarked for this facility. It is proposed to provide the connectivity from VOC railway station.</p> <p>It is envisaged that ChPT could implement a shuttle railway that could quickly and efficiently move container wagons to this off-dock inter-modal container yard located at around 5 km from the Port.</p> | | |
| Expected Key Benefits | <ol style="list-style-type: none"> 1. Potential improvement in vessel turnaround time. 2. A considerable reduction in terms of likely load on roads 3. Decongest the port area 4. Facilitate ChPT in providing customer friendly logistics solutions 5. Competitive advantage in terms of providing fast evacuation using modern shuttle railway. | | |
| Project Implementation Period (approx.) | 1 year | Estimated Project Cost | INR 49.15 Cr. |
| Project Returns (IRR) for the BOT Operator, | <ol style="list-style-type: none"> 1. 17.4% 2. 11.4%* 3. 20.6%** | Net Present Value (NPV) for the BOT Operator, Approximately | <ol style="list-style-type: none"> 1. INR 2.43 Cr. 2. INR (7.67) Cr.* 3. INR 7.87 Cr.** |
| | | Payback Period for the BOT Operator | <ol style="list-style-type: none"> 1. 9 years 2. 11 years* 3. 8 years** |
| | <p>*- Sensitivity Analysis with 10% decrease in cargo volume to be handled and 10% decrease in revenue per TEU. **- Sensitivity Analysis with 5% increase in cargo volume to be handled and 5% increase in revenue per TEU.</p> | | |
| Conclusion from Financial Feasibility | The Project appears to be financially feasible and should be taken up on a PPP Basis. | | |
| Need of Project | Essential | | |
| Project Evaluation | | | |

| | Yes | No |
|--|-----|----|
| Strategic Feasibility | | |
| Whether the project is strategic fit in the overall strategy? | √ | |
| Whether the project fits with policy guidelines of the central government? | √ | |
| Whether the project will help in diversifying the customer base? | √ | |
| Whether the project has a potential for private sector participation? | √ | |
| Whether the project will be able to attract competent players? | √ | |
| Whether the project requires any budgetary support? | | √ |
| Does the project have any adverse environment impacts? If yes; explain. | | √ |
| Is the project adding any competitive advantage? | √ | |
| Whether the project will help in creating better public image of the Port? | √ | |
| Whether the project will help in serving the customers better? | √ | |
| Whether the project will help in improving employee morale? | √ | |
| Technical Feasibility | | |
| Whether the project helps in efficiency improvement? | √ | |
| Whether the project helps in better environment management or addressing environmental issues? | √ | |
| Whether the department has the skills to construct and operate the project? | √ | |
| Whether the project can be outsourced or privatised for construction? | √ | |
| Whether the Port has sufficient resources e.g. land, funds etc. available for the project? | √ | |
| Financial Feasibility | | |
| Whether the Port can raise debt for the project? | √ | |
| Whether the project needs to be financed entirely by internal resources? | √ | |
| Whether the project helps in reduction of operation cost? | √ | |
| Whether the project helps in realization of growth in revenue? | √ | |

| | | | | | | | | | | | | | | | | | | | | |
|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|--|
| Whether the project itself be able to serve the liabilities of loans? | | | | | | | | | | | | | | | √ | | | | | |
| Project Implementation Schedule (2007-08 to 2026-27) | | | | | | | | | | | | | | | | | | | | |
| 07 | 08 | 09 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | |
| | | | | | | | | | | | | | | | | | | | | |

Planned Public Related Projects

| | | | |
|--|---|---------------------|--|
| Project Title: | 1. Ennore-Manali Road Improvement Project (EMRIP) | | |
| Project Owner: | Engineering Department | Project Type | Client-Related/Pubic Investment/Organization Improvement |
| General and Technical Description (details attached) | <p>In view of the increasing traffic at the Port, improvement and strengthening of major road network in Ennore and Manali area is proposed to provide much desired connectivity to the Port from the existing national highways and in order to provide a face-lift to the approach roads to the Port. The Ennore-Manali Road improvement project will consist of the following components:</p> <ul style="list-style-type: none"> - Shore protection work along the Ennore coast; - Four laning of the Ennore Express way; - Improving the Tiruvottiyur Ponneri Panjetti (TPP) Road; - Improving of MORR and Inner ring road and - Rehabilitation and Resettlement of Project affected families. <p>Manali Oil Refinery road gives access to many major industries and also connectivity between ChPT and Ennore Port. It also connects to Ennore Thermal Power Plant and North Chennai Thermal Power Plant (NCTPP) and other major industries and also to the northern segment of Inner Ring Road (IRR). This road takes off (km 0/000) from Ennore Expressway and ends at TPP Road junction at Km 4/600 near Madras Fertilizers Limited. Total length of this road is about 5.6km long.</p> <p>The northern segment of IRR gives access to many major industries and also connectivity between Chennai and Ennore Ports to all National Highways. It also connects Ennore Thermal Power Plant, North Chennai Thermal Power Plant, other major industries and also the Manali Oil Refinery road to NH network. The project road starts at the junction of Inner Ring Road (Km 17/5) and National Highway No.5 (Km 11/5) near Moolakadai and ends at the junction of Inner Ring Road (Km 25/0) with TPP road at Km 4/800 near MFL. The project details improvement of the 7.5 km long northern segment.</p> <p>Presently the to and fro traffic from the Ennore Expressway to Gate No.1 of ChPT flow is through the entry to the fisheries harbor which is very narrow and creates traffic hold up causing much inconvenience. The road passing through the fishing harbor would also be upgraded under the project.</p> <p>Government had approved participation of ChPT in the Special Purposed Vehicle comprising ChPT, National Highways Authority of India (NHAI) and Government of Tamil Nadu</p> <p>ChPT would be required to contribute Rs.72 crores as equity contribution to the total cost of the Project. ChPT has so far paid Rs.23 crores for the above project.</p> <p>On the Rs 309-crore Chennai-Ennore Port Road Connectivity project,</p> | | |

| | | | |
|--|--|---|---|
| | shore protection work has been completed and about 80,000 sqm of land has been reclaimed along the Ennore coast, which was in the past affected by sea erosion. Work on TPP road was inaugurated in the month of March'06 and the project components inside Fishing Harbour and at MORR and Inner Ring Road will be taken up soon. | | |
| Expected Key Benefits | <ol style="list-style-type: none"> 1. Improved connectivity between ChPT and NH-4 & NH-5 2. Efficient movement of road-borne cargo traffic | | |
| Project Implementation Period (approx.) | 2.0 years | Estimated Project Cost (details attached) | Total Cost: INR 309 Cr. Internal Resources: INR 72 Cr. |
| Need of Project | Essential / Desirable | | |
| Project Evaluation | | | |
| | | | Yes |
| | | | No |
| Strategic Feasibility | | | |
| Whether the project is strategic fit in the overall strategy? | | | √ |
| Whether the project fits with policy guidelines of the central government? | | | √ |
| Whether the project will help in diversifying the customer base? | | | √ |
| Whether the project has a potential for private sector participation? | | | √ |
| Whether the project will be able to attract competent players? | | | √ |
| Whether the project requires any budgetary support? | | | √ |
| Does the project have any adverse environment impacts? If yes; explain. | | | √ |
| Is the project adding any competitive advantage? | | | √ |
| Whether the project will help in creating better public image of the Port? | | | √ |
| Whether the project will help in serving the customers better? | | | √ |
| Whether the project will help in improving employee morale? | | | √ |
| Technical Feasibility | | | |
| Whether the project helps in efficiency improvement? | | | √ |
| Whether the project helps in better environment management or addressing environmental issues? | | | √ |
| Whether the department has the skills to construct and operate the project? | | | √ |
| Whether the Port has sufficient resources e.g. land, funds etc. available for the project? | | | √ |
| Financial Feasibility | | | |

| | | | | | | |
|--|---------|---------|---------|---------|---------|---------|
| Whether the project has a potential for private sector participation? | ✓ | | | | | |
| Whether the project will be able to attract competent players? | ✓ | | | | | |
| Whether the project requires any budgetary support? | | ✓ | | | | |
| Does the project have any adverse environment impacts? If yes; explain. | | ✓ | | | | |
| Is the project adding any competitive advantage? | ✓ | | | | | |
| Whether the project will help in creating better public image of the Port? | ✓ | | | | | |
| Whether the project will help in serving the customers better? | ✓ | | | | | |
| Whether the project will help in improving employee morale? | ✓ | | | | | |
| Technical Feasibility | | | | | | |
| Whether the project helps in efficiency improvement? | ✓ | | | | | |
| Whether the project helps in better environment management or addressing environmental issues? | ✓ | | | | | |
| Whether the department has the skills to construct and operate the project? | ✓ | | | | | |
| Whether the Port has sufficient resources e.g. land, funds etc. available for the project? | ✓ | | | | | |
| Financial Feasibility | | | | | | |
| Whether the Port can raise debt for the project? | ✓ | | | | | |
| Whether the project helps in reduction of operation cost? | ✓ | | | | | |
| Whether the project helps in realization of growth in revenue? | ✓ | | | | | |
| Whether the project itself be able to serve the liabilities of loans? | ✓ | | | | | |
| Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

| | | | |
|--|--|---------------------|--|
| Project Title: | 3. Connecting Off Dock facility at Tondiarpet Housing Colony to Port with Shuttle Railway | | |
| Project Owner: | Engineering Department | Project Type | Client-Related/Pubic Investment/Organization Improvement |
| General and Technical Description (details attached) | Although the present railway tracks within ChPT does not adequately serve the potential east-side container terminals, the ultimate removal of the existing coal yards presents a golden opportunity for ChPT to develop a new railway inter-modal yard that will optimize the use of rail transport for the port. In fact, it is envisaged that ChPT could implement a shuttle railway that could quickly and efficiently move container wagons to an off-dock inter-modal container yard located within 20 kilometers from the Port. | | |

| | | |
|---|--|-----------|
| | <p>The shuttle railway would use modern container wagons and depending on distance and train speed would shuttle between the off-dock inter-modal container yard and the port on a 24/7 basis. Rail-mounted gantry (RMG) cranes would be used at ChPT and the off-dock terminal to efficiently handle the containers. A large number of trucks would save time and money by using the off-dock container terminal, consequently potential future truck traffic within the Port and through the City could be reduced substantially.</p> <p>The proposed new inter-modal railway yard would allow all terminals to receive containers via the railway system. The proposed new container terminals would use tractor-trailer trains (road units) that can carry up to 6 TEU with either two 20-foot or one forty-foot container on each of the three trailers. The multi-trailer system (MTS) would quickly and efficiently shuttle containers between the Port's inter-modal rail yard and the terminals.</p> <p>Initial observations and the experience of the Consultant indicate that the use of a "port shuttle railway" system moving containers in-bond from the port to an "off-dock" bonded area close to the port will substantially reduce container dwell times. This system will free-up valuable land at the port that is presently used for the storage of containers. Also, the port shuttle railway service will substantially reduce the number of trucks presently servicing the port. With good management, the port shuttle railway would always have a balanced flow of loaded and empty containers moving in both directions ensuring a high level of utilization.</p> <p>Concept for Shuttle Railway: The main purpose of a railway shuttle system is to better utilize valuable ports lands by minimizing the need to store containers for long periods and to reduce future truck congestion within and around the Port. Other objectives are to increase the utilization, productivity and profitability of the truck transport fleet and to reduce the overall cost of importing and exporting goods through the port.</p> <p>The proposed Container Shuttle Railway System is designed to quickly transport import marine containers "in bond" to an off-dock intermodal terminal located close to the Port.</p> | |
| Expected Key Benefits | <ul style="list-style-type: none"> i) Improved linkage between ChPT and Tondiarpet Housing Colony ii) Fast evacuation of containers from port iii) Considerable modal transport share by rail iv) Decreased load on roads v) Efficient movement of rail-borne cargo traffic | |
| Need of Project | Essential / Desirable | |
| Project Evaluation | | |
| | Yes | No |
| Strategic Feasibility | | |
| Whether the project is strategic fit in the overall strategy? | ✓ | |

| | | | | | | |
|--|---------|---------|---------|---------|---------|---------|
| Whether the project fits with policy guidelines of the central government? | √ | | | | | |
| Whether the project will help in diversifying the customer base? | √ | | | | | |
| Whether the project has a potential for private sector participation? | √ | | | | | |
| Whether the project will be able to attract competent players? | √ | | | | | |
| Whether the project requires any budgetary support? | | √ | | | | |
| Does the project have any adverse environment impacts? If yes; explain. | | √ | | | | |
| Is the project adding any competitive advantage? | √ | | | | | |
| Whether the project will help in creating better public image of the Port? | √ | | | | | |
| Whether the project will help in serving the customers better? | √ | | | | | |
| Technical Feasibility | | | | | | |
| Whether the project helps in efficiency improvement? | √ | | | | | |
| Whether the project helps in better environment management or addressing environmental issues? | √ | | | | | |
| Whether the department has the skills to construct and operate the project? | √ | | | | | |
| Whether the Port has sufficient resources e.g. land, funds etc. available for the project? | √ | | | | | |
| Financial Feasibility | | | | | | |
| Whether the Port can raise debt for the project? | √ | | | | | |
| Whether the project helps in reduction of operation cost? | √ | | | | | |
| Whether the project helps in realization of growth in revenue? | √ | | | | | |
| Whether the project itself be able to serve the liabilities of loans? | √ | | | | | |
| Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |



Planned Organization Improvement Related Projects

The above projects have been broadly categorized below:

Marketing Projects:

The marketing related projects are as explained below:

A) Marketing Department Capacity Building Project: This includes following sub-projects:

1. Formulating a Marketing Plan
2. Restructuring the Marketing Cell
3. Developing a Market Research Cell

The marketing Department Capacity Building projects would help in strengthening the Marketing Department of ChPT and assist it to address the concerns and issues of their target customers in a planned manner. A properly structured marketing plan can yield numerous benefits to the organization. It further would help in attracting & retaining customers and ensuring their total satisfaction. A restructured and modern marketing cell alongwith a market research cell would enable ChPT to identify the industry & market trends and upcoming opportunities.. This would ensure attainment of the main objectives of the organization.

Each of the projects explained below list down the motivation behind undertaking such projects and gives a glimpse of the key benefits the organization would yield by undertaking them. It An unambiguous marketing plan following the business plan would help in achieving the objectives of the business plan in a systematic, scientific and planned manner.

| | | | |
|---|-------------------------------------|------------------------------|----------|
| Sub-Project Name: | Formulating a Marketing Plan | | |
| Sub Project Owner: | Traffic Department | Sub Project Duration: | 3 months |
| General Description | | | |
| The Marketing strategy requires ChPT to develop a detailed marketing Plan that addresses all the target customer segments in a planned manner. A marketing plan follows an overall business plan. Solid background through customer segmentation and identification of key business segments is the foundation of a well-written marketing plan. Key target segments would be spelled out in the Business Plan and marketing Plan would contain strategies and a list of actions to address these key segments. | | | |
| Sub Project Description: | | | |
| A Marketing Plan is a written document that details the Strategy and actions necessary to achieve a specified marketing objective(s). It can cover one year (referred to as an annual marketing plan), or cover up to 5 years. | | | |
| A formal, written marketing plan is essential; in that it provides an unambiguous reference point for marketing activities throughout the planning period. The Plan would | | | |

contain actions points covering the following areas:

1. Pricing (Tariff) Strategy
2. Promotion Strategy
3. Implementation requirements – Personnel, Finance, MIS
Performance measurement criteria (sales, market share, revenue etc.)

Key Benefits expected from the Sub Project:

A properly structured marketing Plan can yield the following benefits:

1. Decision on whether to consolidate or outsource certain services and support operations
2. Improve workforce planning
3. Increase emphasis on designing for service efficiency and self-service
4. Improve management of partner relationships
5. Improve partnership and collaboration skills of staff
6. Identify new service offerings
7. Identify incentive structures for service development and innovation
8. Implement pricing and affinity programs based on volume and breadth
9. Improve retention and win-back processes
10. Target new geographies
11. Target new segments within current geographies

Costs of Implementation

Whereas this project can be internally carried out by ChPT Traffic department, they would require external assistance in validating the marketing plan from reputed marketing consultants. The costs of such external assistance in validating the marketing plan is estimated at Rs. 0.3 million.

