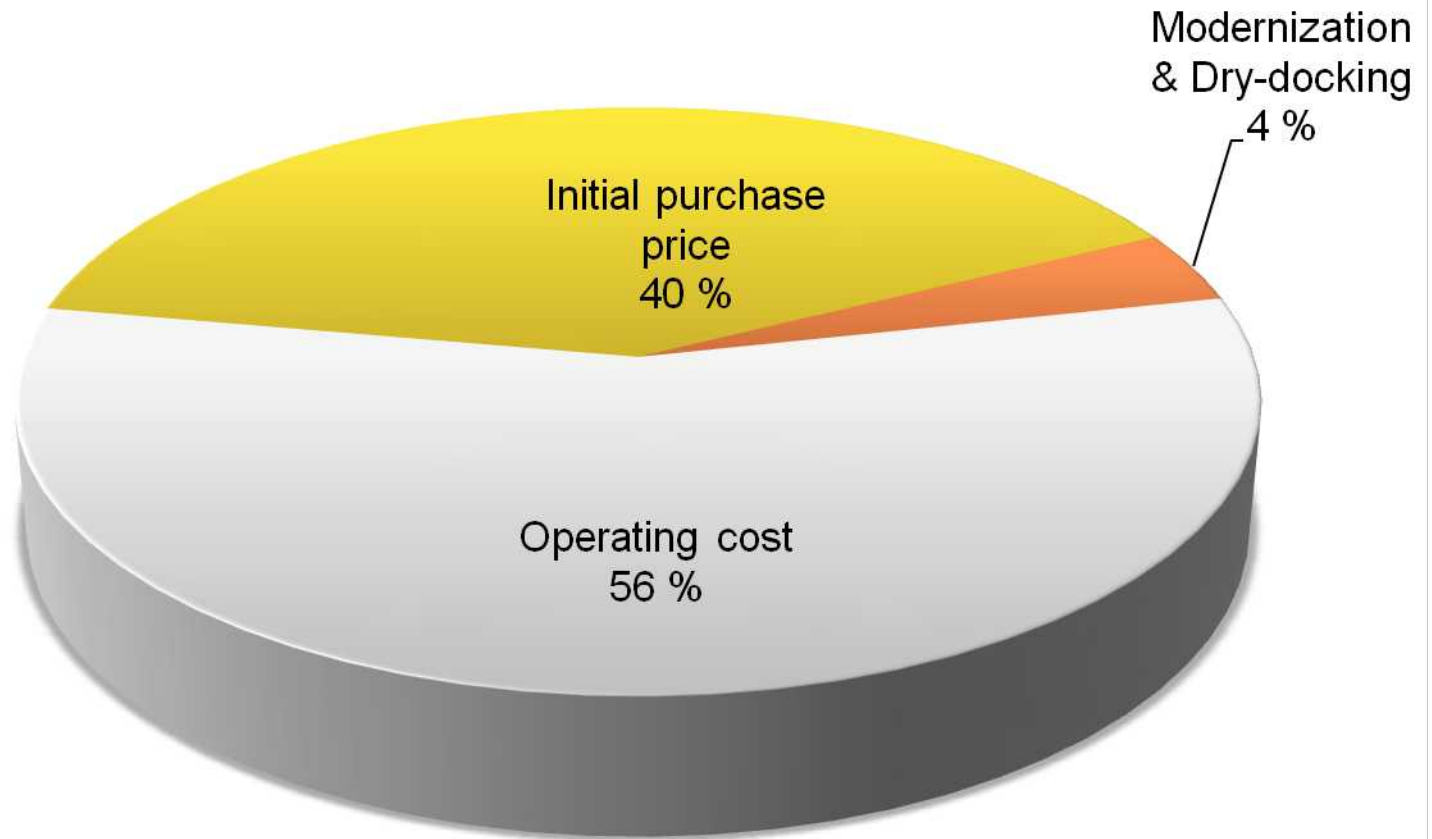


# SHIP LIFECYCLE MANAGEMENT, THE KEY TO SUCCES

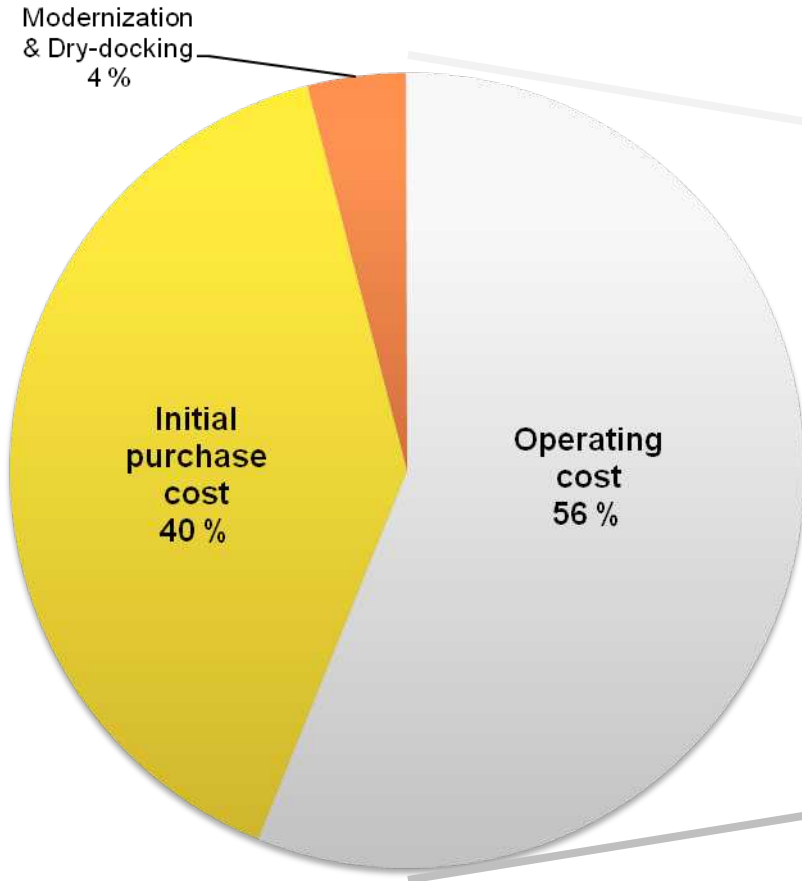
# Cost of ownership



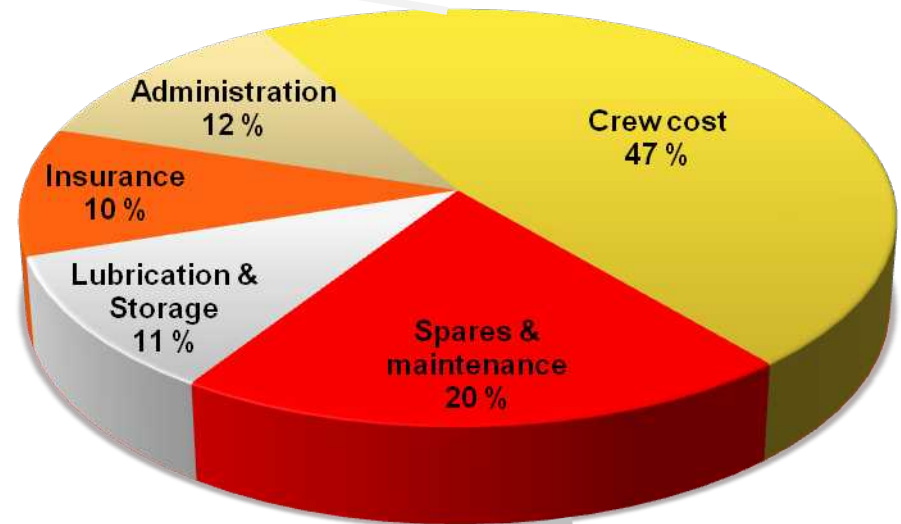
Example of 30 years cost of ownership for a typical RoRo vessel, excluding fuel oil costs and capital costs

# Operating cost is dominant

Total cost of ownership (30yrs)

