



# WONDERMAR Workshop Gdansk - 1 March 2002

Technology Review  
Supply Chain & Logistics

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## *Content*

- Introduction
- Methodology for gathering information
- Report of first results
- Future activities
- Conclusion



## Shipbuilding Information Society Review – An Introduction

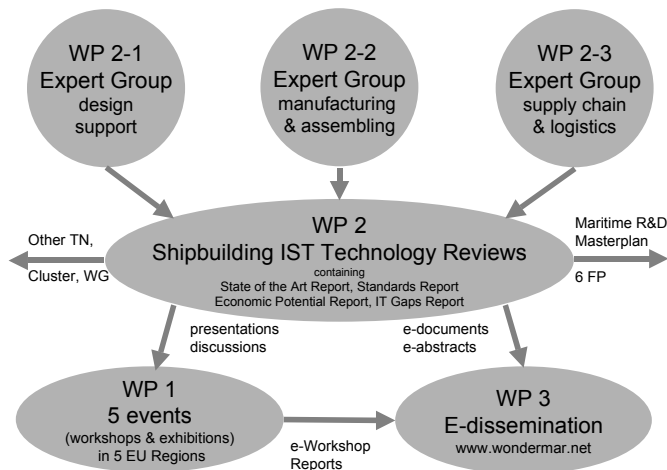
- Idea: Provide a comprehensive overview of
  - State-of-the-art in the shipbuilding IT support
  - Standards used
  - Economic potential of new technology
  - IT gaps to be covered by future projects and developments
- Three expert groups
  - Design support
  - Manufacturing & Assembly
  - Supply chain & Logistics
- Iterative approach
  - First version in March 2002
  - Updates once a year



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## Shipbuilding IST Technology Reviews and Expert Groups



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## Questions to be answered - 1

### ■ State-of-the-art

- Analysis of current situation and available solutions
- How are the processes organised?
- What technology is used?
- Which software tools are used?
- What are the weaknesses?

### ■ Standards

- Which exchange formats are used?
- How is the acceptance of standards?
- What does the standards prevent from being used?



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## Questions to be answered - 2

### ■ Economic potential (starting in version 2)

- What new technologies and developments do exist?
- Are they suitable for being used in the shipbuilding industry?
- What will be the impact of using them in economic terms?

### ■ IT gaps

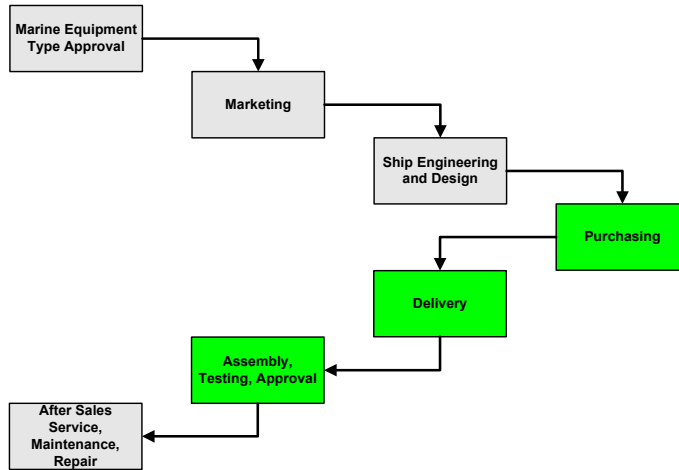
- What problems cannot be solved with existing solutions?
- What type of project/development would help?



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## Processes covered - 1



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## Processes covered - 2

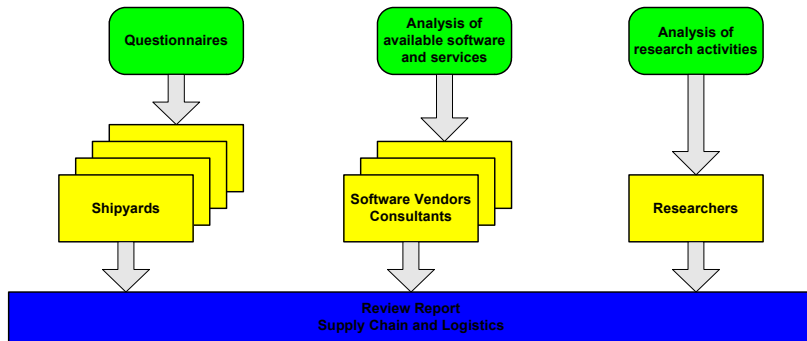
- Purchasing
  - Pre-order processing
  - Order processing
  - Prepare RFQ
  - Analyse quote, negotiate, submit order
- Delivery
  - Delivery planning
- Assembly, testing, approval
  - Receiving and storing equipment at the yard
  - Issue material to production