Sub Project Dependencies:

Customer Segmentation

Importance

Essential

Desirable

Sub Project Phasing

| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------|---------|---------|---------|---------|---------|---------|
| | | | | | | |

| | | | |
|--|---|------------------------------|--------------|
| Sub-Project Name: | Restructuring the Marketing Cell | | |
| Sub Project Owner: | Traffic Department | Sub Project Duration: | Three months |
| General Description | | | |
| Chennai Port does have a marketing cell. The department is an extension of the | | | |

| | | | | | | |
|--|---------|---------|---------|---|---------|---------|
| <p>Traffic department and has limited tools and resources to carry out the marketing function as would be required in the years to come given the competitive scenario. In order to implement the Marketing strategy and marketing plan, there is a need to restructure this cell in terms of strengthening with more resources and skill sets.</p> | | | | | | |
| <p>Sub Project Description:</p> | | | | | | |
| <p>The Project would involve the following activities:</p> <ol style="list-style-type: none"> 1. Deciding the roles and responsibilities the Cell. 2. Identify the reporting relationships of personnel within the Cell. 3. Train personnel in marketing concepts and marketing tools and techniques 4. Recruit personnel specialized in marketing (if need be) 5. Plan infrastructure requirements and acquire infrastructure like computers, software tools etc. | | | | | | |
| <p>Key Benefits expected from the Sub Project:</p> | | | | | | |
| <p>Given the objective of attracting and retaining customers and ensure Total Customer Satisfaction, a skilled Marketing Cell would be crucial to ensuring attainment of the objective. Benefits expected would be as follows:</p> <ol style="list-style-type: none"> 1. Implementation of a formal Marketing Plan 2. Introducing improved methods and tools for managing innovation performance 3. Proactive management of transition points (life events, ends of contracts and leases, etc.) 4. Improved tracking of customer interactions (purchases, support requests, etc.) 5. Improved responsiveness to customer requests and inquiries 6. Improved brand strength and good will 7. Improved identification of valuable customer relationships 8. Solicitation and response to customer feedback | | | | | | |
| <p>Costs of Implementation</p> | | | | | | |
| <p>Cost details provided in the next project in conjunction with the project on "Developing a market research cell"</p> | | | | | | |
| <p>Sub Project Dependencies:</p> | | | | | | |
| <ul style="list-style-type: none"> ▪ Customer Segmentation ▪ Formulating a Marketing Plan | | | | | | |
| <p>Importance</p> | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| <p>Sub Project Phasing</p> | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

| | | | |
|---|--|------------------------------|------------|
| Sub-Project Name: | Developing a Market Research Cell | | |
| Sub Project Owner: | Traffic Department | Sub Project Duration: | Six months |
| General Description: | | | |
| <p>Given the nature of market, it makes sense to have a separate Market Research Cell within the Port to track and identify changes in the market place BEFORE these happen so that the Port can prepare itself for the changes. This Cell can be an extension of the Marketing Cell itself.</p> <p>Chennai Port has adopted the posture of shaping the future in three business segment groups i.e. container handling, automobiles, and cruise operations. The posture requires ChPT to anticipate the future trends and take proactive steps in taking a leadership role in the segment. This cell can keep a track of the activities of the competing ports with and take inform the various authorities about the latest development in the port sector.</p> | | | |
| Sub Project Description: | | | |
| <p>The Project would involve the following activities:</p> <ol style="list-style-type: none"> 1. Deciding the roles and responsibilities the Cell. 2. Identify the reporting relationships of personnel within the Cell. 3. Train personnel in market research tools and techniques 4. Train personnel in competitor intelligence techniques 5. Recruit personnel specialized in market research (if need be) 6. Plan infrastructure requirements and acquire infrastructure like computers, software tools etc. | | | |
| Key Benefits expected from the Sub Project: | | | |
| <p>Given the objective of attracting and retaining customers and ensure Total Customer Satisfaction, a skilled market research Cell would help Chennai port achieve the following:</p> <ol style="list-style-type: none"> 1. Improve identification and prediction of industry and market trends 2. Improve R&D capabilities in marketing domain 3. Maintain competitive functionality and value 4. Improve identification of valuable customer relationships 5. Target new geographies 6. Target new segments within current geographies | | | |
| Costs of Implementation | | | |
| <p>This project will be executed internally by ChPT along with the previous project on restructuring of the marketing cell. For both these projects, The Port will require external assistance in training of marketing personnel which is estimated to cost approximately Rs. 0.5 million. In addition it is estimated that the marketing cell will require computers and other office infrastructure which is expected to cost Rs. 2.5</p> | | | |

| | | | | | | |
|---|---------|---------|---------|--|---------|---------|
| million. | | | | | | |
| Sub Project Dependencies: | | | | | | |
| <ul style="list-style-type: none"> ▪ Customer Segmentation ▪ Formulating a Marketing Plan | | | | | | |
| Importance | | | | | | |
| <input type="checkbox"/> Essential | | | | <input checked="" type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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B) Customer Relationship Management Project . This includes the following sub projects:

1. Customer profiling and Segmentation
2. Implementing a CRM Solution
3. Developing Partnerships with Key Customers
4. Port Community System

Customer being the backbone of any organization requires strategic management inputs and strategic approach. The Customer Relationship Management Projects would help in identifying various segments of the customers and the revenue generated by them. Customized solution provided on the basis of such segmentation would increase customer satisfaction. Specific marketing plans targeting specific segment of customers help in achieving the planned objectives in a better way

Implementation of CRM solution would provide system support to the implementation of the marketing strategy. A focused approach, in identifying a specific segment of customer’s problems, and providing them with a solution would highly increase their satisfaction. Such a strategy would help in increasing potential customers and retaining existing customers.

Business objectives can be effectively achieved by considering the customer as a partner in the process of development. This refers to developing a mutually beneficial relationship with the key customers. Long term relationships with key customers help in creating synergies for both the parties in the long run.

A port community system would help in providing a Single Window System that enables customers to submit regulatory documents, charges etc at a single location and/or single entity

| | | | |
|--|--|------------------------------|---------|
| Sub Project Name: | Customer profiling and Segmentation | | |
| Sub Project Owner: | Traffic Department | Sub Project Duration: | 1 month |
| General Description | | | |
| <p>This project will help in identifying the potential customers based on specific segments like type of cargo, the revenue generated through them, the geographic locations of the client and hence customized solutions can be given to them. This will help identifying the customer needs in a better way and will help to improve the port services. Special tariffs for special clients based on revenue generated from them can also be designed. Promotional schemes can be made to target a particular segment.</p> <p>Business segments such as Container handling, automobiles and cruise operations have already been identified as thrust areas where ChPT will focus in the future. These segments have separate customer groups which need to be targeted. Each customer group will require further profiling so that a marketing plan to target these customers could be worked out in detail.</p> | | | |
| Technical Description: | | | |
| <p>Customer Segmenting is the process of dividing the market into segments based on customer characteristics and needs. The main activity segmenting consists of four sub activities. These are:</p> <ol style="list-style-type: none"> 1. determining who the actual and potential customers are 2. identifying segments 3. analyzing the intensity of competitors in the market 4. selecting the attractive customer segments. <p>The process of segmentation is distinct from targeting (choosing which segments to address) and positioning (designing an appropriate marketing mix for each segment). The overall intent is to identify groups of similar customers and potential customers; to prioritise the groups to address; to understand their behaviour; and to respond with appropriate marketing strategies that satisfy the different preferences of each chosen segment.</p> <p>This Business Plan Report is expected to contain substantial information to aid this exercise.</p> | | | |
| Key Benefits expected from the Sub Project: | | | |
| <p>Customer segmentation will form the basis for development of the Marketing Plan. Once segmentation is carried out, Chennai Port will have the following information which will drive the formulation of the Marketing Plan:</p> <ol style="list-style-type: none"> 1. Improved understanding of customer, product and channel profitability 2. Improved tailoring of marketing and advertising approaches to customer segments | | | |

| | | | | | | |
|--|---------|---------|---------|---|---------|---------|
| 3. Improved ability to identify and assess partnering opportunities 4. Improved understanding of customer needs 5. Improved identification of valuable customer relationships | | | | | | |
| Costs of Implementation | | | | | | |
| This project will be carried out internally by ChPT Traffic department and therefore no specific costs have been identified except for incidental expenses involved in visiting some of the customers, if required | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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|---|------------------------------------|------------------------------|----------|
| Sub Project Name: | Implementing a CRM Solution | | |
| Sub Project Owner: | EDP Department | Sub Project Duration: | One year |
| General Description | | | |
| <p>Presently there is no such process / software which help the Chennai port to understand the customer better and provide complete end to end solutions to their problems / issues. So, a gap exists in terms of a systems support for the marketing strategy implementation which is sought to be addressed by implementing a CRM solution. By implementing a CRM solution, customer focus can be better achieved. A CRM solution which covers a call center wherein customers can call up and get their problems addressed immediately or know the status of their consignments will greatly improve customer service levels and help in attracting and retaining customers.</p> | | | |
| Sub Project Description: | | | |

Customer relationship management (CRM) encompasses the capabilities, methodologies, and technologies that support an enterprise in managing customer relationships. The general purpose of CRM is to enable organizations to better manage their customers through the introduction of reliable systems, processes and procedures.

A successful CRM strategy cannot be implemented by simply installing and integrating a software package and will not happen overnight. Changes must occur at all levels including policies and processes, front of house customer service, employee training, marketing, systems and information management; all aspects of the business must be reshaped to be customer driven.

To be effective, the CRM process needs to be integrated end-to-end across marketing, sales, and customer service. A good CRM program needs to:

1. Identify customer success factors
2. Create a customer-based culture
3. Adopt customer-based measures
4. Develop an end-to-end process to serve customers
5. Recommend what questions to ask to help a customer solve a problem
6. Recommend what to tell a customer with a complaint about a service offering
7. Track all aspects of selling Port's services to customers and prospects as well as customer support

There are three parts of application architecture of CRM:

1. Operational - automation to the basic business processes (marketing)
2. Analytical - support to analyze customer behavior, implements business intelligence alike technology
3. Collaborative - ensures the contact with customers (phone, email, fax, web, sms, post, in person)

Key Benefits expected from the Sub Project:

A good CRM program can improve customer service by facilitating communication in several ways :

1. Identify how each individual customer defines quality, and then design a service strategy for each customer based on these individual requirements and expectations.
2. Provide a mechanism to track all points of contact between a customer and the Chennai Port, and do it in an integrated way so that all sources and types of contact are included, and all users of the system see the same view of the customer (reduces confusion).
3. Help to identify potential problems quickly, before they occur.
4. Provide a user-friendly mechanism for registering customer complaints (complaints that are not registered with the Port cannot be resolved, and are a major source of customer dissatisfaction).
5. Provide a fast mechanism for handling problems and complaints (complaints that are resolved quickly can increase customer satisfaction).
6. Provide a fast mechanism for correcting service deficiencies (correct the problem before other customers experience the same dissatisfaction).
7. Use the Internet to engage in collaborative customization or real-time customization.

The CRM program can be integrated into other cross-functional systems and thereby provide accounting and other information to customers when they want it.

Costs of Implementation

Implementing a CRM Solution will require the following components to be procured, installed and implemented:

| Activities | Estimated costs |
|--|------------------|
| Documenting and re-designing customer interface business | Rs. 1.0 million |
| Procuring a CRM solution (ready made or custom developed) and its implementation | Rs. 4.0 million |
| Training of employees | Rs. 1.0 million |
| Establishing a call center (hardware, building and infrastructural facilities) | Rs. 5.0 million |
| Total | Rs. 11.0 million |

Sub Project Dependencies:

Customer Segmentation

Importance

Essential

Desirable

Sub Project Phasing

| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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| Sub Project Name: | Developing Partnerships with Key Customers | | |
|--|--|-----------------------|----------|
| Sub Project Owner: | Traffic Department | Sub Project Duration: | One Year |
| General description: | | | |
| <p>In view of the intense competitive scenario unfolding before Chennai Port, partnering with customers may just be the most important factor in retaining clients. The term 'customer partnership' should not be taken so much in its legal definition of co-ownership but rather in its sense of sharing in benefits, profits and losses of Chennai Port. In keeping with the strategy to provide value added services to customers, it is necessary to develop partnership with key customers that can be mutually beneficial</p> | | | |

to both parties.

Sub Project Description:

Customer partnership is more than "putting customers first", or finding mutually satisfactory solutions to shared problems, or a dedication to excellence in every sale or service encounter. It also requires commitment to forging long-term relationships that create synergies of knowledge, security, and adaptability for both parties.



Steps required to build successful partnerships are:

1. Determine what Chennai Port need but doesn't have: customers, capital, special expertise, products, production capacity, or distribution channels,
2. Determine partners – current or potential - who have what the Port needs,
3. Develop a Plan to approach the partners and initiate a dialogue. The Plan should, of all things, list out things which the Port can offer to the partners.

Key Benefits expected from the Sub Project:

Given the objective of attracting and retaining customers and ensure Total Customer Satisfaction, customer partnering is likely to be crucial for ensuring retention of clients. Benefits expected are:

1. Improved understanding of customer needs
2. Improved visibility of customer relationships and interactions across all channels
3. Ability to Tailor cross-sell/up-sell offers to customer needs
4. Implementing pricing and affinity programs based on volume and breadth
5. Improve identification of valuable customer relationships

Costs of Implementation

This is an internal project that will be executed by the Port Senior management in conjunction with the traffic department. No external assistance costs are expected in this project except for incidental expenses.

Sub Project Dependencies:

- Customer Segmentation
- Formulating a Marketing Plan

Importance

Essential

Desirable

| Sub Project Phasing | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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| Sub Project Name: | Port Community System | | |
| Sub Project Owner: | EDP Department | Sub Project Duration: | 3 years |
| General Description | | | |
| <p>Chennai Port already has a Web Based EDI system in place since 2002. We believe that IPA is planning to implement a Port Community System at all major ports. Nonetheless, irrespective of who executes the PCS project and when it is worthwhile to mention that implementation of a PCS would significantly help the Port in maximising customer satisfaction.</p> <p>A PCS links all members of the Port Community including Exporters, Importers, Custom House Agents, Shipping lines, Shipping Agents, Stevedores, Transport operators, Banks, Ports, Terminal Operators, Customs, and Other organizations / companies in the maritime logistics chain.</p> <p>Customer interface improvement has already been identified as a key component of the marketing strategy. Customers are already required to interact with various port authorities at various points of time along with documentation requirements. A common system accessible to all port users and other stakeholders will greatly help streamline customer interface. The PCS will help in implementing a Single Window System that enables customers to submit regulatory documents, charges etc at a single location and/or single entity. Such documents are typically customs declarations, applications for import/export permits, port charges and other supporting documents such as certificates of origin, clearance documents and invoices.</p> | | | |
| Sub Project Description: | | | |

Case Study: At Schiphol Airport allows the electronic submission of the cargo manifest by airlines to Customs. Information is supplied by trade to Customs to the so-called VIPPROG system, which was developed by Customs. The VIPPROG system is an EDI-based network application that allows the electronic transmission of the Freight Forward Message, a standard message defined by IATA that is available in the SITA system of IATA. The information from SITA is transmitted via the privately owned community system 'Cargonaut', when the airline has given an authorisation to 'Cargonaut' to provide customs with the information. Customs pays 'Cargonaut' a fee for use and maintenance of the community system.

For Implementation of a PCS, the following needs to be undertaken:

- Study of business processes
- System requirement study
- Design/Procurement of the PCS
- Pilot, Phased or full implementation and Training

Key Benefits expected from the Sub Project:

Following are the main benefits of a PCS to a Port:

- Be a single source, integrated and standardized platform for meeting the requirements of all members of community
- Function as an e-commerce platform for the members of the community.
- Provide adequate, accurate and timely information
- Improve the response time of stakeholders to their customers
- Improve track and trace efficiency
- Provide shipment/ service visibility
- Generate alerts about delays or problems
- Enable moving towards similar procedures across all communities
- Provide for opportunities for re-engineering, adopting best practices
- More effective and efficient deployment of resources
- Enhanced security
- Increased integrity and transparency

Benefits for customers would be:

- Cutting costs through reducing delays
- Faster clearance and release
- Predictable application and explanation of rules
- More effective and efficient deployment of resources

Costs of Implementation

The Indian Ports Association (IPA) on behalf of all major ports is taking the PCS Project up of implementation. As such, ChPT will require no additional costs other than costs of local level implementation. Since the PCS is still at the design stage, it is difficult to estimate the costs of such local level implementation for ChPT.