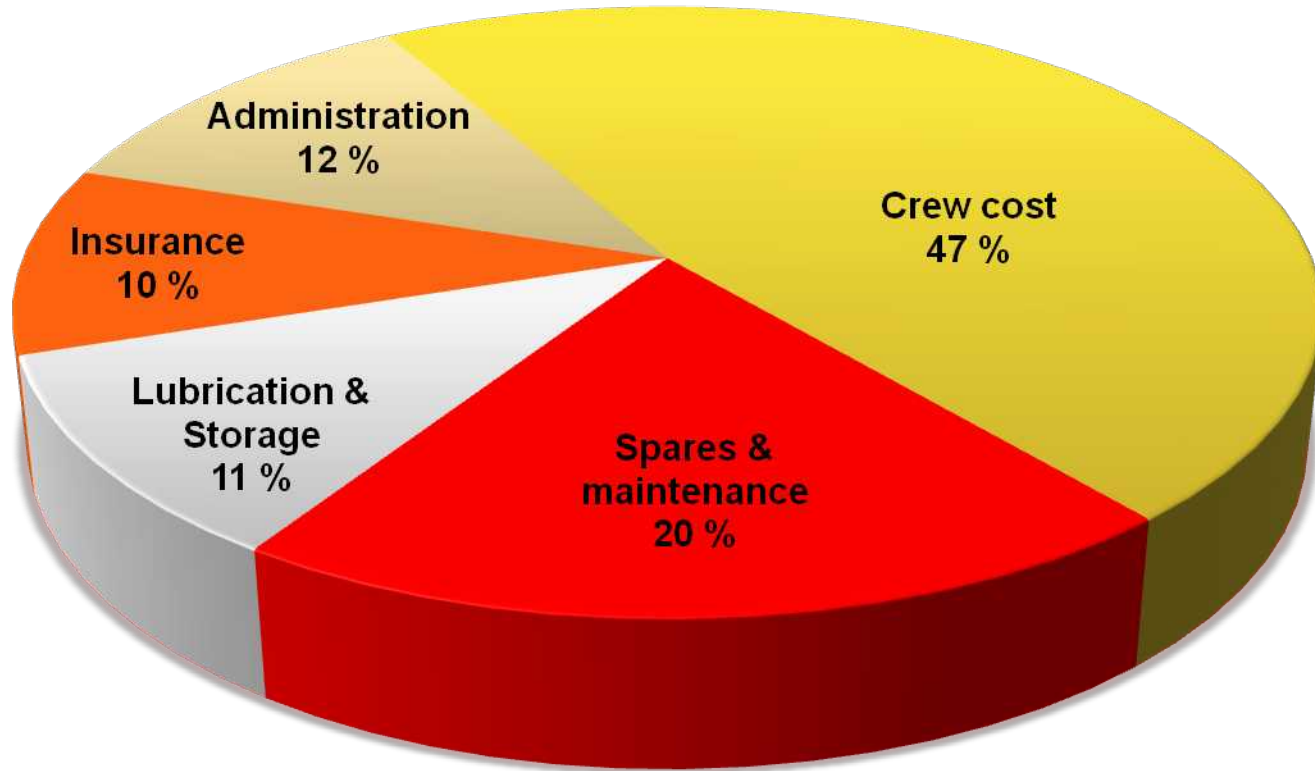


Operating costs



Roro vessel, excluding fuel oil costs and capital costs

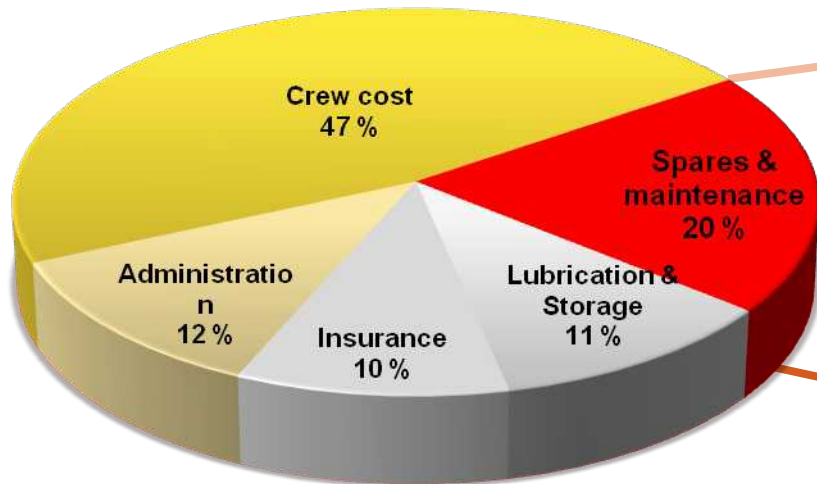
# Breakdown of ship operation cost



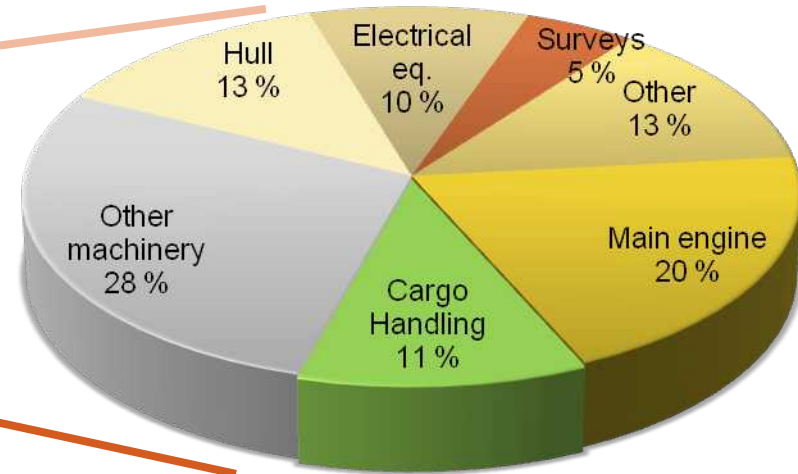
Roro vessel, excluding fuel oil costs and capital costs

