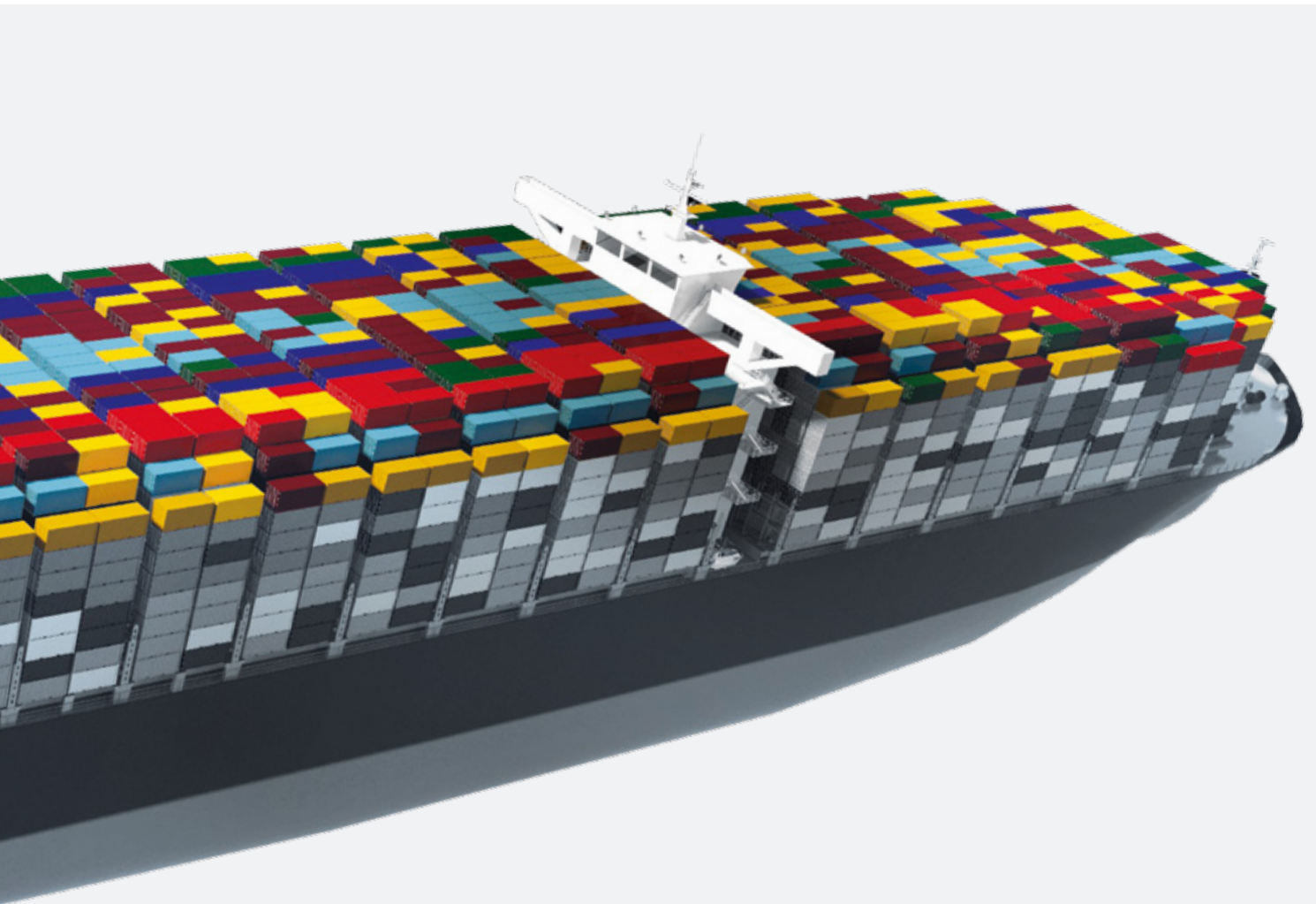


Before you commit to a ship, here is  
how to maximise its earning potential



**CARGO SYSTEM PRE-ORDER PRODUCTIVITY EVALUATION FOR EXISTING CONTAINER VESSELS**

# How can you be sure that a cargo system upgrade will pay off?

Market needs, routes and cargoes change over a ship's lifetime. At some point the original cargo handling system may not meet the requirements of the current cargo profile\* and an upgrade might be necessary to improve the ship's earning potential.

