



# Opportunity assessment

How can you realize the improvement potentials in your maritime based transport system?

## Purpose

Any transport system has its improvement potential; DNV can help you identify it for you. With a specific focus on energy consumption and carbon emission, cost efficiency can be improved while building a sustainable and agile transport system.

## Benefits

By applying a vulnerability assessment to your transport system the following benefits can be achieved:

- Higher capacity utilization of the transport system
- Better mix between land and sea transport
- Better adaptation of the service level and thereby reduced emissions and cost
- Improved route planning to serve a set of costumers
- Leaner and more efficient fleet better suited for your transport system

## Our approach

DNV has extensive experience with offering system analysis services across industries. Together with our unique knowledge of the maritime sector and state-of-the-art maritime logistics expertise, this will guarantee high quality services from highly skilled people.

To ensure high quality assessments we use our own GEEC methodology, combined with an extensive tool kit including:

- Purpose-built transport system optimization software
- PCT – Vessel design/operation benchmarking and improvement tool
- World leading routing software

Our holistic approach covers operational, contractual and organizational aspects and will help you realize your savings potential.

## Adaptation of service levels

With service level we here understand the number and location of ports, the frequency with which the routes are operated, and the volume capacity of these routes. We help you to provide the best service for your customers by adaptively configuring these elements. To meet a global customer with complex needs, evaluation of service level differentiation is central to provide the right level of service at a minimal cost.

## Tactical routing and fleet utilization

Given a service level, we provide tactical route and fleet options to improve your transport system. The whole perspective from hub to hub is considered for different alternatives, and then optimized with respect to fuel cost and/or emission to air.

To equip you for better decision-making, we can provide you with alternative route scenarios with respect to desired slack, planned dockings, volume fluctuations, future speed limits or emission control areas.

Market fluctuations occur, either predictably (seasonal) or unpredictably (market). This may result in significant slack in a transport system. We can assist you to plan ahead how to utilize this slack. Should we slow steam or is it better to take a vessel into layup, when could it be taken out and what alternative use is the most profitable?

## Realize your potential

In the spring of 2008 we were approached by a major vessel owner/operators to help them with an environmental assessment of their planned service offering to a major client. The client was looking for an operator to run a maritime distribution, and the operator wanted to show the client that it could do this in a cost efficient manner, as well as being proactive when it came to GHG emission.

By a systematic variation of the parameters on the suggested route system, and by adding inland data, we managed to uphold the expected service level, cut 14 % of the overall cost and reduce system carbon emission by 17 %.

## Terminal choice

To expand the value of routing optimization, terminal choice analysis regards the number and location of terminals. A terminal in this context could for example be a port, warehouse or distribution center. Using the correct number of ideally located terminals ensures you the possibility to operate at minimal cost and thereby getting a competitive edge. DNV will help you select the best terminals among a discrete pre-selection.

## Contract efficiency improvement

By working together with our partners in the maritime law community we will first identify clauses in your contractual packages that hinder efficient and sustainable operation. After doing scenario analyses the actual cost of crucial clauses will be quantified and replacement clauses will be suggested.

## Fleet/infrastructure compatibility

By looking at how technical solutions on the vessel fits with shore side infrastructure, and how well suited the ship is to the overall cargo handling system in which it operates, an assessment of the vessel performance is made.

We further suggest a set of approaches that will cut the time and/or energy the vessel spends in port, and thereby releasing the vessel to spend more time sailing. The added sailing time can be used for additional cargo work, or to slow steam in order to cut costs.