# Spares & Maintenance are of major importance

Operating costs

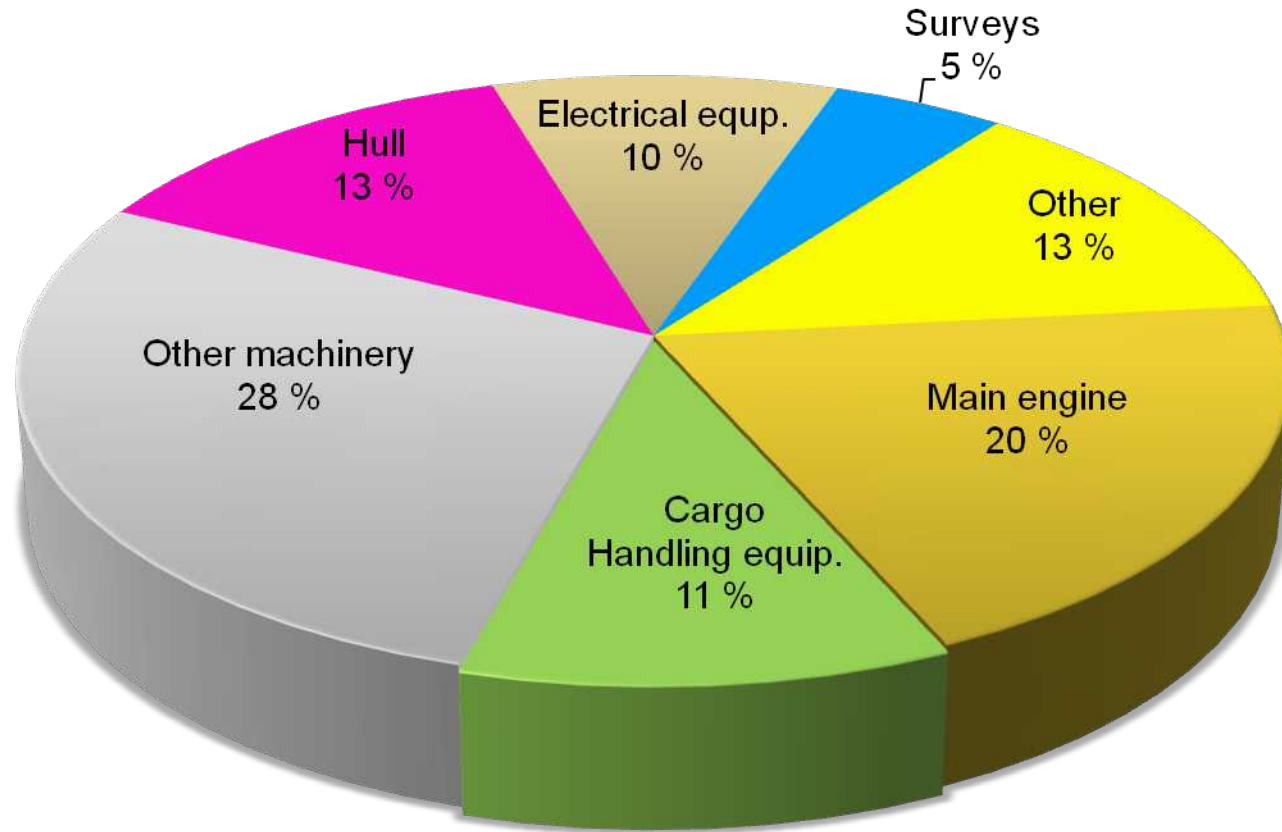


Spares & Maintenance cost



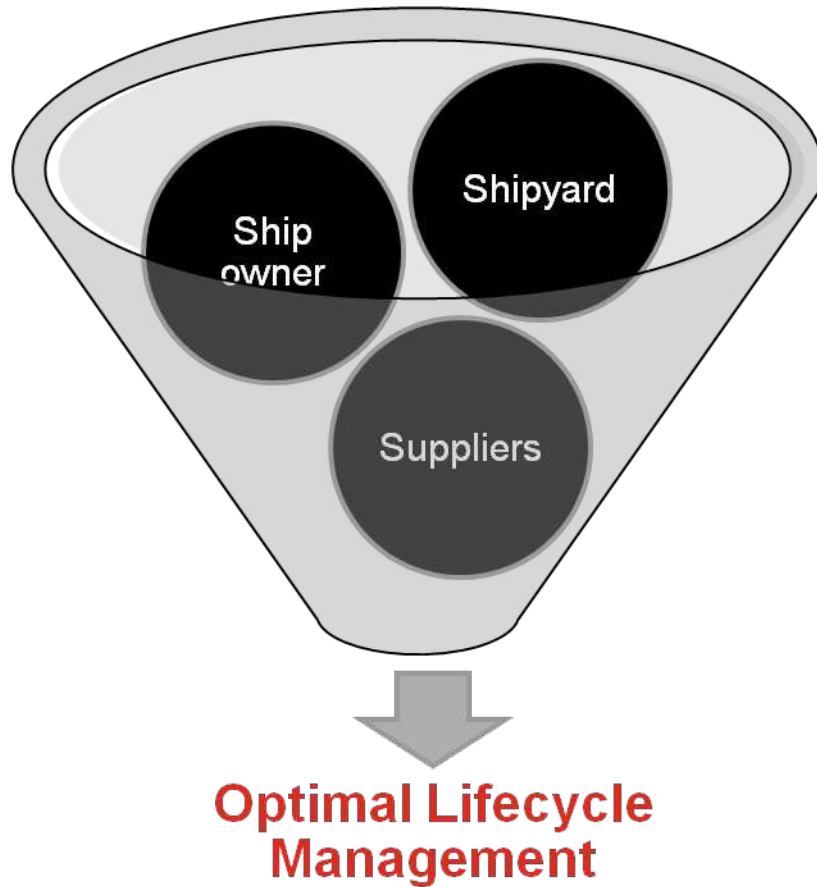
Roro vessel, excluding fuel oil costs and capital costs

