



# Supply chain and logistics in the maritime industry

-

## Future scenarios

### Presentation and Discussion



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# *Bakker Sliedrecht Electro Industrie B.V.*



WONDERMARI

10 march 2004



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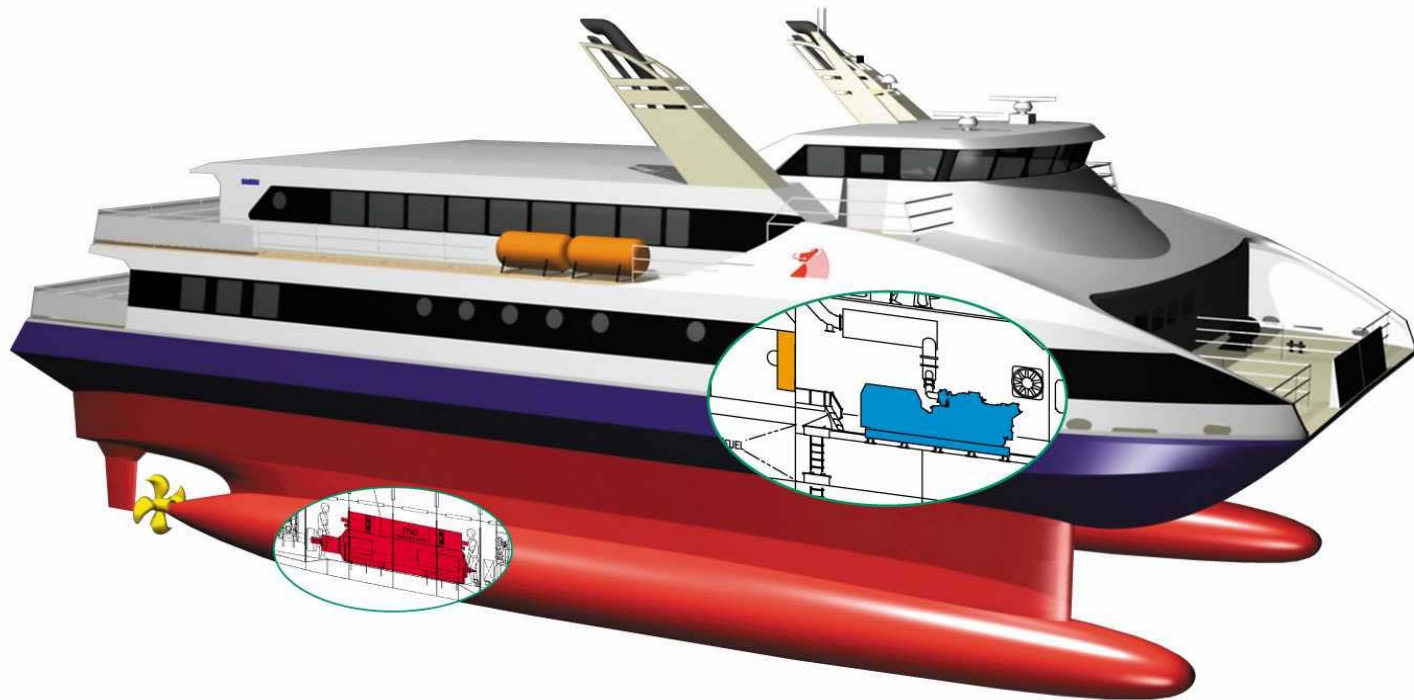
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# *Supplier of Electrical Systems*