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## Overview of Results - 1



## Overview of Results - 2

- Questionnaire was answered by the yards
- Other partners used process structure as base for own investigations
- First questionnaire round could be seen as
  - Test of the questions
  - Starting point for detailed views on specific tasks



## *Observations in the European Shipbuilding Industry - 1*

### ■ General findings

- Computers are available for all employees in supply chain & logistics departments
- E-Mail is typically available to all employees for internal and external use
- WWW access is granted to departments needing it
- Use of EDI is limited



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## *Observations in the European Shipbuilding Industry - 2*

### ■ Purchasing process

- Paper mail, fax and phone are still more important than e-mail or WWW
- Internally the process is completely IT supported (either using in-house or external software (e.g. MARS))
- Use of WWW for request for quotes or order processing only in research and pilot projects (typically with selected suppliers)
- Importance of e-procurement is seen for the future
- Actual ordering typically by personally signed letters



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## *Observations in the European Shipbuilding Industry - 3*

- Delivery and Storing at the yard
  - Major problem: Getting information about delivered supplies into the software systems
  - Assignment of delivered products to corresponding orders
  - Solution: Using bar coding to easily transfer information



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## *Software Solutions*

- In-House solutions covering purchase and delivery processes
- Systems developed specifically for shipbuilding industry
  - MARS
  - GIGROS, RAMOS, SpaceMan, Feedback
- Standard software systems to be customised by vendors and consultants
  - SAP
  - Baan
  - ....
- DBMS typically standard software
  - Oracle
  - UDB (DB/2)
  - MS SQL Server



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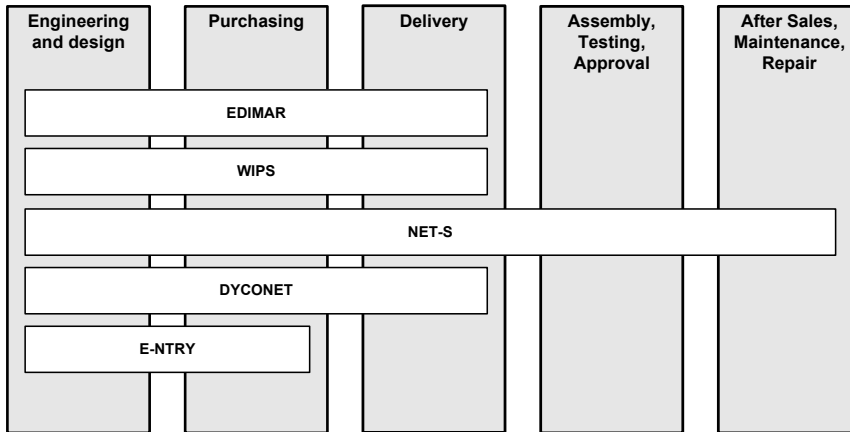
- Data is often exchanged as
  - MS Office Document (Excel)
  - ASCII file customised to the requirements of a specific exchange process
- „Official“ Data exchange standards are not widely used
- Reasons
  - Small suppliers without the possibility to use complex and expensive systems
  - Suppliers are not only focused to shipbuilding industry
  - Large orders (turnkey systems with small interfaces) reducing the need for data exchange on shipyard side
- Internet portals only in experimental use



- First step: Determine which processes and components cause what cost
- Solutions will be presented for current problems
- Assessment of economic potential by industry and consultants
- First results will be available in 2nd release of reports







- Most supply chain related projects cover branches other than shipbuilding
- Delivery and storing of material has not been investigated deeply
- To do: Check whether results of other branches can be transferred into maritime industry
- Cover remaining gaps
  - Analyse and adapt existing solutions from different contexts
  - Industry to carry out development
  - Initiating research projects



- Before end of March 2002
  - Detailed evaluation of questionnaire results
  - Publishing Shipbuilding IST review report
- Preparation of second release
  - Distributing questionnaire to a broader audience
  - Detailed analysis of supply chain management software
  - Discussing new developments with industry to judge economic potential
- Presenting results
  - Wondermar workshop in Lisboa, March 2003



- First analysis of IST support for shipbuilding supply chain & logistics has been finalised
- Results will be published in late March 2002
- Two further iterations will enhance the results, leading to a comprehensive IST review as a European standard document
- IT Gaps will be covered by setting up research and development projects



- Interested companies will be invited to take part in the next round of questionnaires
  - Advantage: More comprehensive and complete report which helps the entire shipbuilding industry
  - Access to results will be given to contributors on return
  - Suppliers not yet present in the project
  - More information and contact via [www.wondermar.net](http://www.wondermar.net)