# Breakdown of Spares & Maintenance cost

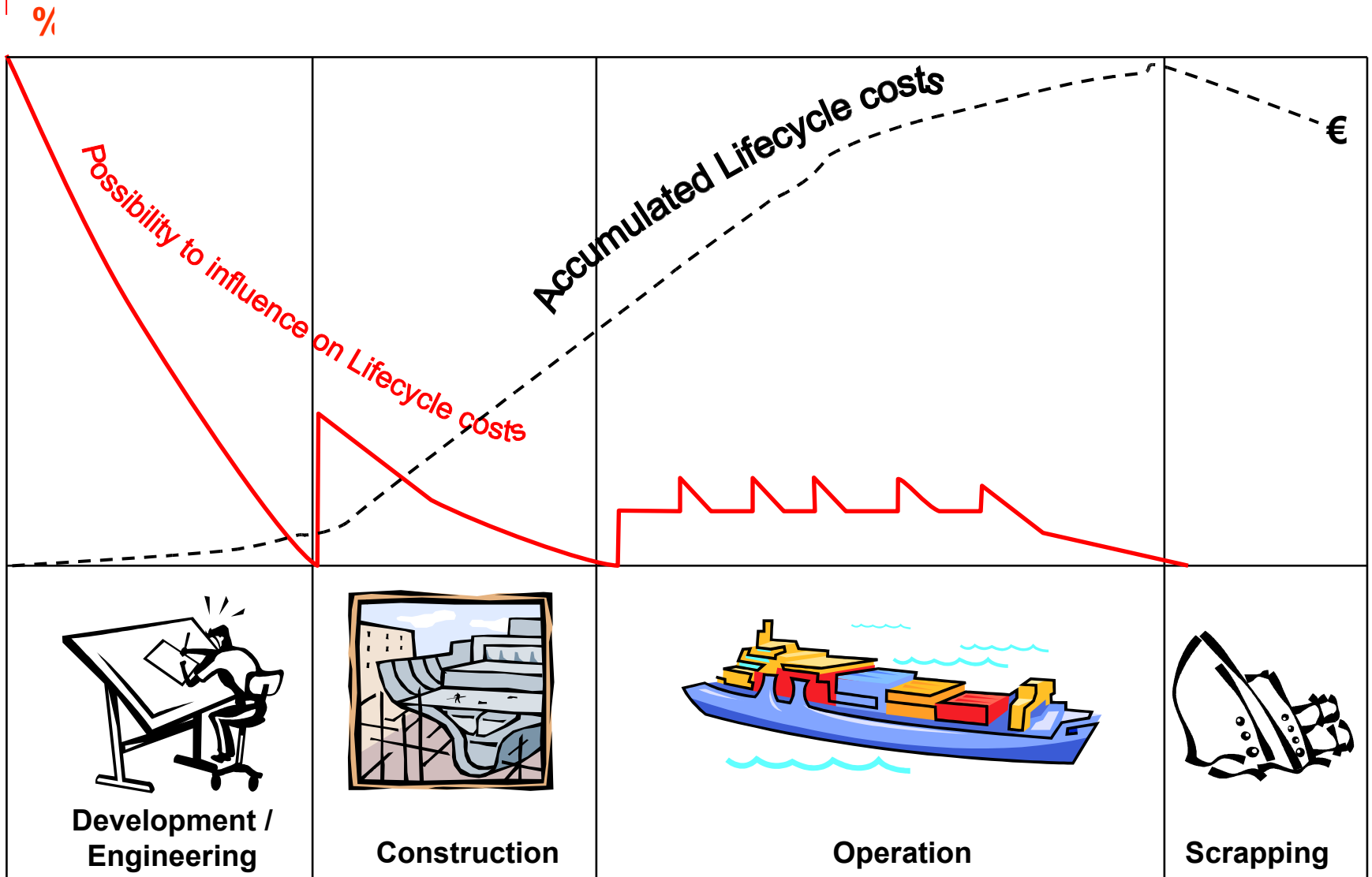


**How can we find cost savings for owner, shipyard and suppliers?