Sub Project Dependencies:

- Customer Segmentation
- Formulating a Marketing Plan
- Developing the market research cell

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| Importance | | | | | | |
| <input type="checkbox"/> Essential | | | <input checked="" type="checkbox"/> Desirable | | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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C) Market Offerings Expansion Projects: This include following sub projects-

1. Identifying Comprehensive Logistics Services for customers
2. Study of pricing / tariffs of international ports
3. Simplification and Realignment of current tariff structure.
4. Study for identifying investments / management of operations in other Minor ports

These sub-projects would help ChPT in providing more value added services to its customers. It would lead to identification of logistic services it would be able to provide its customer in comparison to the competitors.

The projects would also help Chpt to make a rationalized and simplified tariff structure. Assistance of international consultants would help Chpt in structuring their tariffs as per the best international ports in the world. ChPT would be able to evolve various Tariff schemes for customers which would help in retaining them and attracting potential customers.

ChPT should identify other minor ports which are geographically well positioned, endowed with good drafts and possibly have good connectivity which can actually help displace the dirty cargo from ChPT and absorb the same or can bring otherwise excluded hinterland within CPT’s reach and possibly from the clutches of competition. Making investment in such minor ports would help ChPT to retain customers once its current capacities in term of its overall available ground storage area and hinterland connectivity constraints

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| Sub Project Name: | Identifying Comprehensive Logistics Services for customers | | |
| Sub Project Owner: | EDP/Traffic/Engineering | Sub Project Duration: | Six months |
| <p>As of now the port operations are restricted to a typical port services provider with no customized services. In order to differentiate itself from other ports it has to give its customers something more that what they expect like providing the with a complete logistic solution right from the origin to destination i.e. client door steps.</p> <p>These days, the commercial success of a port could stem from a productivity advantage in traditional cargo-handling service, from value-added service, or from a combination of the two. Shippers and carriers select individual ports not only based</p> | | | |

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| <p>on their cargo handling service capabilities, but also on the benefits they are capable of “delivering”. Unless a port can deliver benefits that are superior to those provided by its competitors in a functional aspect, port customers are likely to select ports based merely on price. This fact raises the question of how a port can achieve value differentiation. Customers now tend to look at value-added logistics services as an integral part of their supply chain. As a result, ports must attempt to satisfy these needs by offering differentiated services.</p> | |
| <p>Sub Project Description:</p> | |
| <p>Chennai port should identify comprehensive logistics services that it could offer to its customers. This may include Container Freight Station, Inland Container Depots, Warehouses and Transportation services. This will evolve into a door-to-door comprehensive service of complete logistics chain. The objective would be to guarantee delivery of goods to customers’ premises or from the customers’ premises to the Port. Chennai Port may take up just part of the entire logistics and can have tie ups with specialist companies for the rest of the components of the logistics chain. This tie-up can be either with transport service providers, CONCOR, shipping agents, customer service providers, etc.</p> | |
| <p>Key Benefits expected from the Sub Project:</p> | |
| <ol style="list-style-type: none"> 1. Improve pick, pack and ship processes 2. Improve due-date reliability 3. Refine/align logistics and distribution strategies 4. Increase focus on higher-value products and partners 5. Consolidate/outsource logistics and distribution functions 6. Increase use of lower-cost logistics and distribution channels 7. Improve transport and delivery processes/algorithms 8. Improve incentives around inventory/distribution efficiency 9. Improve terms with service providers (transport, warehousing, etc.) 10. Improve integration of business processes across partner networks 11. Broaden product and service offerings 12. Acquire new product and service offerings 13. Offer value-adding product and service bundles 14. Target new segments within current geographies | |
| <p>Costs of Implementation</p> | |
| <p>The Port’s new market research cell and the traffic department can take up this project internally. Should the market research cell not be in place, ChPT will need to engage a logistics consultant with comprehensive experience in setting up logistics service organizations to advice them in this endeavour. The likely costs of such consultant engagement could be estimated at Rs. 3.0 million</p> | |
| <p>Sub Project Dependencies:</p> | |
| <p>None</p> | |
| <p>Importance</p> | |
| <p><input type="checkbox"/> Essential</p> | <p><input checked="" type="checkbox"/> Desirable</p> |

| Sub Project Phasing | | | | | | |
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| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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| Sub Project Name: | Study of pricing / tariffs of international ports | | |
| Sub Project Owner: | Accounts/Traffic | Sub Project Duration: | 3 months |
| General Description: | | | |
| <p>Given the overall strategy to become a hub port for containers on the east coast, it is important to carry out a study of the pricing tariffs of international hub ports, in particular those which are competitive hub ports in the region. Important stakeholder and customer perspective is that Chennai tariffs are high, compared to international hub ports – and this needs to be addressed appropriately by carrying out a comprehensive study.</p> | | | |
| Sub Project Description: | | | |
| <p>This project would require an elaborate profiling of tariff structures of important ports in Asia like Colombo, Singapore, Hong Kong etc. and also of other important ports in the world. The study would also identify how these ports charge tariffs and how these tariffs have been structured.</p> <p>Along with the above, a commodity profile will also have to be built up for each of the Ports above.</p> | | | |
| Key Benefits expected from the Sub Project: | | | |
| <p>This study will help Chennai Port benchmark its tariff and tariff structure those of the best ports in the world. The benchmarking analysis coupled with a commodity comparison will enable the Port to identify areas where tariffs can be rationalized and/or simplified.</p> | | | |
| Costs of Implementation | | | |
| <p>ChPT will need the assistance of an international consultant with experience in port tariffs to carry out a study and submit a report. It is estimated that this would cost Rs. 7.5 Million</p> | | | |
| Sub Project Dependencies: | | | |
| None | | | |
| Importance | | | |
| <input checked="" type="checkbox"/> Essential | | <input type="checkbox"/> Desirable | |

| Sub Project Phasing | | | | | | |
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| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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| Sub Project Name: | | Simplification and Realignment of current tariff structure | |
| Sub Project Owner: | Accounts/Traffic | Sub Project Duration: | 6 months |
| General Description: | | | |
| <p>Given the overall strategy to attract more customers for containers, possibly be special tariff schemes, discounts etc. it is imperative for ChPT to offer its tariffs in line with global competitive ports. This will require simplification and re-alignment of the current Tariff structure. Based on the recommendations from the study carried out in the previous project, ChPT will need to rationalize its tariffs accordingly.</p> | | | |
| Sub Project Description: | | | |
| <p>Simplification and realignment of tariffs would mean the following:</p> <ul style="list-style-type: none"> ▪ Reduction of tariffs ▪ Exploring avenues to reduce and combine few charges ▪ Change in the basis of charging tariffs in certain areas ▪ Exploring avenues for charging differential tariffs for certain commodities and customers <p>Steps needed to implement this project would be as follows:</p> <ul style="list-style-type: none"> ▪ Taking inputs from studies of tariffs/tariff structures of international ports ▪ Examining tariff levels or competing ports in India and around India ▪ Discussions with customers on their experiences and expectations ▪ Identifying avenues for reduction, simplification and realignment ▪ Designing the new tariff structure ▪ Getting the new Tariff approved from TAMP. | | | |
| Key Benefits expected from the Sub Project: | | | |
| <p>Key benefits expected are:</p> <ol style="list-style-type: none"> 1. Increase emphasis on differentiated products and services 2. Improve focus on price-insensitive customer segments 3. Obtain exclusive agreements with customers 4. Improve use of supply- and capacity-driven promotions 5. Rationalize and/or refocus service portfolios 6. Increase emphasis on differentiated pricing across customer segments (based on customer value, risk, etc.) 7. Increase focus on pricing effectiveness / price optimization 8. Increase use of promotions 9. Improve understanding of customer price sensitivity 10. Improve tailoring of offerings to customer needs | | | |

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| Costs of implementation | | | | | | |
| This is an internal activity that needs to be carried out by ChPT based on the study carried out in the previous project. No external assistance is envisaged. | | | | | | |
| Sub Project Dependencies: | | | | | | |
| Study of pricing/tariffs of international ports | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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|--|--|------------------------------|----------|
| Sub Project Name: | Study for identifying investments / management of operations in other Minor ports | | |
| Sub Project Owner: | Accounts/Traffic | Sub Project Duration: | 3 months |
| General Description: | | | |
| A core component of the business strategy is to aggressively identify opportunities and take controlling stakes in other ports to either support the cargo it has decided to attract or to service at a different location for the cargo it is constrained to forego. In order to do implement this strategy, ChPt will have to take up a study for identifying opportunities in Tamil Nadu for investments or management of operations. | | | |
| Sub Project Description: | | | |
| In making investments in other ports ChPT should identify ports that : | | | |
| <ul style="list-style-type: none"> ▪ Are geographically well positioned ▪ Are endowed with good drafts and possibly good connectivity ▪ Can actually help displace the dirty cargo from CPT and absorb the same, thereby helping ChPT to be able to retain its present customers. ▪ Can bring otherwise excluded hinterland within CPT's reach and possibly from the clutches of competition. ▪ Are in locations that enable consolidate and coastally trans-ship such cargo to and from ChPT, thereby cutting down supply chain costs and resulting into capture of hitherto inaccessible hinterlands especially in the north. | | | |
| ChPT would also need to develop a strong relationship with Tamilnadu Maritime Board and evince interest in actively promoting minor ports by investing in them. The study will have to delve on each of the above parameters and recommend other ports that | | | |

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| can be picked up for investments / management of operations | | | | | | |
| Key Benefits expected from the Sub Project: | | | | | | |
| Key benefits expected are: | | | | | | |
| <ol style="list-style-type: none"> 1. retain customers, otherwise being turned away due to space and infrastructure constraints 2. Increase emphasis on differentiated products and services 3. Obtain exclusive agreements with customers 4. Improve tailoring of offerings to customer needs 5. Remove the constraint of non availability of space being a city port 6. make investments in the port business instead of other financial investments | | | | | | |
| Costs of implementation | | | | | | |
| Should a market research cell not be in place, ChPT could avail of external assistance to carry out this study. It is estimated that the cost of such an external study would cost approximately Rs. 2.5 million. | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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Systems and IT Projects

This category includes the following projects:

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| Project Name: | Restructuring of the IT Department Organization | | | | | |
| Project Owner: | EDP | Project Duration: | Three months | | | |
| General Description | | | | | | |
| A key element in the Systems and IT Strategy is the revamping of the IT Organization in ChPT. The SWOT analysis identified some key weaknesses in this component such as Inadequate IT training, ageing staff in the same IT department age group, stagnation and need for inducting younger people. | | | | | | |
| Project Description: | | | | | | |

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| <p>Organizational Redesign of the IT department will require the following activities:</p> <ul style="list-style-type: none"> • Identifying the Key issues facing the EDP Department • Determining the current status of the Org. Structure i.e. processes, communications, obstacles etc. • Developing the IT Skill matrix and mapping them to the current capabilities in the EDP department. • Provide for rigorous and continuous training for all existing EDP department employees in the latest technologies and tools • Recruit fresh talented professionals / outsource parts of the IT function depending upon availability of resources. <p>The IT strategy recommends a higher focus to this function by shifting the IT Department directly under the Chairman. Identify steps and processes that are required for implementing the same. Define the authority and responsibility of the new IT Head and his relationship with other Department heads / senior management of ChPT.</p> | | | | | | |
| <p>Key Benefits expected from the Project:</p> <ul style="list-style-type: none"> • Continued and sustained focus on IT in the organization • Increased capabilities to develop, maintain IT applications and IT infrastructure on a 24 x 7 basis, such that real time access of customer interface applications is available to all customers and other stakeholders. • Ensuring capabilities to manage IT related security and disasters within the organization • Improved effectiveness of organizational structures and reporting relationships • Improved assignment of accountability and authority | | | | | | |
| <p>Costs for Implementation</p> | | | | | | |
| <p>ChPT will need the services of an external consultant for the IT Organization restructuring. This is estimated to cost Rs. 2.0 million approximately</p> | | | | | | |
| <p>Project Dependencies:</p> | | | | | | |
| <p>None</p> | | | | | | |
| <p>Importance</p> | | | | | | |
| <p><input type="checkbox"/> Essential</p> | | | | <p><input checked="" type="checkbox"/> Desirable</p> | | |
| <p>Project Phasing</p> | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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B) Process Re engineering and Improvement Project : This would include the following sub projects

1. Business Process Re-engineering
2. Full Scale ERP Implementation (current implementation and its review)

These projects would help in improving efficiency and competitiveness of ChPT and help in cost reduction, provision of quality services in terms of time and efficiency of cargo handling. ERP implementation will help in integrate the financial and customer information, reduce inventory and customize HR information.

| Sub Project Name: | Business Process Re-engineering | | |
|--|---------------------------------|-----------------------|------------|
| Sub Project Owner: | Corporate Planning Department | Sub Project Duration: | Six Months |
| General Description | | | |
| <p>The overriding objective in a BPR is to achieve a step change in performance. BPR is a fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance such as cost, quality, service and speed.</p> <p>Performance improvement relates to internal efficiency and competitive advantage. Internal efficiency is achieved by examining how we can run the business with fewer hand-offs, barriers, formal communications and less waiting time. BPR will help ascertain bottlenecks in the business processes as well as avenues for modifying as well as introducing new processes to streamline port functions. The key objective of the review should be to weed out inefficiency in the processes.</p> | | | |
| Sub Project Description: | | | |
| <p>Activities involved in a BPR Exercise are:</p> <ol style="list-style-type: none"> 1. Documenting Current Processes 2. Establishing Key Performance Measures 3. Developing and Testing Future Processes 4. Prioritizing and Committing to Future Processes 5. Planning Implementation 6. Implementing Future Processes | | | |
| Key Benefits expected from the Sub Project: | | | |
| <p>Note: Implementation of Future Processes involves ERP and similar other IT systems quite often. These projects have been explained subsequently. Consequently, benefits expected under this Project are applicable for some of the projects listed subsequently too.</p> | | | |

1. Improve invoicing / billing processes
2. Improve selection, acquisition and contracting processes
3. Improve processes for managing system operations, maintenance and changes
4. Improve technology and data risk management processes
5. Improve establishment of and adherence to service-level targets
6. Improve real estate design and development processes
7. Improve operational processes (administration, security, and maintenance)
8. Improve recruitment and orientation processes
9. Improve salary and benefits administration processes / increase employee self-service
10. Improve payroll processes
11. Improve performance assessment processes
12. Provide staff with better HR information and tools
13. Implement/improve port-wide processes and tools for assessing staff performance
14. Consolidate and / or align financial planning, management and reporting functions
15. Strengthen corporate governance structures (composition, selection, roles, etc.)
16. Improve / implement internal control frameworks and policies
17. Improve understanding of regulatory requirements and management of regulatory compliance
18. Improve identification and assessment of risk (strategic, operational, investment, financial, compliance, data/privacy, etc.)
19. Improve breadth, depth, quality and timeliness of managerial information
20. Improve assignment of accountability and authority
21. Improve flexibility of business processes
22. Improve communication and knowledge transfer across organizational boundaries

Costs of Implementation

Business Process re-engineering will require ChPT to take the external assistance from consultants with BPR experience. This is estimated to cost approximately Rs. 5.0 million.

Sub Project Dependencies:

None

Importance

Essential

Desirable

Sub Project Phasing

| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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| Sub Project Name: | Full Scale ERP Implementation (current implementation and its review) |
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| Sub Project Owner: | EDP | Sub Project Duration: | Two Years |
| General Description | | | |
| <p>Enterprise Resource Planning systems (ERPs) integrate all data and processes of an organization into a single unified system. A typical ERP system will use multiple components of computer software and hardware to achieve the integration. A key ingredient of most ERP systems is the use of a single, unified database to store data for the various system modules. In a full scale ERP system, the following modules are generally covered:</p> <ul style="list-style-type: none"> - Projects - Supply Chain Management - Financials - Human Resources - Customer Relationship Management - Maintenance <p>In order to introduce Best-in-Class processes, an ERP package implementation is required so that IT driven processes are introduced at the Port. This is especially true since the Port's Vision is to be 'Futuristic' port. With the future significantly determined to be more automated than before</p> | | | |
| Sub Project Description: | | | |
| <p>The process of ERP implementation is given below:</p> <ul style="list-style-type: none"> - Business Process Mapping and Re-engineering - Deciding functional specifications - Designing/Procuring the system - Implementation and Training <p>Note: We are aware that a computerized system on the lines of an ERP system is currently being designed and is being implemented by Chennai Port. The same will need to be reviewed to check its adequacy for the Port's requirements, both current and future. Since the current implementation is of a customized application, its capabilities to meet future requirements may require additional software development. We also understand that the current implementation has been significantly delayed and has already incurred time and cost over runs. This needs to be kept in mind while reviewing the status of the project and the action plan to be undertaken based on this project.</p> | | | |
| Key Benefits expected from the Sub Project: | | | |
| <p>Five major reasons why Organizations undertake ERP.</p> <ol style="list-style-type: none"> 1. Integrate financial information— As the Management tries to understand the company's overall performance, they may find many different versions of the truth. Finance has its own set of revenue numbers, traffic has another version, and the different departments may each have their own version of how much they contributed to revenue. ERP creates a single version of the truth that cannot be questioned because everyone is using the same system. 2. Integrate customer information—ERP systems can become the place where the | | | |

berth is booked by a shipping agent till the goods are dispatched from the Port. By having this information in one software system, rather than scattered among many different systems that can't communicate with one another, the Port can keep track of services provided more easily.

