

1. TOTAL ENGINEERING PACKAGE

1.1 *Introduction*

Shipbuilding process is a complex interaction between the shipyard, owner, partners, suppliers, subcontractors, class and authorities. The complexity typically starts already during project phase and continues through design, engineering, production, installation and up to commissioning phase.

Number of partners involved in each phase may vary but co-ordination, both technical and project, plays an important role. Co-ordination between different parties, different disciplines, as well as different phases is critical and requires skills and understanding of the total process.

Information management is one of the key words in technical and project co-ordination. Technical co-ordination is important for the owner as end user of the product, but for the yard as well to avoid technical problems, non-performance and rework. Project co-ordination plays an important role throughout the process including start-up information for all related parties, boundary definitions between parties, work phase definitions, reporting and follow-up. And this holds for design as well as for production. The challenge is to manage the complex projects with all parties involved within limited time.

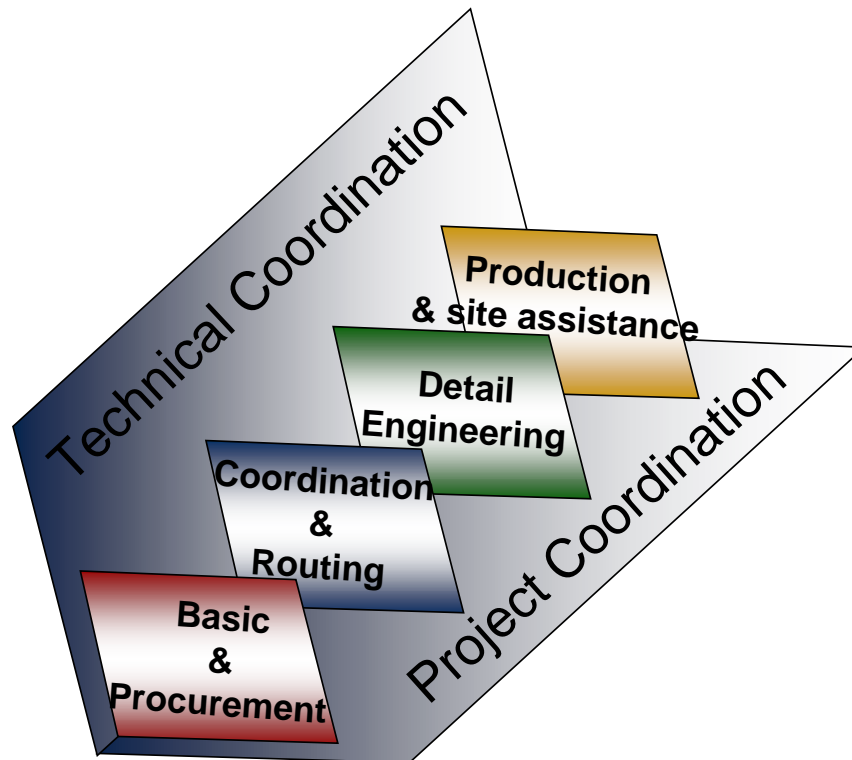
1.2 *The concept*

Total engineering package may consist of planning, basic design, procurement, co-ordination design, production planning, detail engineering as well as site assistance, including as the most important feature technical and project co-ordination with the yard and its suppliers and subcontractors, class authorities and even with owner and other parties involved, as agreed.

In today's world of networking and utilising work sharing principles the technical and project co-ordination plays an important role not only concerning the delivery time and quality but change management as well.

The final extent and scope is, of course, depending on the type of vessel, yard requirements, capacity available, position of suppliers and subcontractors, however always utilising the experience of different parties in the best possible way.

The package can be limited to a certain area or part of the vessel or it can even cover the complete ship or anything there in between. It is also possible to limit the package into certain phases or parts of phases but still including the technical and project co-ordination.



Several advantages can be highlighted:

- There is only one partner for the yard; number of interfaces can be limited.
- Information chain between different parties is shorter.
- Design, procurement and production schedules are synchronised and information exchange co-ordinated.
- Design and engineering documentation supporting building method, practises and subcontractor involvement.
- Technical and project co-ordination easier, management and follow-up systems available.
- Shorter lead times.
- Change management is easier.

Our references include different types of vessels, e.g. ro-ro passenger ferries, passenger cruise ships, ro-ro ships and other special ships.

Our customers include both shipyards and major subcontractors.