**

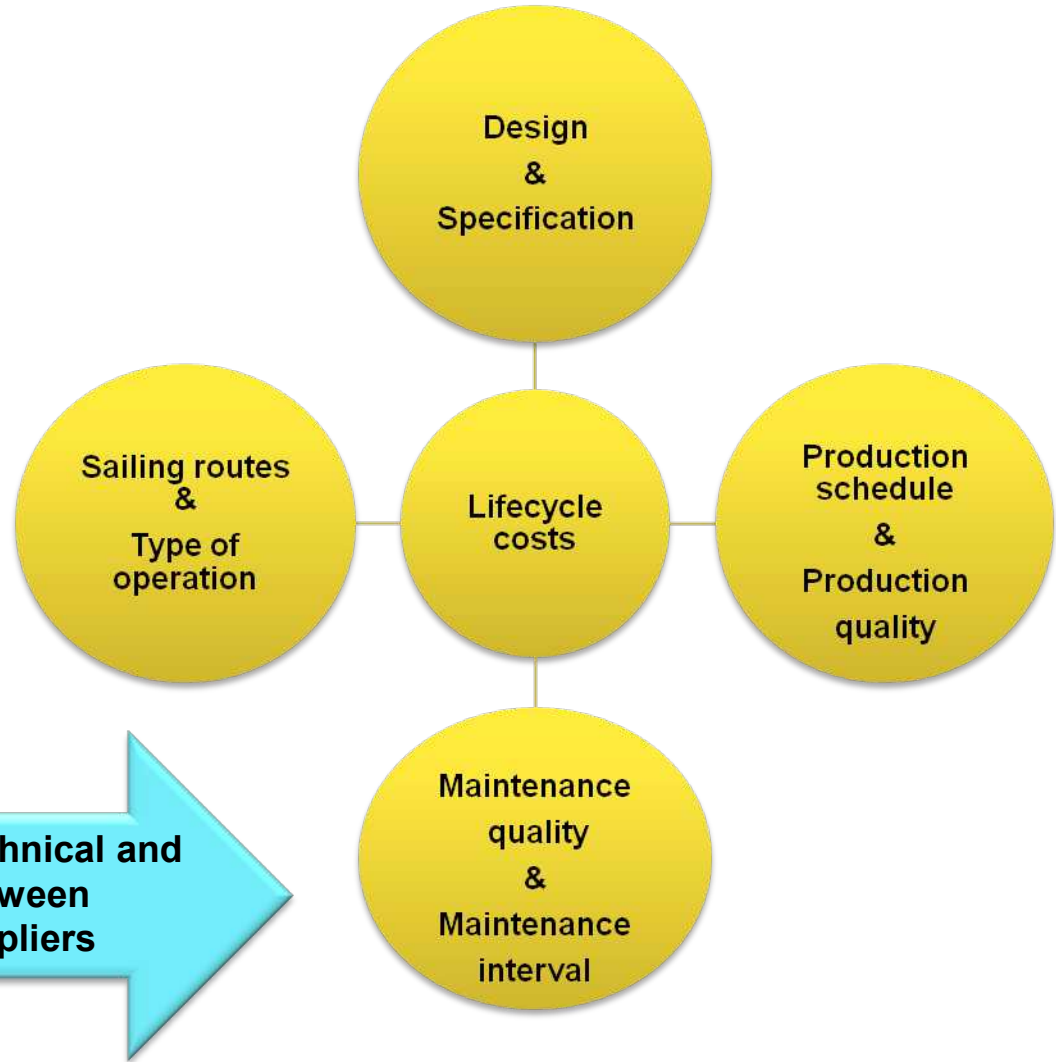
**Cost savings can be reached only when all parties work in close symbiosis**