3. **Reduce inventory**—ERP helps some of the core processes flow more smoothly and enable better tracking on inventory. That can lead to reduced inventories of the materials used, and it can help users better plan inventory replenishments and reducing inventories at the warehouses.
4. **Standardize HR information**— especially in organizations with multiple departments and huge staff, HR may not have a unified, simple method for tracking employees' time and communicating with them about benefits and services. ERP can provide comprehensive HR database.

General benefits listed under the BPR project are also applicable here.

Costs of Implementation.

As indicated above, ChPT is already implementing a customized application for all modules. Hence these costs are not calculated here. However, ChPT will require a comprehensive review to be done on the implementation (post implementation audit). In terms of its status as well as benefits obtained by ChPT on the same. Such a review can also cover coverage of in-built internal controls, access controls, security of the systems and data. Such a review is estimated to cost approximately Rs. 3.5 million.

Sub Project Dependencies:

Business Process Re-engineering

The current implementation of the computerized systems has been going on for almost 2-3 years which is very slow compared to the requirements of the Port. It is important that the contract for this system be completed at the earliest and thereafter a comprehensive review be done to check whether the computerized system has met with the said objectives. The review can establish whether the Port needs to install additional modules / functionality from other ERP packages.

Importance

Essential

Desirable

Sub Project Phasing

| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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C) Activity Based Costing

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|---|-------------------------------|------------------------------|------------|
| Sub Project Name: | Activity Based Costing | | |
| Sub Project Owner: | EDP / Accounts | Sub Project Duration: | Six months |
| General Description | | | |
| <p>Chennai Port is a service organization and it provides services to its customers by rendering a basket of services under various heads. A customer avails of different services based on the commodity being shipped, material handling equipments required and the type of vessel being used to transport the same. Whereas ChPT's financial and management accounting systems are able to account for costs at the natural objective level of cost classification, these do not support a subjective costs classification by identifying the costs for the actual service rendered. This creates a handicap in terms of deciding the tariff levels for various services.</p> <p>While cost rationalization is one aspect of pricing, identification of proper cost of services is another. It would be important to look at the current costing mechanisms and to assess if there is a need for introduction of more sophisticated costing mechanisms to arrive at the correct cost of providing services. Better costing mechanisms would help arrive at the correct costs for each of the services and would definitely aid proper decision making.</p> <p>Activity-based costing (ABC) is a method of allocating costs to products and services. It is generally used as a tool for planning and control. ABC has been universally recognised as an alternative approach to solve the problems of traditional cost management systems. Traditional costing systems are often unable to determine accurately the actual costs of rendered services. Consequently the management was making decisions based on inaccurate data especially where there are multiple services being offered. One of the key elements of the strategy is to offer competitive tariffs in key business segments and activity based costing will help a great deal in determining the competitive tariffs.</p> | | | |
| Sub Project Description: | | | |
| <p>Instead of using broad arbitrary percentages to allocate costs, ABC seeks to identify cause and effect relationships to objectively assign costs. Once costs of the activities have been identified, the cost of each activity is attributed to each service to the extent that the service uses the activity. In this way ABC often identifies areas of high overhead costs per unit and so directs attention to finding ways to reduce the costs or to charge more for costly services.</p> <p>Steps required to implement an ABC system are:</p> <ul style="list-style-type: none"> ▪ Identification of Activities ▪ Determining Cost for each activity ▪ Determining cost drivers ▪ Collect activity data | | | |

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|---|---------|---------|---------|---|---------|---------|
| <ul style="list-style-type: none"> Calculating cost of providing each service | | | | | | |
| Key Benefits expected from the Sub Project: | | | | | | |
| <ul style="list-style-type: none"> Improved cost accounting and allocation of shared/overhead costs Improved projection of segment results and margins Better decision making in the area of tariff fixing | | | | | | |
| Costs of Implementation | | | | | | |
| <p>The introduction of activity based costing will require ChPT to engage management consultants with activity based costing experience. It is expected that the total cost of ABC implementation for a port of the size of ChPT would be approximately Rs. 5.0 million (Rs. 2.0 million for the concept and design of ABC for ChPT and Rs. 3.0 million for implementation and support for a period of 3 to 6 months.</p> | | | | | | |
| Sub Project Dependencies: | | | | | | |
| Business Process Re-engineering | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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D) Security Enhancement Projects

This includes the following sub- Projects

1. Port Security System
2. IT Security System

The projects would ensure higher security for ChPT's and thereby increase stakeholders confidence in it. This is very necessary as ChPT is a public utility and is accountable to the general Public for appropriate safeguard and utilization of its assets.

There has also been an increasing concern over security of the IT system. The project implementation would lead to higher security as regards to the IT system of the port and provide the necessary confidence to all third parties dealing with the port on day to day operations to interact electronically on the Port IT systems and the Internet.

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|--|-----------------------------|------------------------------|---------|
| Sub Project Name: | Port Security System | | |
| Sub Project Owner: | Security | Sub Project Duration: | 2 years |
| General description | | | |
| <p>Given the security perception in the country and given the strategic nature of ports assets, it is imperative that stringent security measures are in place for avoid any security mishaps. Though providing security is not a specific strategic initiative, the absence of security systems can cause havoc to the port's business if any unforeseen event occurs. In light of the same, it is necessary that appropriate security infrastructure upgrades are carried out in the context of ChPT being a public utility.</p> | | | |
| Sub Project Description: | | | |
| <p>While the Port is ISPS Compliant, we are informed that security from sea-side attacks (if any) can be improved. A security assessment needs to be carried out for identifying the credibility of this perception. If the assessment is valid, then various measures like the following can be put in place:</p> <ul style="list-style-type: none"> - Networked CCTV systems - Container and vehicle security/control - Perimeter control and intrusion detection - Facility controls (quay, office, gate, and yard) - Tracking systems (RFID, WiFi and DGPS) - Data exchange and mining - Cargo and equipment scanning - Radioactivity detection devices - Narrow and broadband (Wi-Fi) wireless networks - Advanced biometric recognition and validation systems | | | |
| Key Benefits expected from the Sub Project: | | | |
| <p>The main benefit will be increased security measures reducing security concerns and therefore increasing stakeholder confidence in the Port.</p> | | | |
| Costs of Implementation | | | |
| <p>ChPT will need to design and implement a logical security framework to ensure that it is well protected. ChPT will need to hire security consultants who can provide such a framework and help in implementing the same. It is estimated that ChPT will incur a cost of Rs. 5.0 million to get a security assessment and framework designed. The conclusions of that study shall identify the investments required in hard security infrastructure which is difficult to estimate at this point of time.</p> | | | |
| Sub Project Dependencies: | | | |
| None | | | |

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| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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|---|---------------------------|------------------------------|------------|
| Sub Project Name: | IT Security System | | |
| Sub Project Owner: | EDP | Sub Project Duration: | Six months |
| General description | | | |
| <p>With greater reliance on IT and ERP systems and the introduction of best-in class IT processes, there would be increased concerns on the IT security and data safety fronts. In the future, increased use of Information Technology tools is a given paradigm and this will also correspondingly increase chances of IT security attacks and loss of valuable MIS information and IT Infrastructure, not to mention loss of valuable business and credibility of the port.</p> <p>ChPT has been implementing an ERP solution for some time now. Once these are implemented, significant operational and MIS data of the Port and its customers will be residing on ChPT servers. ChPT will also be providing EDI and web based connectivity to its customers for accessing and utilizing ChPT services. All of these will have to be well protected from IT attacks and disasters. Being a public utility, ChPT cannot afford to loose valuable business because of systems downtime in the case of manmade / natural disasters. All of this call for a robust IT policy and design and implementation of a disaster management plan</p> | | | |
| Sub Project Description: | | | |
| <p>Various measures like the following need to be put in place:</p> <ul style="list-style-type: none"> - Formulation of an IT Security Policy - Formulation of a Disaster Management and Business Continuity Plan - Implementation of the IT Security Policy - Identifying and developing access controls | | | |
| Key Benefits expected from the Sub Project: | | | |
| <p>The main benefit will be increased security measures reducing security concerns and therefore increasing stakeholder confidence in the Port. Given the increased use of IT in the Port, the establishment of an IT security Policy will address key concerns amongst the customers in using the Port systems.</p> | | | |
| Costs of Implementation | | | |

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| <p>ChPT will need to design and implement an IT Security Policy and Disaster Management Plan. This would require assistance from IT Security consultants to assess the current level of security, the risk profile and the development of the above documents. It is estimated that ChPT will incur a cost of Rs. 5.0 million to get an IT security policy and disaster management plan designed. The conclusions of that study shall identify the investments required in IT security hardware which is difficult to estimate at this point of time.</p> | | | | | | |
| <p>Sub Project Dependencies:</p> | | | | | | |
| <p>None</p> | | | | | | |
| <p>Importance</p> | | | | | | |
| <p><input checked="" type="checkbox"/> Essential</p> | | | | <p><input type="checkbox"/> Desirable</p> | | |
| <p>Sub Project Phasing</p> | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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HR Projects

This category includes the following projects :

A) Organization Re design and Right Sizing

This includes the following sub projects :

1. Organization redesign
2. Restructuring and re-introduction of VRS
3. Centralized HR department

Redesign and Rightsizing of the organization would help ChPT to adapt to the changing environment and help in the implementation of prudent organization structure policies. Surplus labour has been a major issue with organizations like the Chennai Port, and it has been acknowledged that Chennai Port will have a major problem especially when iron ore cargo is stopped and converted to BOT operated container terminals. This therefore needs to be addressed at the earliest. Introducing VRS would help in addressing this problem to some extent with innovative designs of the retirement schemes the need of the hour. .Already the cost of surplus labour is impacting the profitability of the organization.

A centralised HR department will help in decisively implementing the initiatives regarding HR management system, review of HR ,policies, compensation, performance appraisal, etc

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| Sub Project Name: | Organization redesign | | |
| Sub Project Owner: | Departments | Sub Project Duration: | Six months |
| General Description | | | |
| ChPT is organized as a public sector – cum Government organization. Given the need to be competitive in the marketplace, CHPT will need to re-align its organization structure that can adapt itself to the changing requirements and provide for appropriate flexibility in decision making as well as operations. In order to enable implementation of best in practice IT and business processes, the organization structure and hierarchy will require a re-look. | | | |
| Sub Project Description: | | | |
| Organizational Redesign is structuring an organization, division or department to optimize how it provides services to its clients and customers. Following are the main steps in carrying out an Organisation Redesign: | | | |
| <ul style="list-style-type: none"> ▪ Identifying the Key issues facing the Organisation ▪ Determining the current status of the Org. Structure i.e. processes, communications, obstacles etc. ▪ Determining the characteristics of the new organisation i.e. facilitating interactions, rewards, flexibility, open source, hybrid structures etc. ▪ Designing the new structure and implementing through rigorous program management, ensuring stakeholder support, matching of capabilities and culture and considering infrastructure availability. | | | |

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| Key Benefits expected from the Sub Project: | | | | | | |
| <ol style="list-style-type: none"> 1. Continued and sustained focus on development initiatives irrespective of stakeholder attitudes 2. Improved ownership of business processes 3. Improved effectiveness of organizational structures 4. Improved assignment of accountability and authority 5. Improved agility and flexibility of organizational structures 6. Improved flexibility of business processes 7. Improved communication and knowledge transfer across organizational boundaries | | | | | | |
| Costs for Implementation | | | | | | |
| ChPT will need the services of an external consultant for the Organization restructuring. This is estimated to cost Rs. 4.0 million approximately | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input type="checkbox"/> Essential | | | | <input checked="" type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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|---|---|------------------------------|----------|
| Sub Project Name: | Restructuring and re-introduction of VRS | | |
| Sub Project Owner: | HR Department | Sub Project Duration: | 3 months |
| General Description | | | |
| <p>VRS (Voluntary retirement Scheme) is a good initiative to address the problem of surplus labour at the Port. It creates a win-win situation for both the employer and the employee. The employee gets the financial benefits associated with the scheme and the employer can reduce its work force and thus reduce its administrative and overhead costs.</p> <p>A VRS scheme was introduced in ChPT in the past but it was not effective and infact it was counter productive as young and skilled labor (who could easily get employment elsewhere) was lost through this initiative. There still remains a need to right size the organisation to reduce administrative overheads and consequently enable overall cost reduction.</p> | | | |
| Sub Project Description: | | | |
| The following plan of action should be followed : | | | |

- 1) VRS should be aimed at encouraging ageing employees to opt for early retirement.
- 2) The Scheme should preferably more lucrative than the present scheme in order to ensure a most fair and just compensation for early retirement.
- 3) Benefits like free medical facilities may be continued for employees opting for VRS.
- 4) It should, however, be ensure that young and talented people are retained and they are not given a window to exit under the Scheme

Key Benefits expected from the Sub Project:

- 1) It will help the organization to reduce surplus labour
- 2) The cost associated with the excess labor will reduce drastically.
- 3) More benefits can be passed over to talented employees and thus it will be easy to retain them.
- 4) The efficiency of the port operations may improve

Costs of Implementation

This exercise is best done internally by ChPT senior management with the assistance of an HR professional within the port or from outside. Port officials are best suited to understand the needs of the employees and can appreciate specific issues that these employees have vis-à-vis the Port. Hence no specific costs are estimated for this purpose.

Sub Project Dependencies:

Organization Re-design

Importance

Essential

Desirable

Sub Project Phasing

| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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|--|----------------------------------|------------------------------|----------|
| Sub Project Name: | Centralized HR department | | |
| Sub Project Owner: | Secretary's Department | Sub Project Duration: | 3 months |
| General Description | | | |
| <p>It has been analyzed that every department has its own HR department, which take care of the needs of the employee of that particular department. So, every HR department has its own procedures and establishment staff to maintain the requisite HR records. The Secretary's department handles 'confidential reports (CRs)' of Heads of Departments. There is a greater need that the HR department should be centralized because the policies and procedures governing the HR</p> | | | |

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| <p>function should be consistent within all the departments.</p> <p>This will also help to reduce the HR workforce associated with the departmental HR. it has been observed that the overhead expenses for all the segments are stable over the years but the administrative expenses have been rising steadily.</p> <p>There are many ways an HR function can be structured to deliver efficient services. This is often referred to as its 'HR delivery model'. Centralised HR department is one of such delivery models. In this model, The majority of HR support is provided by a central HR team, only low-level administrative activity takes place within individual departments.</p> | | | | | | | | | | | | | |
| Sub Project Description: | | | | | | | | | | | | | |
| <p>Centralised HR department will involve creation of separate HR department, which will undertake all the new initiatives like HR management system, review of policies and salary, performance appraisal, etc. in addition to carrying out all the existing functions.</p> | | | | | | | | | | | | | |
| Key Benefits expected from the Sub Project: | | | | | | | | | | | | | |
| <p>The centralised HR department is expected to result in following benefits:</p> <ol style="list-style-type: none"> 1. Cost reduction and reduction in HR support staff 2. Improvement of functional efficiency and reduction of administrative procedures 3. Better resource and succession planning 4. Centralised and uniform implementation of HR policies and initiatives 5. Increased focus on human resource development and people planning 6. Creating of a specialised department to look into employee issues and support 7. Increase in job satisfaction and confidence among the employees 8. Ability to attract and retain talented people | | | | | | | | | | | | | |
| Costs of Implementation | | | | | | | | | | | | | |
| <p>This will be an internal activity to be performed by ChPT by pooling establishment staff from respective departments and centralizing them under one department. Except for hiring of HR professionals as permanent employees in the senior management team, no other costs are expected to be incurred.</p> | | | | | | | | | | | | | |
| Sub Project Dependencies: | | | | | | | | | | | | | |
| Organizational Re-design | | | | | | | | | | | | | |
| Importance | | | | | | | | | | | | | |
| <input type="checkbox"/> Essential | | | | <input checked="" type="checkbox"/> Desirable | | | | | | | | | |
| Sub Project Phasing | | | | | | | | | | | | | |
| 2007-08 | | 2008-09 | | 2009-10 | | 2010-11 | | 2011-12 | | 2012-13 | | 2013-14 | |
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B) Employee Upliftment Project:

This includes the following subprojects:

1. Training Employees
2. Carry out a Needs Analysis of current and potential future employees
3. Review and improvement of Promotion and Recruitment policies
4. Work Conditions Infrastructure improvement
5. Remuneration review and upgrade

Training is a must in any organization development .It would increase employee efficiency and ultimately lead to improvement in quality and reduction of cost. Carrying out a need analysis of the current and potential employees would help in determining the HR profile.