We believe that all existing container vessel cargo systems on board can be upgraded, and have set our minds to this challenge because we understand the whole cargo system.

The starting point for our upgrade process is to define a container stowage arrangement that includes a combination of hatch covers, lashing bridges, lashing components, and bearing pads to enable your vessel to carry the maximum payload possible.

We work on a turnkey delivery basis and can take overall responsibility for the upgrade project from design and sourcing through to delivery. We have the tools to analyse your ship's business profile and maximise the amount of cargo it can carry in relation to deadweight tonnage. We will deliver proven data to demonstrate that the upgrade will pay off well before the ship is ready to be docked. This is how we do it:



\* MacGregor defines cargo profile as the distribution of containers on board a ship in terms of container sizes and container weights, operating on a particular route.

## 1. Preliminary feasibility study

### Current ship or fleet analysis

A good starting point is an analysis of the vessel's current particulars: cargo profile, the routes it serves and the distribution – in terms of size and weight – of the containers it carries. All available technical material such as original drawings are useful.

### Earning evaluation

We can propose a concept that will deliver additional potential earnings for your vessel and suggest the optimal corresponding design and hardware. At this stage the proposed cargo system is evaluated against the ship's business profile. This is known as the Individual Earning Report (TIEReport 1.0). As a result of this evaluation, it will become clear if the proposed upgrade is feasible or not.

## 2. Cargo system definition

### System requirements

MacGregor will need to know what routes the ship intends to serve and the profile of the cargo that it will carry after the upgrade. It is also possible to determine the type of cargo that will deliver the best earnings and how the cargo system can support the ability to carry this cargo.

The definitive requirements for the cargo system are specified at this stage. These include, for example,

container stack weights and heights, which are checked against the selected GM. The nominal capacity and the actual cargo-specific capacity per container weight and size can be a part of this phase.

### Earning case requirements

Based on an analysis of the whole ship's cargo system, bay by bay, we define the proposed concept in terms of earning ability and investment.

## 3. Verification of the proposed cargo system

### Evaluation of the investment profile

We produce the Individual Investment period Earning Report (TIEReport 2.0) to demonstrate and validate the earning ability of the proposed cargo system specification as the basis for an investment decision. For this analysis the ship's cargo profile, especially the anticipated route and cargoes and cost structures need to be known. The ship's existing Baplie files, from which we can generate the cargo profile, are useful.

With the TIEReport 2.0 complete, it is possible to compare the existing vessel and the proposed upgrade concept and obtain the necessary figures to support the decision-making process.

### Evaluation of the ship's structures

Although the existing hull is considered in step 2, the purpose of this evaluation is to verify that it can carry the proposed cargo profile from a strength and stability perspective and to suggest any necessary hull strengthening or modifications.

## 4. Final cargo system technical specification and docking arrangements

Finally, the new system is specified in detail and an inquiry specification to support shipyard negotiations is produced, along with our quotation for the actual upgrade work.

We can be responsible for the project from definition, through the design process, to the delivery of the hardware

and software. This can include docking arrangements and experienced project management, supervision and commissioning of local personnel on site, as well as component supply and logistics. We can also undertake financing arrangements.

The efficiency of a container ship's cargo system has an immediate effect on the ship's earning potential and on the return of investment throughout the ship's lifetime. It makes good economic sense to invest in a system that provides a competitive edge and takes full advantage of a new or existing ship's earning potential from day one.



Lloyd's Register Quality Assurance certifies that the Quality Management System for Cargotec Marine is ISO 9001:2008 compliant.

**MacGregor** is the world's leading brand of engineering solutions and services for handling marine cargoes and offshore loads. MacGregor products serve the maritime transportation, offshore and naval logistics markets, in ports and terminals as well as on board ships. Our cargo flow solutions integrate cargo access, stowage, care and handling functions to suit a particular ship's cargo profile. This benefits its productivity, environmental impact and profitable service lifetime. MacGregor is part of Cargotec. Cargotec's class B shares are quoted on NASDAQ OMX Helsinki.

Published by **MacGregor**. Copyright © MacGregor June 2013. All rights reserved. No part of this publication may be reproduced, stored, photocopied, recorded or transmitted without permission of the copyright owner.



**Dry Cargo**

[drycargosales@cargotec.com](mailto:drycargosales@cargotec.com)

tel. +358 2 41211

fax +358 2 4121 256

[www.macgregor-group.com](http://www.macgregor-group.com)