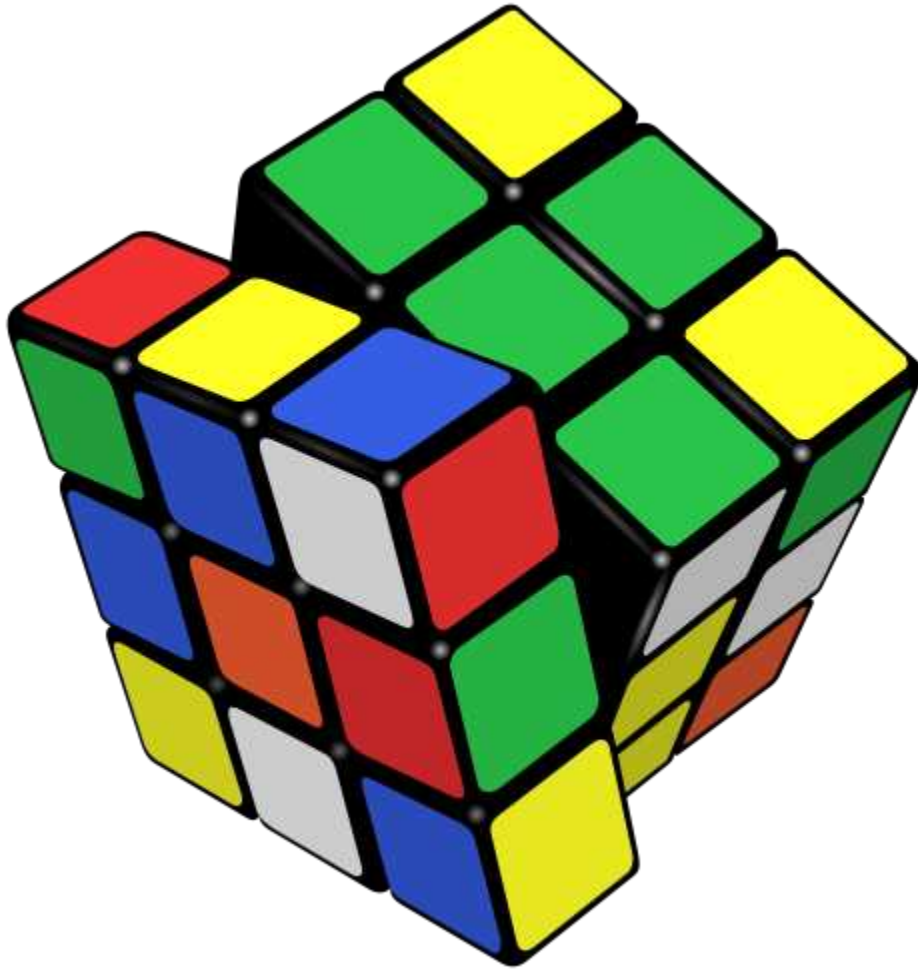
# Ships Lifecycle Cost



# Factors impacting on equipment lifecycle cost



# To highlight the complexity of managing information....



**Rubic's Cube consist of :**

**27 small cubes**

**Containing 6 different sides**

**Each vessel consist of:**

**100 Suppliers providing**

**800 different pieces of  
equipment**

**containing about 1000  
different parts**

# Standardising equipment data benefits owner and supplier





# MacGREGOR way of thinking

- ❑ The reasons for MacGREGOR participating in SHIPDEX™ working group
  - Showing good will when invited by large customers
  - A wish to contribute to the development within shipping and to have an influence on the new standard.
  - Get positive PR
  
- ❑ We will implement Shipdex in our system due to
  - Customer requirements
  - A faith in the concept of SHIPDEX™
  - Minimum DTD (Document Type Definition) development costs when introducing a new information system
  - Possibility of converting to other formats still remain

# Current situation with manuals

- ✓ Cost and time consuming to produce detailed, high quality manuals.
- ✓ Manuals are more seen as a contractual obligation, than a tool to secure that operation and maintenance of equipment is made properly.
- ✓ No structured way to communicate possible changes in documentation, and assure that end user is kept up-dated.
- ✓ Possibility of misunderstandings between supplier and end user, due to different document revisions or "missing pages" in paper manuals.
- ✓ Difficult to provide feedback from end user to supplier of how manuals should be developed to user requirements