Improvement in promotion and recruitment policy will help in retaining, attracting and motivating excellent employees.

Improvement in work infrastructure would boost employee morale and increase their efficiency. Good efficient employees would be attracted and can be retained. Improvement in pay structure would help to retain employees and provide an initiative to give better performance.

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|--|---------------------------|------------------------------|---------|
| Sub Project Name: | Training Employees | | |
| Sub Project Owner: | Departments | Sub Project Duration: | 3 years |
| General Description | | | |
| <p>Continuous training is the keystone of the HR Strategy. Significant management skills will need to be imparted to senior and middle management to carry out strategic planning, appropriate decision making and provide leadership to the employees</p> <p>While lot of BPR initiatives would require installation of IT based applications, there are a few areas where improvement is possible even without such efforts. The only thing that would be required would be providing Training to the employees.</p> | | | |
| Sub Project Description: | | | |
| <p>Some of the areas where training will be an ongoing process are:</p> <ul style="list-style-type: none"> - Financial Management - Budgeting - Strategic Planning - Leadership development | | | |
| Key Benefits expected from the Sub Project: | | | |
| Providing of training to employees in relevant areas will result in following | | | |

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| benefits: | | | | | | |
| <ol style="list-style-type: none"> 1. Increase emphasis on generating revenue from company assets 2. Improve investment returns on cash/treasury funds 3. Improve understanding of business unit performance and market values 4. Improve operational processes (administration, security, and maintenance) 5. Strengthen enterprise-wide financial reporting standards 6. Increase focus on business insight and forward-looking information 7. Improve cash/treasury management practices 8. Improve financial risk management processes 9. Improve budgeting and forecasting capabilities 10. Improve skills of financial management staff 11. Improve strategy development capabilities at corporate and business-unit levels 12. Improve leadership and management skills of executives | | | | | | |
| Costs of Implementation. | | | | | | |
| There are 274 class 1 officers and 143 Class II officers. An estimate of Rs. 0.1 million has been taken per employee for continuous training expenses over a period of three years. Hence it is expected that the total cost of training would be approximately Rs. 4 Crores | | | | | | |
| Sub Project Dependencies: | | | | | | |
| Business Process Re-engineering | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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|---|---|------------------------------|----------|
| Sub Project Name: | Carry out a Needs Analysis of current and potential future employees | | |
| Sub Project Owner: | Secretary's Department | Sub Project Duration: | 3 months |
| General Description | | | |
| Considering ChPT Hr related issues with reference to an ageing workforce, poor employee morale, and high turnover in certain skilled categories of employees, it is important for ChPT to understand what its employees need and what is required to be done to retain good performers and attract good talent. For this a conscious exercise will need to be done by ChPT to talk to current employees, ascertain requirements and set up an HR function that can cater to these | | | |

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| <p>requirements. There is an urgent need to build the HR profile of the port in terms of business processes, job description & specification, candidate profile, time and efficiency estimates and employee requirement planning.</p> |
| <p>Sub Project Description:</p> <p>The HR profile can be built by carrying out a HR needs assessment based on assessment of following issues and parameters:</p> <ol style="list-style-type: none"> 1. How efficient are Chennai Port’s review mechanisms for judging individual and team performance, giving feedback and resolving issues? 2. Does every employee demonstrate commitment to specific objectives, role descriptions and performance criteria tied in to your organization strategies, goals and customer service targets? 3. Has individual and team capability and performance been assessed in detail against existing and future business needs and identified training implemented? 4. Is staff given regular feedback and coaching for continuous improvement? 5. Does your remuneration costs model motivate your staff to work most effectively and achieve their objectives? 6. Are you investing wisely in the right benefits for your people? 7. Are statements regarding terms of employment clearly define pay, benefits, hours, holidays, job content, codes of conduct, procedures, rules, confidentiality, intellectual property protection and other conditions? Do these statements reflect your current needs? 8. Do various departments conduct team meetings, staff briefings, social activities, open-doors, coaching and feedback to help in maintaining staff motivation, competence, commitment and high standards of customer service? 9. Do all the employees and HR department comply with codes of conduct and health and safety policies? 10. Do you have good intentions but find that due to business pressures HR takes lower priority – until ‘people problems’ steal your time and cost you money? |
| <p>Key Benefits expected from the Sub Project:</p> <p>The HR needs assessment is expected to result into following benefits:</p> <ol style="list-style-type: none"> 1. Improvement of recruitment and orientation processes 2. Consolidation or outsourcing of recruitment functions 3. Integration of HR performance management methods and tools 4. Integration of performance assessment processes into HR policies 5. Identification of learning and development requirements 6. Improvement of HR performance management methods and tools 7. Improve salary and benefits administration processes/increase employee self-service |
| <p>Costs of Implementation</p> <p>This exercise is best done internally by ChPT senior management with the assistance of an HR professional within the port or from outside. Port officials are best suited to understand the needs of the employees and can appreciate specific issues that these employees have vis-à-vis the Port. Hence no specific costs are estimated for this purpose.</p> |
| <p>Sub Project Dependencies:</p> |

| | | | | | | |
|--|---------|---------|---------|---|---------|---------|
| Organization Re-design | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

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|---|--|---|--|------------------------------|--|
| Sub Project Name: | | Review and improvement of Promotion and Recruitment policies | | | |
| Sub Project Owner: | | Secretary's Department | | Sub Project Duration: | |
| | | | | 3 months | |
| General Description: | | | | | |
| <p>Chennai port being a public sector unit has to follow notifications issued by central government even for operational matters like recruitment, backward class reservations, seniority based promotion, appointment, etc. Keeping in mind the requirements of a competitive future, ChPT will have to make drastic changes to its HR Policies, rules and regulations in order to retain, motivate and attract excellent employees. ChPT will need to present to its key stakeholder i.e. the Government about the need for changes in these HR related matters so that operational issues are addressed at the Port level itself.</p> | | | | | |
| Sub Project Description: | | | | | |
| <p>In accordance with these notifications, ChPT employees are governed by following regulations:</p> <ol style="list-style-type: none"> 1. MPT Employees" (Appointment, Promotion, etc.) Regulations, 1977. 2. MPT Employees' (Conduct) Regulations, 1987. 3. MPT Employees' (Classification, Control, and Appeal) Regulations, 1988. 4. MPT (Pay and Allowances, etc.) Regulations, 2001. 5. and other about 15 regulations <p>Clearly Chennai port needs to revise these regulations to give effect to proposed projects like Business Process Reengineering, Human Resource Management System, and Performance Management System and to be a customer-friendly and futuristic port.</p> | | | | | |
| Key Benefits expected from the Sub Project: | | | | | |
| <p>The review and improvement of Promotion and Recruitment policies is expected to provide following benefits to the port:</p> <ol style="list-style-type: none"> 1. Improvement of recruitment and orientation processes 2. Increased focus on employee retention 3. Integration and policy guidelines for using HR performance management methods and tools 4. Integration of performance assessment processes into HR policies | | | | | |

| | | | | | | |
|--|---------|---------|---------|--|---------|---------|
| Costs of Implementation | | | | | | |
| ChPT will carry out this exercise internally and it is envisaged that no external assistance will be required to carry out this project. | | | | | | |
| Sub Project Dependencies: | | | | | | |
| Organization re-design | | | | | | |
| Importance | | | | | | |
| <input type="checkbox"/> Essential | | | | <input checked="" type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

| | | | |
|--|-------------------------------|---|---------|
| Sub Project Name: | | Work Conditions Infrastructure improvement | |
| Sub Project Owner: | Engineering Department | Sub Project Duration: | 2 years |
| General Description: | | | |
| <p>In addition to the improvement in salary and employment policies, working environment around the employee's work area also plays a major role in efficiency improvement and comfort building. All the employees look for safe and better environment conditions in addition to pay and social benefits. Good working conditions boosts the moral of the employees and improve their efficiency and leading to higher productivity.</p> <p>Working conditions can be improved for taking active and perceptible initiatives for two types of employee categories, i.e. executive and labour.</p> | | | |
| Sub Project Description: | | | |
| <p>For labour, better working conditions will mean safe, clean and non-hazardous working environment. This will require taking of following some of the initiatives:</p> <ol style="list-style-type: none"> 1. Providing for easy availability of basic needs like food, water, bathrooms, toilets, etc. 2. Dust-free and healthy working environment 3. Easy accessibility to disabled staff 4. Availability of pre-medical care and fire safety 5. Follow best practices and ILO recommendations for working conditions and improvement of safe & healthy environment <p>For executive staff, this will require providing better infrastructure and pleasant environment. This will require taking of following some of the initiatives:</p> <ol style="list-style-type: none"> 1. Better computers and seating facility 2. Providing for easy availability of basic needs like food, water, bathrooms, toilets, etc. | | | |

| | | | | | | |
|--|---------|---------|---------|---|---------|---------|
| <ol style="list-style-type: none"> 3. Easy accessibility to disabled staff 4. Increased aesthetic values of office and working desks | | | | | | |
| Key Benefits expected from the Sub Project: | | | | | | |
| <p>Improvement of working conditions and infrastructure is expected to result in following benefits:</p> <ol style="list-style-type: none"> 1. Improvement of employee morale and confidence building; 2. Ability to attract and retain qualified and talented employees; 3. Increased satisfaction among the employees; 4. Increase in proactive initiatives by the employees for performance improvement; 5. Improvement of better utilization of organization resources; | | | | | | |
| Costs of Implementation: | | | | | | |
| <p>This project will require enhancements to the office buildings and port infrastructure buildings as well as procurement of office computers etc. A broad level estimate of such changes is made at Rs. 3 Crores.</p> | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

| | | | |
|---|--|------------------------------|----------|
| Sub Project Name: | Remuneration review and upgrade | | |
| Sub Project Owner: | Secretary's Department | Sub Project Duration: | 3 months |
| General Description: | | | |
| <p>In line with the strategy to retain and attract good talent, there is a significant need for a remuneration review and upgrade pursuant to the installation of a performance management system. As the case with other public sector units, ChPT employees are paid as per the salary scales and classes, with fixed annual increments irrespective of the level of performance. In correlation with other departments like HR needs improvement, performance assessment and HR management system, ChPT should establish salary structure considering the cost of living, profit sharing, performance incentive, market salary rate with enough provisions for flexibility and performance linked.</p> | | | |
| Sub Project Description: | | | |
| <p>ChPT can define job specification for a particular activity and required skills for performing the job. ChPT should regularly monitor market conditions of salary</p> | | | |

levels and demand-supply of people having required skills. ChPT should monitor regularly cost of living and other perks and benefits. Considering all the cost and benefit, ChPT can fix the salary structure, which will be revised after particular duration or may be linked to any variable like port's profit margins, inflation rates and performance level. Chennai Port will have to garner stakeholder support for this initiative.

Key Benefits expected from the Sub Project:

The activity of remuneration review and upgrade will result in following benefits to the Chennai port:

1. Ability to attract and retain qualified and talented peoples;
2. Increased satisfaction among the employees;
3. Improvement of efficiencies of various functions;
4. Increase in proactive initiatives by the employees for performance improvement;
5. Focus on common driving force among employees for achievement of common organizational goals;

Costs of Implementation:

This is an internal activity to be conducted by the Senior management of ChPT. At best, ChPT may want to carry out a compensation survey for select skill sets, which is likely to cost Rs. 3.0 million

Sub Project Dependencies:

- Build HR profile of the port**
- Install a Performance Management System**

Importance

- Essential** **Desirable**

Sub Project Phasing

| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------|---------|---------|---------|---------|---------|---------|
| | | | | | | |

C) HR Process Improvement Project

This will include the following sub projects:

1. HR Process optimization software
2. Performance Management System

An IT based HR tool will help in automating the pay process; it will help in gathering cost effectively the employee time/work information and evaluate it. This will help to establish organizational cost accounting capabilities and increase employee participation in benefits programs.

The performance Management System will help to determine the extent on which the employees are performing the job effectively.

| | | | |
|--|-------------------------------|---|----------|
| Sub Project Name: | | HR Process optimization software | |
| Sub Project Owner: | Secretary's Department | Sub Project Duration: | 9 months |
| General Description: | | | |
| <p>A critical component for implementing some of the HR strategic initiatives is the availability of an IT based tool i.e. Human Resource Management Systems (HRMS, EHRMS). Human Resource Management Systems (HRMS, EHRMS) shape an intersection in between human resource management (HRM) and information technology. Efficient and effective management of the "Human Capital" Pool (HCP) has become an increasingly imperative and complex activity to all HR professionals. The HR function consists of tracking innumerable data points on each employee, from personal histories, data, skills, capabilities, experiences to payroll records. To reduce the manual workload of these administrative activities, organisations began to electronically automate many of these processes by introducing innovative HRMS/HCM technology.</p> | | | |
| Sub Project Description: | | | |
| <p>These systems are characteristically developed around following four areas:</p> <ol style="list-style-type: none"> 1. The payroll module automates the pay process by gathering data on employee time and attendance, calculating various deductions and taxes, and generating periodic pay-cheques and employee tax reports 2. The time and labour management module applies new technology and methods (time collection devices) to cost effectively gather and evaluate employee time/work information, so as to establish organizational cost accounting capabilities. 3. The benefit administration module permits to administer and track employee participation in benefits programs like healthcare provider, insurance policy, and pension plan and profit sharing or stock option plans. 4. The HR management module is a component covering all other HR aspects from application to retirement. The system records basic demographic and address data, selection, training and development, capabilities and skills management, compensation planning records and other related activities. | | | |
| Key Benefits expected from the Sub Project: | | | |
| <p>By using the internet or corporate intranet as a communication and workflow vehicle, the HRMS technology can convert these into web-based HRMS components of the ERP system and permit to reduce transaction costs, leading to greater HR and organizational efficiency. Through employee or manager self-service, HR activities shift away from paper based processes to using self-service functionalities that benefit employees, managers and HR professionals alike. Costly and time consuming HR administrative tasks, such as travel reimbursement, personnel data change, benefits enrolment, enrolment in training classes (employee side) and to instruct a personnel action, authorise access to information for employees (manager's side) are being individually handled and permit to reduce transaction time, leading to HR and organisational effectiveness.</p> | | | |
| Costs of Implementation | | | |

Implementing a HRMS Solution will require the following components to be procured, installed and implemented:

| Activities | Estimated costs |
|--|------------------|
| Documenting and re-designing HR business processes | Rs. 1.0 million |
| Procuring an HRMS solution (ready made or custom developed) and its implementation | Rs. 6.0 million |
| Training of employees | Rs. 2.0 million |
| Hardware and other infrastructural facilities) | Rs. 3.0 million |
| Total | Rs. 12.0 million |

Sub Project Dependencies:

1. Business Process Re-engineering
2. Review and improvement of Promotion and Recruitment policies

Importance

Essential

Desirable

Sub Project Phasing

| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------|---------|---------|---------|---------|---------|---------|
| | | | | | | |

| Sub Project Name: | | Performance Management System | |
|--|------------------------|-------------------------------|----------|
| Sub Project Owner: | Secretary's Department | Sub Project Duration: | 6 months |
| General Description: | | | |
| <p>A key motivation issue is the system of rewards based on Performance. ChPT being a Government organization has a traditional system of performance appraisals and payment of rewards. This needs to change if ChPT is to focus on retaining and attracting talent within the organization.</p> <p>Performance Management (Appraisal) System is the human resources activity used to determine the extent on which the employees are performing the job effectively. Performance Appraisal gives the idea of any improvements required where there is the difference between actual and desired results.</p> | | | |
| Sub Project Description: | | | |
| <p>There are following six steps in a typical official (other than an informal performance appraisal system) Performance Management System:</p> | | | |

1. Establish performance standards for each position and the criteria for evaluation
2. Establish performance evaluation policies on when to rate, how often to rate and who should rate
3. Have raters gather data on employee performance
4. Have raters (and employees in some systems) evaluate employees' performance
5. Discuss the evaluation with the employee
6. Make decisions and file the evaluation

Automated Performance Management System may integrate all the modalities of the performance appraisal process like performance reviews, 360° feedback, goal management, compensation planning and dashboards & reporting.