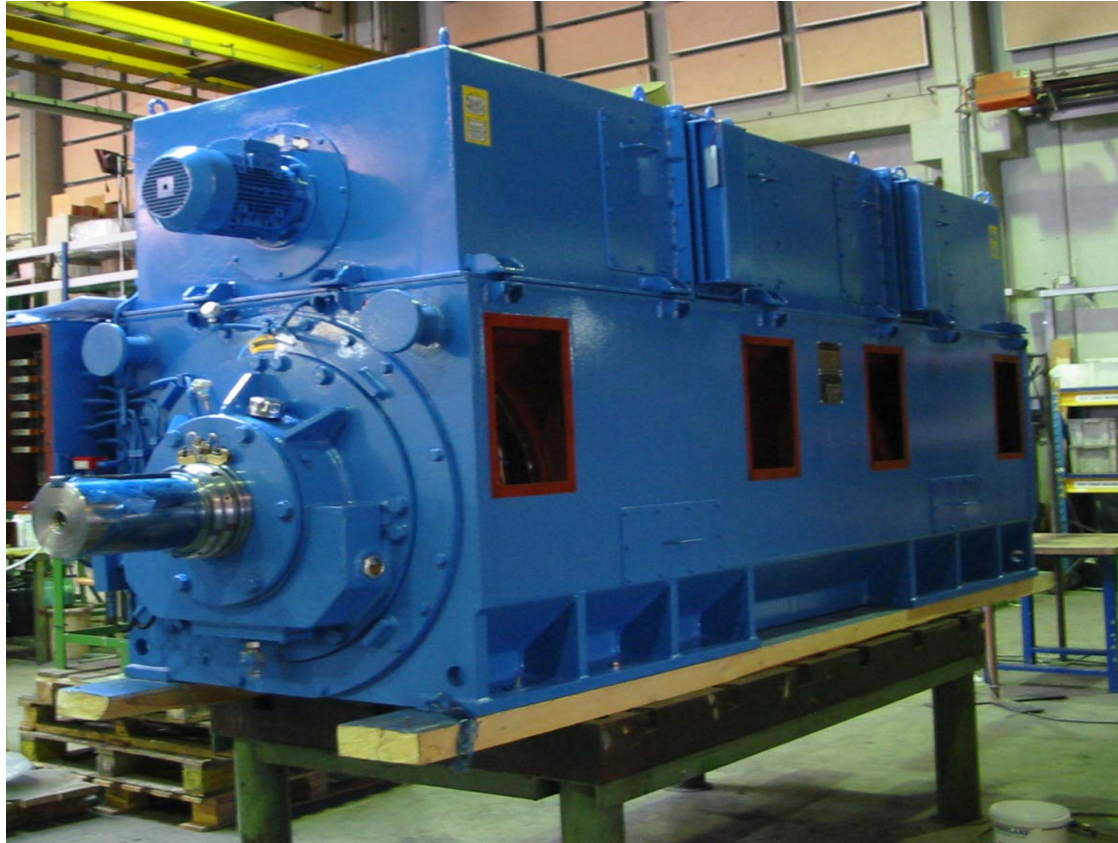
- Electric Propulsion & Drives
- HV/LV Switchboards
- Trafo's
- Cabling
- Lighting
- Alarm, monitoring & control sytems



# *Low weight propulsion system for SWATH type ferry*



# *Custom build propulsion motor*



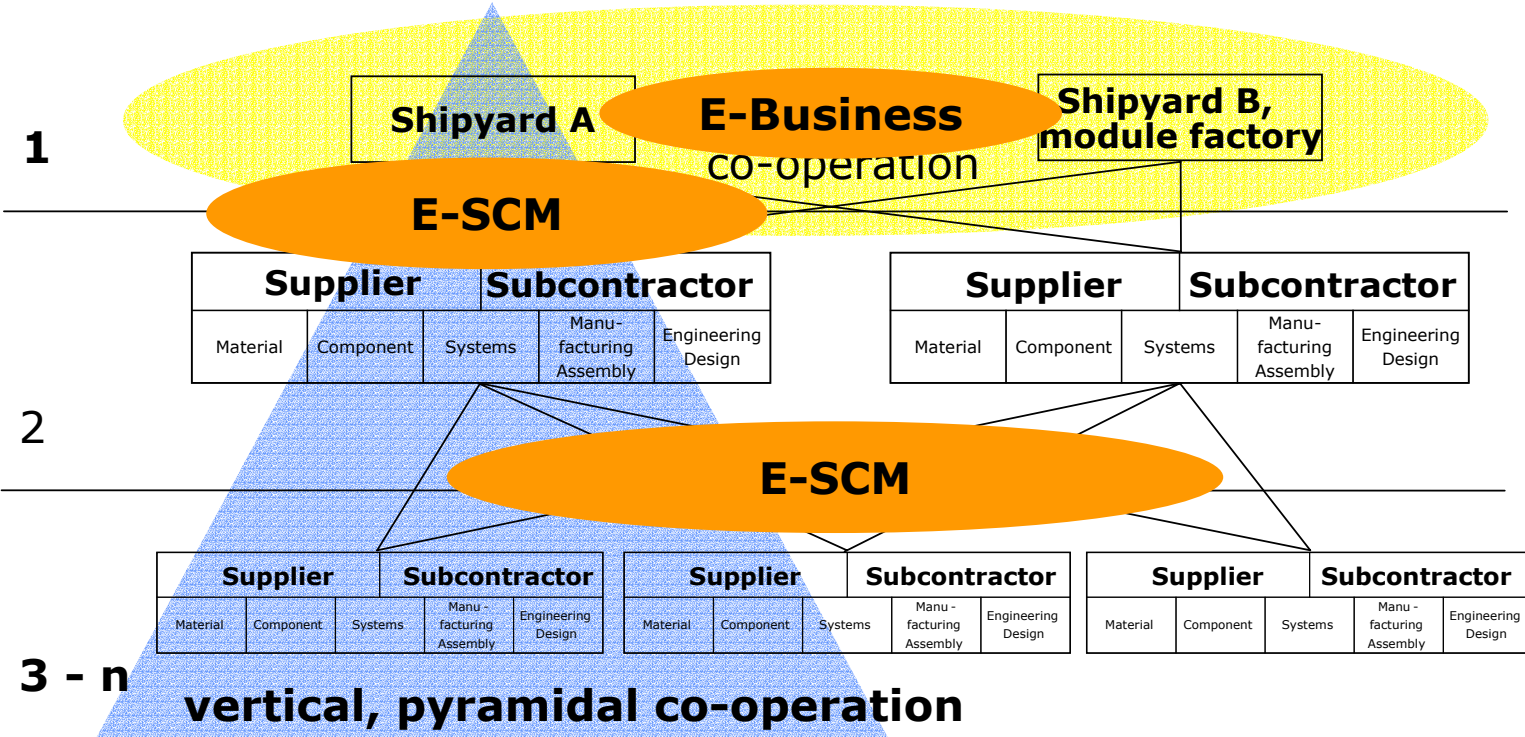
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- Maritime supply chain today and in the future
- Different perspectives of the Wondermar “Future Scenarios”
- Conclusion
- Open discussion