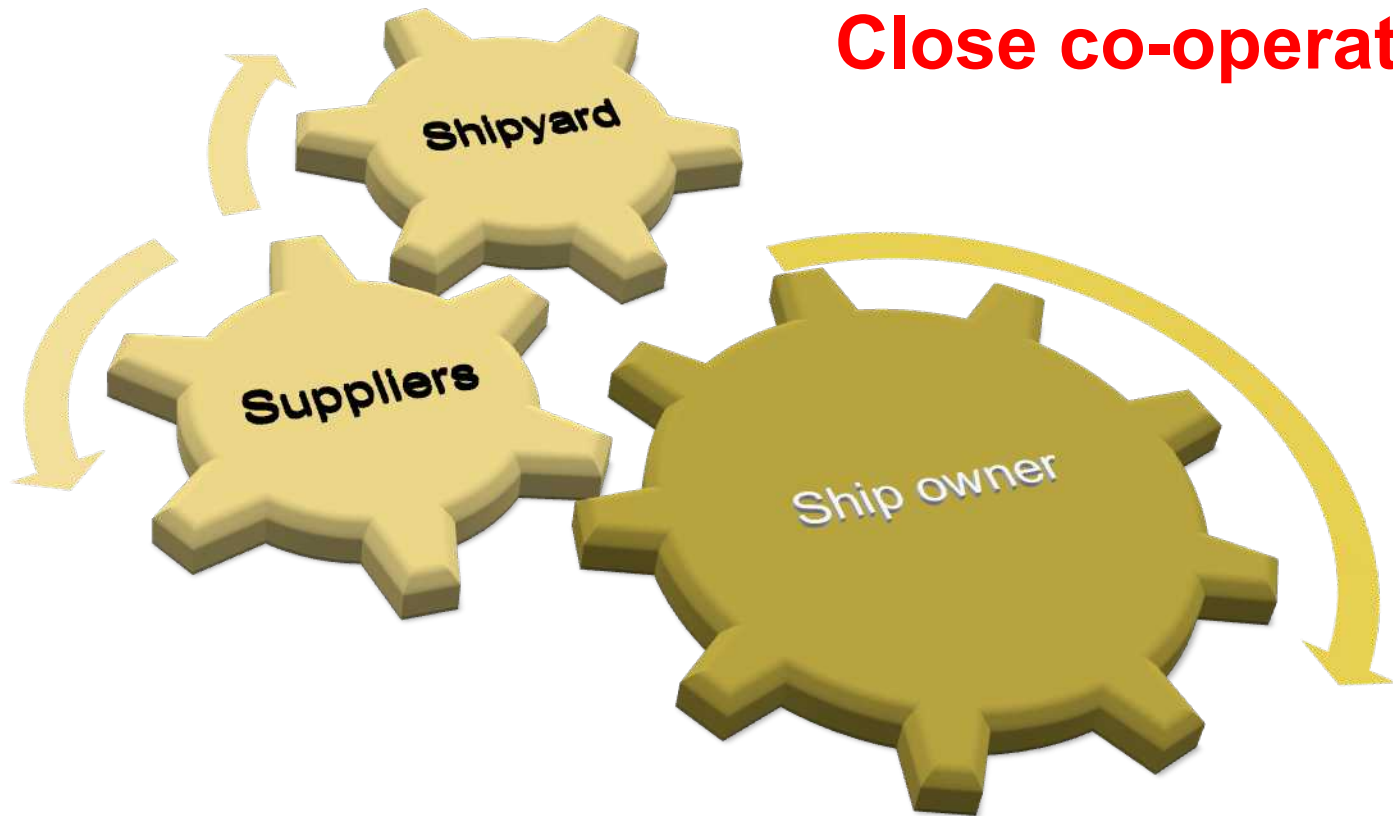
# Why XML-system and Shipdex ?

- XML increases production capacity for manuals significantly.
- Decrease the need of manual work and risks for errors
- Using Shipdex™ decreases the DTD development costs to a minimum.
- S1000D compatible, easy to adjust for other customers requiring S1000D

# Suppliers benefits of

- ❑ Direct two way communication between supplier and end user
- ❑ Structured way to collect valuable information about the equipment performance, in order to facilitate future improvements
- ❑ Less cost and administrative work to produce manuals
- ❑ Faster response times to spares inquiries
- ❑ Updates to documentation and drawings are easily communicated to the user.
- ❑ Facilitates closer relationship between end user and supplier
- ❑ Provides an competitive edge for original suppliers

# The key to succes?



**Close co-operation...**

**... and focus on Ships Lifecycle Management**