Key Benefits expected from the Sub Project:

The performance management system will be useful in the following HR purposes:

1. *Developmental purposes*: it helps to clarify the necessity and the effectiveness of the training programs;
2. *Reward purposes*: helps in determining who should receive rewards and who should be laid off;
3. *Motivational purposes*: stimulates effort to perform better;
4. *Legal compliance*: it provides legally defensible reason for making promotion, transfer, reward and discharge decisions;
5. *Human resource and employee planning purposes*: it serves as a valuable input to skills inventories and human resource planning;
6. *Compensation*: helps to identify what to pay and what will serve as an equitable monetary package;
7. *Communication purposes*: the rater and ratee get to know each other through communication;
8. *HRM research purposes*: it can be used to validate selection tools, such as a testing program.

Costs of Implementation:

ChPT will require assistance of external consultants for carrying out this project. The cost for such assistance is estimated at Rs. 5.0 million

Sub Project Dependencies:

Review and improvement of Promotion and Recruitment policies

Importance

Essential

Desirable

Sub Project Phasing

| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------|---------|---------|---------|---------|---------|---------|
| | | | | | | |

Port Development Projects

This category includes the following projects

A) Identifying Cost Reduction Avenues and Implementing Cost Reduction Measures :

This includes the following sub projects:

1. Identifying Cost Reduction Avenues
2. Implementing Cost Reduction Measures

This project will help in Cost reduction of the port. Higher cost is a major constraint in a competitive tariff environment. With the entry of private players in the market who are able to demonstrate cost leadership, it will be very difficult for the Port to continue increasing its tariffs based on a cost push model. Efficiencies in port operations will also have to be equally competitive in terms of cost structures. As competition increases, ChPT will find it increasingly difficult to maintain its high tariffs and thereby its profitability.

After identifying the cost reduction measures, a more difficult initiative is to implement these and achieve the reductions in a manner that it shows up in the profit and loss account. Implementation of such measures require organizational will power and the readiness to take tough decisions. Therefore, the implementation process will have to be taken up as a full fledged project, with clearly laid out responsibilities and targets.

| | | | |
|--|---|------------------------------|------------|
| Sub Project Name: | Identifying Cost Reduction Avenues | | |
| Sub Project Owner: | Accounts / Corporate Planning Department | Sub Project Duration: | Six months |
| General Description: | | | |
| <p>Given the likely competitive scenario, the possibilities for increasing tariffs further appear to be very unlikely. The only way therefore to increase margins will be to reduce costs. While Chennai has a distinct advantage on having fully depreciated assets, its high administrative overheads are a burden raising total costs. The financial analysis carried out by Deloitte highlights that operating and administrative expenditure as a matter of concern, even though ChPT is in a very good financial position at this point of time. It is important to become lean in terms of costs and identify where the flab has accumulated.</p> | | | |
| Sub Project Description: | | | |

Avenues which could lead reduced costs could be VRS, outsourcing of certain services, utilising leased facilities instead of construction etc. Key steps for identifying cost reduction measures are:

- Deciding the approach and methodology
- Reviewing the current costs and cost structure and trends in past few years
- Identifying the largest cost clusters
- Generate buy-in from stakeholders on the need for and the nature of cost reduction
- In-depth study of these cost clusters for identifying cost reduction avenues
- Discussion on reduction avenues identified and agreeing the methodology for reduction

Key Benefits expected from the Sub Project:

The key benefits would be

- Identification of avenues for reduced costs which would lead to higher margins.
- Providing flexibility for reducing tariffs if necessary,
- Attracting customers interested in a cost advantage and tie up with them on a long term basis
- Increased profitability

Costs of Implementation

The identification of cost reduction measures and its implementation is an activity that will require ChPT to take the assistance of external consultants who are experienced in cost management and who are willing to take a stake in the quantum of costs that will be reduced. Their scope will also include the activity of providing assistance in implementing these cost measures (see next project). The total cost of both these projects is expected to be approximately Rs. 2 crores

Sub Project Dependencies:

Activity Based Costing

Importance

Essential

Desirable

Sub Project Phasing

| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
|---------|---------|---------|---------|---------|---------|---------|
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|--|----------|---|---|---------|---------|---------|
| Sub Project Name: | | Implementing Cost Reduction Measures | | | | |
| Sub Project Owner: | Accounts | Sub Project Duration: | 3 years | | | |
| General Description: | | | | | | |
| The cost reduction measures identified in the previous project will need to be implemented in a phased manner. The impact of these measures is likely to be felt in the following two years and the same therefore needs to be continuously implemented such that these measures get institutionalized accordingly. | | | | | | |
| Sub Project Description: | | | | | | |
| Implementing Cost Reduction measures identified should involve the following steps: <ul style="list-style-type: none"> ▪ Setting objectives for the exercise and target results ▪ Identifying owners for each cost reduction measure ▪ Implementation the identified measures ▪ Periodical Review (if required) for measures implemented | | | | | | |
| Key Benefits expected from the Sub Project: | | | | | | |
| The key benefit would be reduced costs leading to higher margins. In turn it would also help ChPT in becoming more flexible as regards tariffs, entering into long term relationships with customers etc. | | | | | | |
| (benefits outlined in the previous project "identifying cost reduction measures" are also relevant here) | | | | | | |
| Costs of Implementation | | | | | | |
| Costs are already included in the estimate for previous Project on "identifying cost reduction measures" | | | | | | |
| Sub Project Dependencies: | | | | | | |
| Identifying Cost Reduction Avenues | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | <input type="checkbox"/> Desirable | | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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B) Efficiency Improvement Project

This includes the following sub projects

1. Current Asset Utilisation Analysis
2. Building an Engineering Research Cell

Analysis of utilisation of Assets will help in understanding the manner in which the port assets are utilised. The port will be able to identify where there is over utilisation or underutilisation and plan for asset replacement / modernization.

Building an Engineering research cell would help in tracking the upcoming port technologies in.ChPT . The Cell will help in providing data which will help in developing business models, outsource business functions, Reconfiguring facilities and utilization of efficient material handling equipment.

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|---|---|------------------------------|----------|
| Sub Project Name: | Current Asset Utilisation Analysis | | |
| Sub Project Owner: | Engg. Department | Sub Project Duration: | 2 months |
| General Description | | | |
| The Port strategy emphasizes on cost reduction and higher utilization of equipments. In order to do the same, ChPT will need to carry out a detailed asset utilization analysis and identify areas where assets are under-utilized and the steps needed to correct the same | | | |
| Sub Project Description: | | | |
| Current Asset Utilisation analysis would involve a comprehensive listing of all infrastructure and related facilities available with Chennai Port and carrying out a comprehensive analysis on their past and present usage of these assets. | | | |
| Activities to be carried out under this project would be: | | | |
| <ul style="list-style-type: none"> ▪ Develop a comprehensive listing of all infrastructure and infrastructure facilities available with Chennai Port ▪ Tracking usage of infrastructure over past few years ▪ Identifying whether these infrastructure facilities are likely to be utilised in future keeping in mind traffic trends and Port's strategy | | | |
| This Business Plan Report is expected to contain substantial information to aid this exercise. | | | |
| Key Benefits expected from the Sub Project: | | | |
| Asset Utilisation analysis is expected to yield the following benefits: | | | |
| <ul style="list-style-type: none"> ▪ Provide a detailed picture of assets being utilized at the Port ▪ Identify areas where new infrastructure is required and also where infrastructure is underutilized | | | |
| Costs of Implementation | | | |

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| <p>This current Business Plan will provide significant inputs to ChPT for this project. All activities identified here can be taken up by ChPT Engineering Department and no external assistance is required.</p> | | | | | | |
| <p>Sub Project Dependencies:</p> | | | | | | |
| <p>None</p> | | | | | | |
| <p>Importance</p> | | | | | | |
| <p><input checked="" type="checkbox"/> Essential</p> | | | | <p><input type="checkbox"/> Desirable</p> | | |
| <p>Sub Project Phasing</p> | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

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|---|---------------------------|---|-----------------|
| <p>Sub Project Name:</p> | | <p>Building an Engineering Research Cell</p> | |
| <p>Sub Project Owner:</p> | <p>Engineering</p> | <p>Sub Project Duration:</p> | <p>3 months</p> |
| <p>General Description:</p> | | | |
| <p>Engineering skills and experience in setting up port operations are considered to be a strength area for ChPT. It is important to build upon this strength and develop capabilities that can help ChPT to be truly a futuristic port in terms of infrastructure and equipments. This will also help ChPT when they undertake other projects such as "management of operations in other minor ports" and providing consultancy services.</p> | | | |
| <p>Sub Project Description:</p> | | | |
| <p>In order to 'foresee' trade requirements in so far as equipments / facilities / infrastructure is concerned, it would be worthwhile to look at setting up an Engineering research cell whose mandate would be to carry out the following:</p> <ul style="list-style-type: none"> ▪ track upcoming port technologies ▪ infrastructure requirements and developments at competing ports and at leading ports in Asia ▪ anticipating trade requirements and carrying out cost-benefit analysis of providing these facilities (along with finance and traffic department) <p>The Cell will work closely with the market research cell.</p> <p>The Project would involve the following activities:</p> <ul style="list-style-type: none"> ▪ Deciding the roles and responsibilities the Cell. ▪ Identify the reporting relationships of personnel within the Cell. | | | |

| | | | | | | |
|--|---------|---------|---------|---|---------|---------|
| <ul style="list-style-type: none"> ▪ Train personnel in research tools as well as cutting edge engineering concepts and technologies practiced at other ports ▪ Recruit specialized personnel (if need be) ▪ Plan infrastructure requirements and acquire infrastructure like computers, software tools etc. | | | | | | |
| Key Benefits expected from the Sub Project: | | | | | | |
| <p>The Engineering research cell may be able to provide the Port with crucial data to undertake the following initiatives:</p> <ul style="list-style-type: none"> ▪ Rationalize and/or refocus service portfolios ▪ Develop business models with low real estate requirements ▪ Outsource business functions ▪ Reconfigure facilities / Increase utilization of facilities ▪ Increase use of leased real estate ▪ Divest low-utilization real estate ▪ Increase use of flexible and expandable infrastructure ▪ Defer / change timing of capital investments ▪ Utilize more efficient material handling equipment | | | | | | |
| Costs of Implementation | | | | | | |
| This project needs to be taken up internally by ChPT and therefore no additional costs are envisaged. | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input type="checkbox"/> Essential | | | | <input checked="" type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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C) Institutional Strengthening Project

This will include the following sub projects:

1. Study of facilities at top Ports in Asia
2. Stakeholder expectations management
3. Designating personnel to ensure quick completion of connectivity projects
4. Setting up the Internal Audit Function
5. Establishing a Consulting Entity
6. Communication Plan

The projects will help Chpt provide facilities to match with some of the best ports internationally.

Stakeholders expectation management will help in increasing the confidence of stakeholders in the port. This will involve concerted efforts to ensure that stakeholder related issues are identified and addressed appropriately. This will also include designating personnel who will ensure quicker completion of connectivity projects in terms of better liaison with public entities involved in these projects.

An internal audit department will help in increasing the focus on the internal controls in the organization and ensure improved assignment of accountability and authority by ensuring a parallel system of checks and balances within the organization.

Establishing an consulting entity will strengthen Brand value of the port and increase satisfaction of the high potential employees.

Communication plan will ensure that the measures taken by the Port to be an environmentally and socially 'pro-active' port are conveyed to and understood by the community and hence will be very helpful in increasing the positive attitude of community towards the Port.

| | | | |
|--|---|------------------------------|---------|
| Sub Project Name: | Study of facilities at top Ports in Asia | | |
| Sub Project Owner: | Engineering | Sub Project Duration: | 1 month |
| General Description | | | |
| ChPT has taken up a vision to be a futuristic port. In order to translate this vision into a reality, it is important for ChPT to understand the differentials in terms of equipments, infrastructural facilities and service levels vis-à-vis top ports in Asia. This will require a detailed study in the areas where ChPT is focussing on i.e. automobiles, containers and cruise terminals. | | | |
| Sub Project Description: | | | |
| This project would require an elaborate profiling of infrastructure available and facilities provided by important ports in Asia like Colombo, Singapore, Hong Kong, Shanghai and Dubai. The study would also identify how these facilities are provided i.e. by the Ports themselves or through private sector participation. Along with the above, a commodity profile will also have to be built up for each of the Ports above. | | | |
| Key Benefits expected from the Sub Project: | | | |
| This study will help Chennai Port benchmark its facilities with those provided by the best ports in Asia. The benchmarking analysis coupled with a commodity comparison will enable the Port to identify those facilities and infrastructure which | | | |

| | | | | | | |
|---|---------|---------|---------|---|---------|---------|
| are being provided by these ports but which are not available with Chennai. | | | | | | |
| Costs of Implementation | | | | | | |
| Assuming a small delegation of 3 – 4 senior management personnel to visit these ports, it is estimated that the costs shall be approximately Rs. 1 Crore. | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
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|---|-------------------|--|---------|
| Sub Project Name: | | Stakeholder expectations management | |
| Sub Project Owner: | Management | Sub Project Duration: | Ongoing |
| General Description: | | | |
| Chapter 4 on corporate strategy deals extensively with key uncertainties and the emergence of likely future scenarios. The scenarios extensively deal with the positive and negative possibilities of stakeholder support. Whereas good stakeholder support is always welcome, it cannot be guaranteed. To ensure continuous support from the stakeholders, it is important that ChPT manages their expectations effectively. | | | |
| Sub Project Description: | | | |
| Stakeholders are people or groups whose welfare is connected directly or indirectly with the progress of the Port. These may be internal as well as external stakeholders. For continued success of any entity it is important to identify the most important stakeholders and cater to their expectations. This is essential to have their buy-in in all future endeavors of the Port. Steps to be undertaken for this purpose are: | | | |
| <ol style="list-style-type: none"> 1. Identification of stakeholders. 2. Prioritizing the stakeholders and identifying KEY stakeholders (the Government – in case of Chennai Port). 3. Identifying with requirements and contributions and describing the success criteria for requirements and contributions. 4. Find the stakeholders’ focal areas in terms of risks, finances, time and quality. 5. Identifying the stakeholders’ positions and roles. 6. Designing an action plan to address key stakeholders’ requirements | | | |

| | | | | | | |
|--|---------|---------|---------|---|---------|---------|
| Key Benefits expected from the Sub Project: | | | | | | |
| The single largest benefit available will be continued stakeholder patronage in all future projects of Chennai Port Trust. This will also improve effectiveness of legislative/lobbying efforts. | | | | | | |
| Costs of Implementation | | | | | | |
| This project needs to be taken up internally by ChPT and therefore no additional costs are envisaged. | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

| | | | | | |
|--|-------------------|--|---------------|--|--|
| Sub Project Name: | | Designating personnel to ensure quick completion of connectivity projects | | | |
| Sub Project Owner: | Management | Sub Project Duration: | On need basis | | |
| General Description | | | | | |
| ChPT's corporate strategy hinges critically on the two hinterland connectivity projects envisaged on the north and south of Chennai. Whereas significant progress has been made by the executing agencies with ChPT itself being a stakeholder in these, the timely completion of these projects cannot be guaranteed. On the other hand, non / partial completion of these projects can severely impinge upon ChPT's business plans. This project therefore demands greater importance, especially in the context of the issues related to stakeholder support as identified in the previous project. | | | | | |
| Sub Project Description: | | | | | |
| In case hinterland connectivity (rail / road / pipeline) is not established as per the traffic requirements, it would imperative for Chennai Port to designate a person (preferably at a senior level) with a fixed responsibility to liaise with relevant government authorities and sort out any issues that may be impeding the progress. | | | | | |
| The concerned professional will also be responsible for identifying alternatives which could be presented to these government authorities for financing / executing the projects in case these are the bottlenecks hampering the | | | | | |

| | | | | | | |
|--|---------|---------|---------|--|---------|---------|
| <p>progress. The concerned professionals will continuously liaise with the executing agencies to ensure that there are no impediments to these projects that can be resolved by ChPT's intervention.</p> | | | | | | |
| <p>Key Benefits expected from the Sub Project:</p> | | | | | | |
| <p>Ensuring quick completion of connectivity projects.</p> | | | | | | |
| <p>Costs of Implementation</p> | | | | | | |
| <p>This project needs to be taken up internally by ChPT and therefore no additional costs are envisaged.</p> | | | | | | |
| <p>Sub Project Dependencies:</p> | | | | | | |
| <p>None</p> | | | | | | |
| <p>Importance</p> | | | | | | |
| <p><input checked="" type="checkbox"/> Essential</p> | | | | <p><input type="checkbox"/> Desirable</p> | | |
| <p>Sub Project Phasing</p> | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

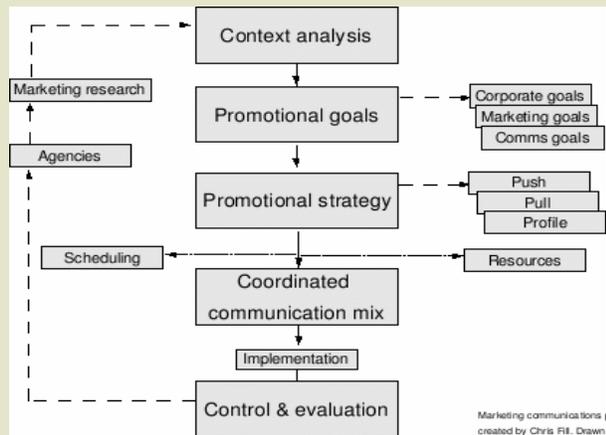
| | | | | | |
|--|--|--|--|-------------------------------------|--|
| <p>Sub Project Name:</p> | | <p>Setting up the Internal Audit Function</p> | | | |
| <p>Sub Project Owner:</p> | | <p>Accounts / Secretary</p> | | <p>Sub Project Duration:</p> | |
| | | | | <p>Three months</p> | |
| <p>General Description</p> | | | | | |
| <p>A key insight that emerged from the SWOT analysis was the non existence of an internal audit department in ChPT. Though not directly an offshoot of the business and functional strategy, this weakness needs to be addressed by setting up of an independent Internal Audit department reporting directly reporting to the Chairman of the Port.</p> | | | | | |
| <p>Sub Project Description:</p> | | | | | |
| <p>Setting up of the Internal Audit function would involve:</p> <ul style="list-style-type: none"> Identifying the role of the Internal Audit function Defining the placement of the Internal Audit function in the overall organization structure and developing the structure of the internal audit department itself. Developing the Audit skill matrix and mapping them to the current capabilities in the Accounts and other departments of the Port. Provide for rigorous and continuous training for all existing EDP | | | | | |

| | | | | | | |
|---|---------|---------|---------|---|---------|---------|
| <p>department employees in the latest technologies and tools</p> <ul style="list-style-type: none"> Recruit fresh talented professionals / outsource parts of the Internal Audit function depending upon availability of resources. Define the authority and responsibility of the new Internal Audit Head and his relationship with other Department heads / senior management of ChPT. | | | | | | |
| Key Benefits expected from the Sub Project: | | | | | | |
| <ul style="list-style-type: none"> Continued and sustained focus on Internal Audit function in the organization Increased capabilities to constantly assess and review the existence of internal controls in the organization Provide required level of assurance to all customers and other stakeholders about the effectiveness of internal controls in the organization. Improved assignment of accountability and authority by ensuring a parallel system of checks and balances within the organization. | | | | | | |
| Costs for Implementation | | | | | | |
| ChPT will need the services of an external consultant for setting up the Internal Audit function. This is estimated to cost Rs. 1.5 million approximately | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input type="checkbox"/> Essential | | | | <input checked="" type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

| | | | |
|--|---|------------------------------|----------|
| Sub Project Name: | Establishing a Consulting Entity | | |
| Sub Project Owner: | Engineering | Sub Project Duration: | 9 months |
| General Description: | | | |
| The SWOT analysis and strategy development highlights the need to leverage ChPT's engineering and port management skills by providing consultancy services to other minor and smaller ports. This would also mean that these | | | |

| | | | | | | |
|---|---------|---------|---------|---|---------|---------|
| <p>departments would start being a profit center instead of just being a cost center by earning some revenues. Chennai Port has an established track record of executing complicated technical projects. This could be used to set up a Business / Technical Consulting unit on the lines of RITES and Rotterdam Maritime Group.</p> | | | | | | |
| <p>Sub Project Description:</p> | | | | | | |
| <p>The Project would involve the following activities:</p> <ul style="list-style-type: none"> ▪ Deciding the Ports key capabilities ▪ Deciding the legal structure of the entity and the roles and responsibilities of the Entity. ▪ Identify the reporting relationships of personnel within the Cell. ▪ Train personnel in research tools and cutting edge engineering concepts and technologies. ▪ Recruit specialized personnel (if need be) ▪ Plan infrastructure requirements and acquire infrastructure like computers, software tools etc. ▪ Build Market presence | | | | | | |
| <p>Key Benefits expected from the Sub Project:</p> | | | | | | |
| <p>The Consulting Entity will be able to provide the following benefits:</p> <ul style="list-style-type: none"> - Generating additional revenues - Strengthening the Brand value of Chennai Port - Better work satisfaction for high potential employees - Knowledge which can be used by Chennai Port for its own development | | | | | | |
| <p>Costs of Implementation</p> | | | | | | |
| <p>This project will be executed internally by ChPT. The Port will require external assistance in training of personnel which is estimated to cost approximately Rs. 0.5 million. In addition it is estimated that the entity will require computers and other office infrastructure which is expected to cost Rs. 2.5 million.</p> | | | | | | |
| <p>Sub Project Dependencies:</p> | | | | | | |
| <p>None</p> | | | | | | |
| <p>Importance</p> | | | | | | |
| <p><input type="checkbox"/> Essential</p> | | | | <p><input checked="" type="checkbox"/> Desirable</p> | | |
| <p>Sub Project Phasing</p> | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

| | | | |
|--|-------------------------------|------------------------------|--|
| Sub Project Name: | Communication Plan | | |
| Sub Project Owner: | Secretary's Department | Sub Project Duration: | |
| General Description: | | | |
| <p>The strategy requires that ChPT takes up initiatives like public relations, and build awareness among the community about steps being taken by Chennai Port on various fronts. This should be internally disseminated as well. In such big organizations a systematic communication channel should be established</p> <p>Proper communication channel should be set up between the port authorities & the public in order to make them aware about the activities that have been undertaken by the port to fulfill their social obligations.</p> | | | |
| Sub Project Description: | | | |
| <p>Communication plan gives clearly laid out plan for figuring out how to communicate important messages to key stakeholders of an organization in the most effective way possible.</p> <p>Communications management is the systematic planning, implementing, monitoring, and revision of all the channels of communication within an organization, and between organizations; it also includes the organization and dissemination of new communication directives connected with an organization, network, or communications technology. Aspects of communications management include developing corporate communication strategies, designing internal and external communications directives, and controlling the flow of information, including online communication.</p> <p>The adjacent Marketing Communication Planning Framework provides a framework for creation of an integrated marketing communications plan.</p> <p>The communication plan will provide for communicating the initiatives taken by the port for environment management, social responsibility, city development etc. to general public.</p> | | | |
| Key Benefits expected from the Sub Project: | | | |
| <p>The comprehensive communication plan will ensure that the measures taken by the Port to be an environmentally and socially 'pro-active' port are conveyed to and understood by the community and hence will be very helpful in increasing the positive attitude of community towards the Port.</p> | | | |



| | | | | | | |
|---|---------|---------|---------|--|---------|---------|
| Costs of Implementation | | | | | | |
| This project needs to be taken up internally by ChPT and therefore no additional costs are envisaged. | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input type="checkbox"/> Essential | | | | <input checked="" type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

D) Corporate Social Responsibility Project

This includes the following sub projects:

1. Assessment of Environment Impact of Chennai Port's Activities
2. Creation of Green area / belt inside the port premises
3. Social Welfare Initiatives
4. City Development Projects

These projects will help in identifying the impact of Chennai Port's Activities on the Environment. All legal consequences need to be foreseen and well prepared for in terms of environmental compliance. Provisioning of green area / belts will be one of initiatives for environment management and ensure the achievement of strategic objective to "be recognised as an environmentally and socially responsible Port. It would improve the public perception of the port.

City development projects will improve the public perception of the port and will surely reduce the resistance, to some extent, against adverse impacts arising due to operation of the port within the city limits.

| | | | |
|---|--|------------------------------|----------|
| Sub Project Name: | Assessment of Environment Impact of Chennai Port's Activities | | |
| Sub Project Owner: | Marine and Engineering Department | Sub Project Duration: | 4 months |
| General Description | | | |
| The environment related compliance is becoming stringent day by day so it is always a better option to have an environment assessment carried out that will assess and regulate the environment issues related to the port and keep a check on the effect of port activities on the environment. The business strategy entails ChPT wanting to be a green and clean port especially in view of it being a city port and the major pollution issues already confronting the port as of | | | |

today.

Sub Project Description:



For any port or upcoming project, Environment Impact Assessment is the critical area for deciding on to go ahead for implementing new projects or how to better manage environment issues. Chennai port, due to its location within city limits and handling of dusty cargo, has to give specific importance to Environment management.

Environmental Impact Assessment (EIA) is a management tool for ensuring optimal use of natural resources for sustainable

development. EIA' s for ports and harbours is a mandatory requirement as per the Ministry of Environment and Forests (MoEF) EIA notification (1994) and CRZ notification (1991) because The port and harbour projects have following major adverse impacts:

1. Changes to the flow pattern and resultant coastal erosion / siltation due to the construction of breakwaters and other waterfront structures that obstruct normal flow.
2. Disturbance to the bottom surface and benthic organisms due to dredging and dumping of dredge spoils.
3. Pollution from oil spills during pipeline transfers dismantling operations and oily waste disposal.
4. Risk of oil / hazardous cargo spills from accidents due to collisions, grounding or leakage.
5. Loss of habitats such as mangroves, corals, mudflats etc.

Basic components of an EIA study are presented in the diagram¹ above.

Key Benefits expected from the Sub Project:

Environmental Impact Assessments (EIA) identifies potential impacts and proposes actions to avoid, reduce or mitigate them through Environmental Management Plans (EMPs) and/or Standard Operating Procedures (SOPs). The functions of an EIA is to:

1. Identify pre-project environmental status and project activities that may affect the environment,
2. Estimate the impacts of the proposed development,
3. Evaluate the consequences of impacts on human life and environment,
4. Assess the need for alternative actions and remedial measures.

EIA' s result in

1. legal compliance
2. development that is sustainable;

¹ Source: "Manual for Environmental Impact Assessment of Ports & Harbour", National Institute of Ocean Technology, IIT Chennai.

| | | | | | | |
|---|---------|---------|---------|---|---------|---------|
| <ol style="list-style-type: none"> 3. cost savings, and avoiding cost overruns due to wrong site selection / remediation / time delays / 4. public outcry etc; and 5. environmental management and improved environmental performance 6. corporate image 7. EIA therefore shall be viewed as the first step towards commitment to prevention of pollution. | | | | | | |
| Costs of Implementation | | | | | | |
| This project will require the hiring of environment management consultants to prepare the EIA. It is estimated to cost approximately Rs. 5.0 million. | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input checked="" type="checkbox"/> Essential | | | | <input type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

| | | | |
|--|-------------------------------|---|--------|
| Sub Project Name: | | Creation of Green area / belt inside the port premises | |
| Sub Project Owner: | Administration/ Estate | Sub Project Duration: | 2 year |
| General Description: | | | |
| The environment management plan and initiatives for pollution reduction will include creation of green area to counter the adverse environment impacts of ongoing port activity. The green area can be located within the port premises depending upon available land. This will help in environment management and also improve working environment making is more healthy to the port community. | | | |
| Sub Project Description: | | | |
| Chennai port should regularly conduct tree plantation programmes with sufficient awareness about such efforts. Also Chennai port can integrate this project with proposed projects of social welfare initiatives and city development projects. | | | |
| Key Benefits expected from the Sub Project: | | | |
| Provision of green area/ belts will be one of initiatives for environment management. This will ensure the achievement of strategic objective to "be | | | |

| | | | | | | |
|---|---------|---------|---------|---|---------|---------|
| recognised as an environmentally and socially responsible Port”. | | | | | | |
| Costs of Implementation | | | | | | |
| This project needs to be taken up internally by ChPT and therefore no additional costs are envisaged. | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input type="checkbox"/> Essential | | | | <input checked="" type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

| | | | | | |
|--|-------------------------------|-----------------------------------|---------|--|--|
| Sub Project Name: | | Social Welfare Initiatives | | | |
| Sub Project Owner: | Engineering Department | Sub Project Duration: | Ongoing | | |
| General description: | | | | | |
| One of the mission statements of Chennai port is to act as a catalyst for sustained development of the region. Chennai port also to be recognised as socially responsible organization needs to initiate various actions including social welfare projects, media planning and taking other soft steps to manage these aspects. | | | | | |
| Sub Project Description: | | | | | |
| Chennai port need to take initiatives to build following social welfare projects by donating money and promoting the project so as the people take this project as a community development initiative: | | | | | |
| <ol style="list-style-type: none"> Hospital for medical facilities: Chennai port may contribute certain portion of capital expenditure required to create a secondary care hospital. Chennai port can create a capital fund to fund annual operating expenses. Chennai port should be initiator of the project and take help of NGOs to gather money or manpower. The hospital should provide medical facilities to economically backward people at lower cost or free. Schools: Chennai port may build a school for providing education to poor and backward people in the immediate vicinity of the port. Vocational training institute: Similar to a school, Chennai port may create vocational training institutes for training of unemployed youth from poor families. For future manpower requirement relating to skills training given by | | | | | |

| | | | | | | |
|---|---------|---------|---------|--|---------|---------|
| <p>the Institute, Chennai port can give preference to students of the institute to be recruited on contract basis.</p> <p>4. Counseling centre: Chennai port can take initiatives in association with NGOs for promoting and opening up of counseling centre in the region. The centre will provide counseling service to socially and economically backward people in areas like removal of social vices. These centres will also be beneficial for large pool of labor of Chennai port for improvement of their personal / social lives.</p> | | | | | | |
| Key Benefits expected from the Sub Project: | | | | | | |
| <p>Taking initiatives for implementation of these social welfare projects will improve the public perception of the port in general and will surely reduce the resistance, to some extent, against adverse impacts arising due to operation of the port within the city limits.</p> | | | | | | |
| Costs of Implementation: | | | | | | |
| <p>Since this project is a combination of several sub-projects and is entirely dependant on how ChPT may want to further its social initiatives, no costs have been specifically estimated. Deloitte however recommends that as a matter of prudence and social responsibility, ChPT must, if not more, atleast set aside 1% of their operating surplus every year towards such initiatives.</p> | | | | | | |
| Sub Project Dependencies: | | | | | | |
| None | | | | | | |
| Importance | | | | | | |
| <input type="checkbox"/> Essential | | | | <input checked="" type="checkbox"/> Desirable | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

| | | | |
|--|----------------------------------|------------------------------|--|
| Sub Project Name: | City Development Projects | | |
| Sub Project Owner: | Engineering Department | Sub Project Duration: | |
| General Description: | | | |
| <p>One of the mission statements of Chennai port is to act as a catalyst for sustained development of the region. Chennai port also to be recognised as a socially responsible organization and responsible citizen of Chennai port needs to initiate various actions including city development projects, media planning and taking other soft steps to manage these aspects.</p> | | | |
| Sub Project Description: | | | |

Chennai port need to take initiatives to build following city development projects by donating money and promoting the project which will increase the visibility of port initiatives for city development and beautification:

1. **Park or Garden:** Chennai port may contribute towards creation of a park or garden within the city. The existing park may be built on the theme of port project. The park can also give initial briefing of port operations. The park can also serve as a media place for conducting exhibitions or display system for communication to general public about initiatives of the port in city development and social responsibility. Chennai port can take over some existing parks for operation and maintenance.
2. **Traffic Junctions:** Chennai port can design or build traffic junctions at busy traffic junctions for better traffic management and providing resting facility to traffic police. Creation of facilities at traffic junctions are least cost option for promotion and communication offering highest visibility among general public. These traffic junctions also can be used to communicate about initiatives of the port in city development and social responsibility.
3. **Heritage building restoration:** Chennai claims to be the 'city of firsts'. It has many first to its credit due to first capital of British Empire in South Asia region. There are many heritage buildings like Marina seafront, Madras club, Museum Theatre and Connemara Library complex, etc. Chennai port can take up restoration, rehabilitation and improvement of the infrastructure of one or some of the heritage sites of the city.
4. **Sea Front Development:** Chennai city has the famous Marina beach in the vicinity of the Chennai port. Chennai port can provide another beach for entertainment and pleasure of the citizens of the port. The port's experience in port side construction esp. passenger terminal & berths and port environment management offers the great skill for creation of such project. Similar to parks and traffic junctions, such projects will be useful for communication and media purpose.

Key Benefits expected from the Sub Project:

Taking initiatives for implementation of these city development projects will improve the public perception of the port and will surely reduce the resistance, to some extent, against adverse impacts arising due to operation of the port within the city limits. These facilities also provide means for communicating and awareness building among wider public front about port's initiatives.

Costs of Implementation:

Since this project is a combination of several sub-projects and is entirely dependant on how ChPT may want to further its social initiatives, no costs have been specifically estimated. Deloitte however recommends that as a matter of prudence and social responsibility, ChPT must, if not more, atleast set aside 1% of their operating surplus every year towards such initiatives.

Sub Project Dependencies:

None

| Importance | | | | | | |
|------------------------------------|---------|---------|---|---------|---------|---------|
| <input type="checkbox"/> Essential | | | <input checked="" type="checkbox"/> Desirable | | | |
| Sub Project Phasing | | | | | | |
| 2007-08 | 2008-09 | 2009-10 | 2010-11 | 2011-12 | 2012-13 | 2013-14 |
| | | | | | | |

**----- Annexure-4 Alternative Scenario -----
Capacity Assessment**

Alternative Scenario: Assessment of port's capacity

The potential future throughput capacity of the proposed new container terminal operations is estimated at 27,000 teu/ha of land using industry best practices and assuming an RTG or RMG based operation with a complementary off-dock container terminal.

An analysis of some comparable international container terminals like Centerm Container Terminal at the Port of Vancouver Canada and Terminal System Inc.'s, Vanterm Container Terminal indicates that future throughput capacity can be estimated with a conversion factor ranging between 22,000 teu/ha to 29000 teu/ha. The capacity of the proposed new container terminals at Chennai Port were therefore estimated assuming the factor as 27,000 teu per ha of land near to the upper range as the best case scenario and using 22,000 teu as an alternative scenario.

The alternative scenario estimating port's capacity against the assumption 22,000 teu per ha is presented below.

| Storage Area Requirement | | | | | |
|---|--|--------------|--------------|---------------|---------------|
| Sr No | Particulars | Year | | | |
| | | 2007-2012 | 2012-2017 | 2017-2022 | 2022-2027 |
| A | Cargo to be Handled (in MT) | 21.02 | 40.76 | 65.78 | 108.65 |
| B | Cargo to be Handled (in teus) | 1.31 | 2.55 | 4.11 | 6.79 |
| C | Total storage area requirement (in ha) | 59.72 | 115.78 | 186.88 | 308.66 |
| Storage Area Gap to be Bridged | | | | | |
| D | Storage Area Available | 25.06 | 25.06 | 25.06 | 25.06 |
| E | Storage Area Gap to be Bridged | 34.66 | 90.72 | 161.82 | 283.60 |
| Identified Projects & Associated Storage Area | | | | | |
| F | Planned Projects and Storage Area Creation | | | | |
| F1. Container Terminal-2 | | | | | |
| | Area to be developed is shown in Drawing-1 | 35.00 | 35.00 | 35.00 | 35.00 |
| F2. Container Terminal-3 | | | | | |
| | Area to be developed is shown in Drawing-2 | 0.00 | 24.87 | 24.87 | 24.87 |
| F3. Container Terminal-4 | | | | | |
| | Area to be developed is shown in Drawing-3 | 0.00 | 0.00 | 29.67 | 29.67 |
| F4. Container Terminal-5 | | | | | |
| | Area to be developed is shown in Drawing-3 | 0.00 | 0.00 | 18.82 | 18.82 |

| | | | | | |
|---|---|--------------|--------------|---------------|---------------|
| G | Total additional storage area possible to be developed | 35.00 | 59.87 | 108.36 | 108.36 |
| H | Net deficit in storage area required which can not be bridged | -0.34 | 30.85 | 53.46 | 175.24 |

As shown above, the land which can additionally be provided, to cater increasing container traffic, is limited to 108.36 ha. This area of land with existing area of 25.06 ha, presently being used by CCTL, can be aggregated only to 133.42 ha. Now assuming the conversion factor as 22000 teu per ha, the port can cater only around **2.93 Mteu** of containers by the end of phase-3.

**----- Annexure-5 Alternative Scenario -----
Iron Ore shifting to Ennore**

Alternative Scenario: Iron Ore shifting to Ennore Port

A scenario with Iron Ore getting shifted to Ennore port by the end of year 2012 is presented below:

Given the above assumption, iron ore traffic numbers are expected to cease gradually from 10.66 Mtpa in 2007-08 to zero by the end of 2012.

| Year | Growth (in %) | Demand Forecast (in Mtpa) | Traffic Forecast (in Mtpa) |
|----------|---------------|----------------------------|----------------------------|
| 2007-08 | 8% | 11.39 | 10.66 |
| 2008-09 | 8% | 12.31 | 8.00 |
| 2009-10 | 8% | 13.29 | 5.00 |
| 2010-11 | 8% | 14.35 | 2.00 |
| 2011-12 | 8% | 15.50 | 0.00 |
| 2012-13 | 8% | 16.74 | 0.00 |
| 2013-14 | 8% | 18.08 | 0.00 |
| 2014-15 | 8% | 19.53 | 0.00 |
| 2015-16 | 8% | 21.09 | 0.00 |
| 2016 -17 | 8% | 22.78 | 0.00 |
| 2017-18 | 8% | 24.60 | 0.00 |
| 2018-19 | 8% | 26.57 | 0.00 |
| 2019-20 | 8% | 28.69 | 0.00 |
| 2020-21 | 8% | 30.99 | 0.00 |
| 2021-22 | 8% | 33.47 | 0.00 |
| 2022-23 | 8% | 36.14 | 0.00 |
| 2023-24 | 8% | 39.04 | 0.00 |
| 2024-25 | 8% | 42.16 | 0.00 |
| 2025-26 | 8% | 45.53 | 0.00 |
| 2026-27 | 8% | 49.17 | 0.00 |

As the capacity assessment of all the parameters is already done in the main report. As the container terminal-4, which was proposed in phase 3 shall now be required to be taken up in phase-2 itself, the impact of this scenario is assessed below for storage capacity requirement, berth requirement and connectivity:

Storage area

| Sr. No | Particulars | Year | | | |
|--------|---|---------|---------|---------|---------|
| | | 2007-12 | 2012-17 | 2017-22 | 2022-27 |
| A | No. of Containers to be handled (in Mteu) | 1.31 | 2.55 | 4.11 | 6.79 |
| B | Total Storage area Requirement (ha) | 48.66 | 94.34 | 152.27 | 251.50 |
| C | Storage area available (ha) | 25.06 | 25.06 | 25.06 | 25.06 |

| | | | | | |
|--------------------------|--|---------------|---------------|---------------|---------------|
| D | Storage Area Gap to be Bridged (in ha) | 23.60 | 69.28 | 127.21 | 226.44 |
| E | Planned Projects and corresponding Backup Storage Area conversion | | | | |
| E1. Container Terminal-2 | | | | | |
| | Area to be developed is shown in Drawing-1 | 35.00 | 35.00 | 35.00 | 35.00 |
| E2. Container Terminal-3 | | | | | |
| | Area to be developed is shown in Drawing-2 | 0.00 | 24.87 | 24.87 | 24.87 |
| E3. Container Terminal-4 | | | | | |
| | Area to be developed is shown in Drawing-3 | 0.00 | 29.67 | 29.67 | 29.67 |
| E4. Container Terminal-5 | | | | | |
| | Area to be developed is shown in Drawing-3 | 0.00 | 0.00 | 18.82 | 18.82 |
| F | Total additional storage area possible to be developed (ha) | 35.00 | 89.54 | 108.36 | 108.36 |
| G | Net deficit in storage area required which can not be bridged | -11.40 | -20.26 | 18.85 | 118.08 |

This shall not make any impact on the port's capacity against storage but with this happening, it can be seen that there would not be any land storage constraint until the end of Phase-2. There is a deficit of around 18.85 ha that too in by the end of Phase-3. The same can be dealt with as proposed in the main report by taking over the fishing harbour available in the near vicinity of the port.

Berth Requirement

The impact of this change on the berth requirement is assessed below:

| Berth Requirement | | | | | |
|-------------------|--|---------|---------|---------|---------|
| Sr No | Particulars | Year | | | |
| | | 2007-12 | 2012-17 | 2017-22 | 2022-27 |
| 1 | Cargo to be Handled (in Million Tonnes) | 21.02 | 40.76 | 65.78 | 108.65 |
| 2 | Total No of TEUs | 1.31 | 2.55 | 4.11 | 6.79 |
| 3 | No. of Vessels | 900 | 1,350 | 1,800 | 2,525 |
| 4 | AV parcel size (TEU's) | 1,460 | 1,887 | 2,284 | 2,689 |
| | Average length of berth required | 200 | 250 | 350 | 350 |
| 5 | No. of days at berth per ship | 1.6 | 1.7 | 1.5 | 1.5 |
| 8 | No of Berths required | 4.7 | 7.8 | 9.0 | 12.6 |
| 6 | Total length of berths | 944 | 1947 | 3150 | 4419 |
| 10 | No of Berths of average 275.00 | 3.4 | 7.1 | 11.5 | 16.1 |

| | | | | | |
|-----------|---|--------------|--------------|--------------|--------------|
| | length | | | | |
| 11 | Existing Container Terminal No. 1 having 4 berths of 200.00 m length each | 885 | 885 | 885 | 885 |
| 12 | No of Berths of equivalent length of 275.00 m | 3.22 | 3.22 | 3.22 | 3.22 |
| 13 | No of Berths additionally required | | | | |
| 13.1 | Total length of Berths required to be developed | 58.80 | 1061.59 | 2265.00 | 3533.75 |
| 13.2 | No of Berths of equivalent length of 275.00 m required to be developed | 0.21 | 3.86 | 8.24 | 12.85 |
| 14 | Berths to be newly developed | | | | |
| 14.1 | Container Terminal-2 | | | | |
| | Proposed Berth length | 800.00 | 800.00 | 800.00 | 800.00 |
| | Proposed No. of Berths | 2.91 | 2.91 | 2.91 | 2.91 |
| 14.2 | Container Terminal-3 | | | | |
| | Proposed Berth length | 0.00 | 655.00 | 655.00 | 655.00 |
| | Proposed No. of Berths | 0.00 | 2.38 | 2.38 | 2.38 |
| 14.3 | Container Terminal-4 | | | | |
| | Proposed Berth length | 0.00 | 360.00 | 360.00 | 360.00 |
| | Proposed No. of Berths | 0.00 | 1.31 | 1.31 | 1.31 |
| 14.4 | Container Terminal-5 | | | | |
| | Proposed Berth length | 0.00 | 0.00 | 853.00 | 853.00 |
| | Proposed No. of Berths | 0.00 | 0.00 | 3.10 | 3.10 |
| 15 | Total additional Berths possible to be developed | | | | |
| 15.1 | Total proposed berth length | 800.00 | 1815.00 | 2668.00 | 2668.00 |
| 15.2 | Total no. of proposed berths (each 275 m) | 2.91 | 6.60 | 9.70 | 9.70 |
| 16 | Net deficit in development of additional Berths | | | | |
| 16.1 | Net deficit in total length of Berth | -741.20 | -753.41 | -403.00 | 865.75 |
| 16.2 | Net deficit in no of Berths | -2.70 | -2.74 | -1.47 | 3.15 |

As can be seen from above calculation, there is no impact on the port's capacity against change in berth requirement. This scenario only indicated additional surplus of 1.31 berths in Phase-2 i.e. 2.74 against 1.43 berths.

Connectivity

With Iron ore shifting to Ennore port port's capacity calculation against connectivity is presented below:

Calculation of increased rail capacity

| Sr. No | Particulars | Year | | | |
|--------|---|-----------|-----------|-----------|-----------|
| | | 2007-2012 | 2012-2017 | 2017-2022 | 2022-2027 |
| 1 | No. of containers presently being handled by rail | 49,420 | 49,420 | 49,420 | 49,420 |

| | | | | | |
|---|---|----------------|----------------|----------------|----------------|
| 2 | Additional capacity created by shifting Coal & Iron Ore | 0 | 174,852 | 174,852 | 174,852 |
| 3 | Additional capacity created by developing an Off-Dock facility at Tondiarpet Housing Colony | 144,000 | 144,000 | 144,000 | 144,000 |
| 4 | Total Nos. of containers which can be handled using rail links (in teu) | 193,420 | 318,852 | 318,852 | 318,852 |

With this enhanced rail mode capacity to handle containers, the expected percentage share of targeted traffic by rail and road mode is presented in Table No- 1.4-13:

Phase-wise rail and road share

| Sr. No. | Phase | Rail mode | Road mode |
|---------|-----------|-----------|-----------|
| 1 | 2005-2006 | 6.73% | 93.27% |
| 2 | 2017-2012 | 11.98% | 88.02% |
| 3 | 2012-2017 | 20.11% | 79.89% |
| 4 | 2017-2022 | 20.22% | 79.78% |
| 5 | 2022-2027 | 5.42% | 94.58% |

Road Mode

Now, with this modal share for road in the last year of each phase, the total containers which are to be handled by road are estimated and further the connectivity issues are analyzed. Details are provided in the Table No- 1.4-14.

Analysis of port's capacity with respect to road connectivity

| Sr. No | Particulars | Year | | | |
|--------|--|-----------|-----------|-----------|-----------|
| | | 2007-2012 | 2012-2017 | 2017-2022 | 2022-2027 |
| 1 | Total Number of Mteu to be handled | 1.61 | 2.54 | 4.11 | 6.79 |
| 2 | % traffic to be transported by rail mode | 11.98 | 20.11 | 20.22 | 5.42 |
| 3 | % traffic to be transported by road mode | 88.02 | 79.89 | 79.78 | 94.58 |
| 4 | Traffic in Mteu to be handled by road per annum | 1.42 | 2.03 | 3.28 | 6.42 |
| 5 | Traffic in teu to be handled by road per day (assuming 300 working days per annum) | 4735 | 6783 | 10934 | 21408 |
| 6 | Traffic in teu to be handled by road per hour (assuming 18 working hours per day) | 263 | 377 | 607 | 1189 |
| 7 | Total no. of lanes for container movement | 8.0 | 8 | 10 | 12 |

| | | | | | |
|----|---|-----------|-----------|-----------|-----------|
| 8 | No. of Trucks/ teu to be handled per lane/hour on the port gate | 33 | 47 | 61 | 99 |
| 9 | No. of trucks which are to be handled at any gate with 4 lane (2 inbound + 2 out bound) | 132 | 188 | 243 | 396 |
| 10 | Average no. of trucks which can be handled per lane | 50 | 50 | 60 | 60 |
| 11 | No. of trucks which can be handled on any gate | 200 | 200 | 240 | 240 |
| 12 | Net Deficit (9-11) in Nos | -68 | -12 | 3 | 156 |

Note: Negative (-) deficits indicates surplus

* In this scenario, the need of further expansion of both the gates is envisaged. Addition of 2 more lanes to one of the gates is considered in phase 3 and similarly the addition another 2 more lanes to another gate is considered in phase 4.

The table below indicates the analysis of port's capacity against road connectivity for transporting cars:

Analysis of port's capacity with respect to road connectivity for transporting cars for exports

| Sr No | Particulars | Year | | | |
|-------|---|-----------|-----------|-----------|-----------|
| | | 2007-2012 | 2012-2017 | 2017-2022 | 2022-2027 |
| 1 | No. of Cars expected to be handled | 202,696 | 357,219 | 629,542 | 700,000 |
| 2 | No. of cars transported in one trailer | 6 | 6 | 6 | 6 |
| 3 | Total No. of trailers required for transporting forecasted nos. of cars | 33,783 | 59,537 | 104,924 | 116,667 |
| 4 | Total numbers of trailers to be handled by road per day (assuming 345 working days per annum) | 98 | 173 | 304 | 338 |
| 5 | Number of trailers to be handled by road per hour (assuming 20 working hours per day) | 5 | 9 | 15 | 17 |
| 6 | No. of dedicated lanes for car trailer movement | 1.0 | 1.0 | 1.0 | 1.0 |
| 7 | No. of trucks to be handled per lane/hour at the port gate | 5 | 9 | 15 | 17 |

The above analysis assesses the maximum possible capacity of port using the connectivity parameter and indicates that the maximum practical capacity of the port for container handling shall be the targeted container volume by the end of phase-3 i.e. 4.11 Mteu