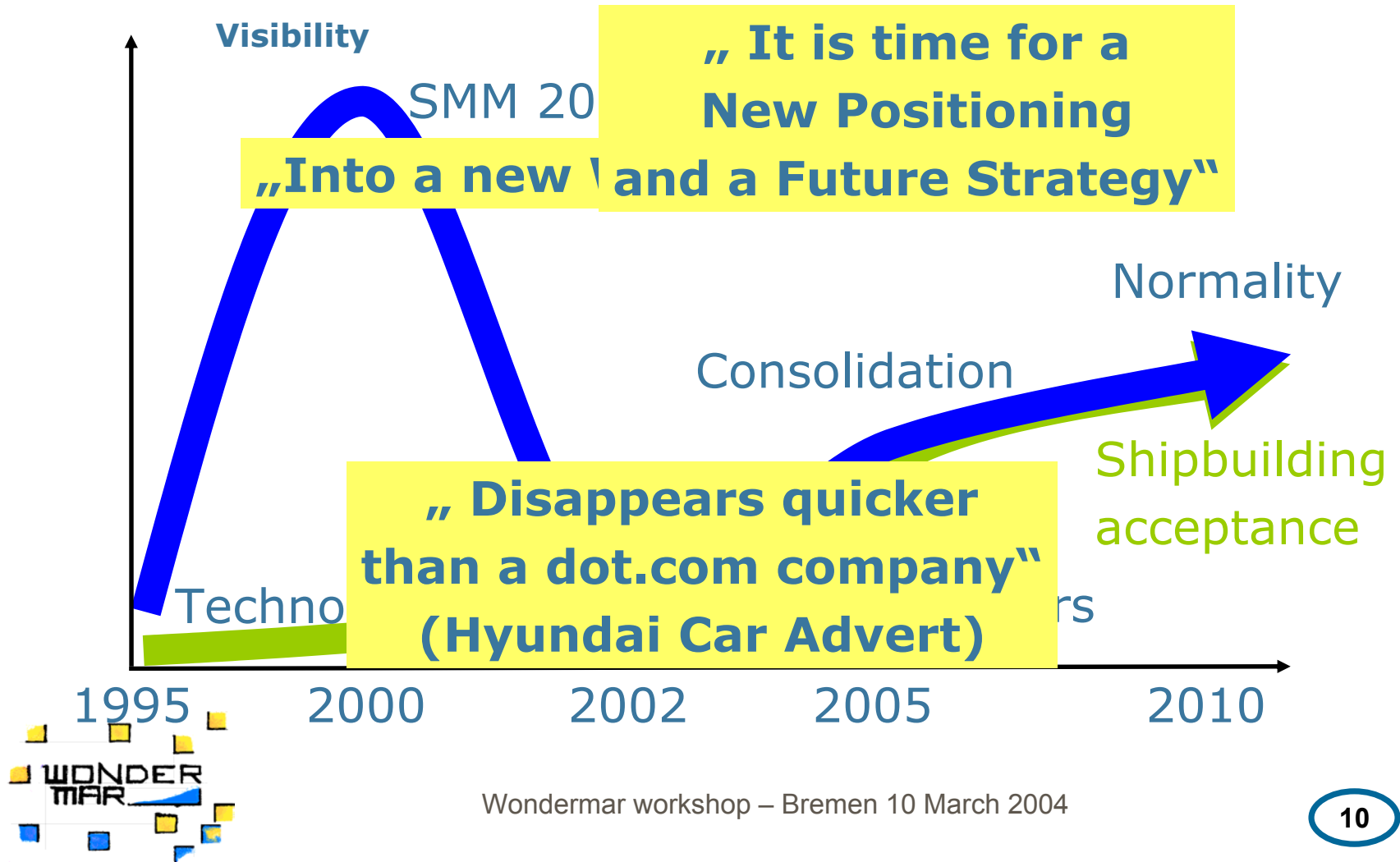
# Supply Chain Structure





- Reduction of costs
  - 10% - 30% of overhead, design and material
  - Approx. 10% of the entire costs
- Benefits for shipyards
  - Increased choice in sourcing
  - Shorter lead times
  - Structured data and document management
  - Standardised processes
- Benefits for suppliers
  - Increased number of customer requests
  - 365 days/24 hours visibility
  - Reduced product info costs
  - Reduced procurement costs

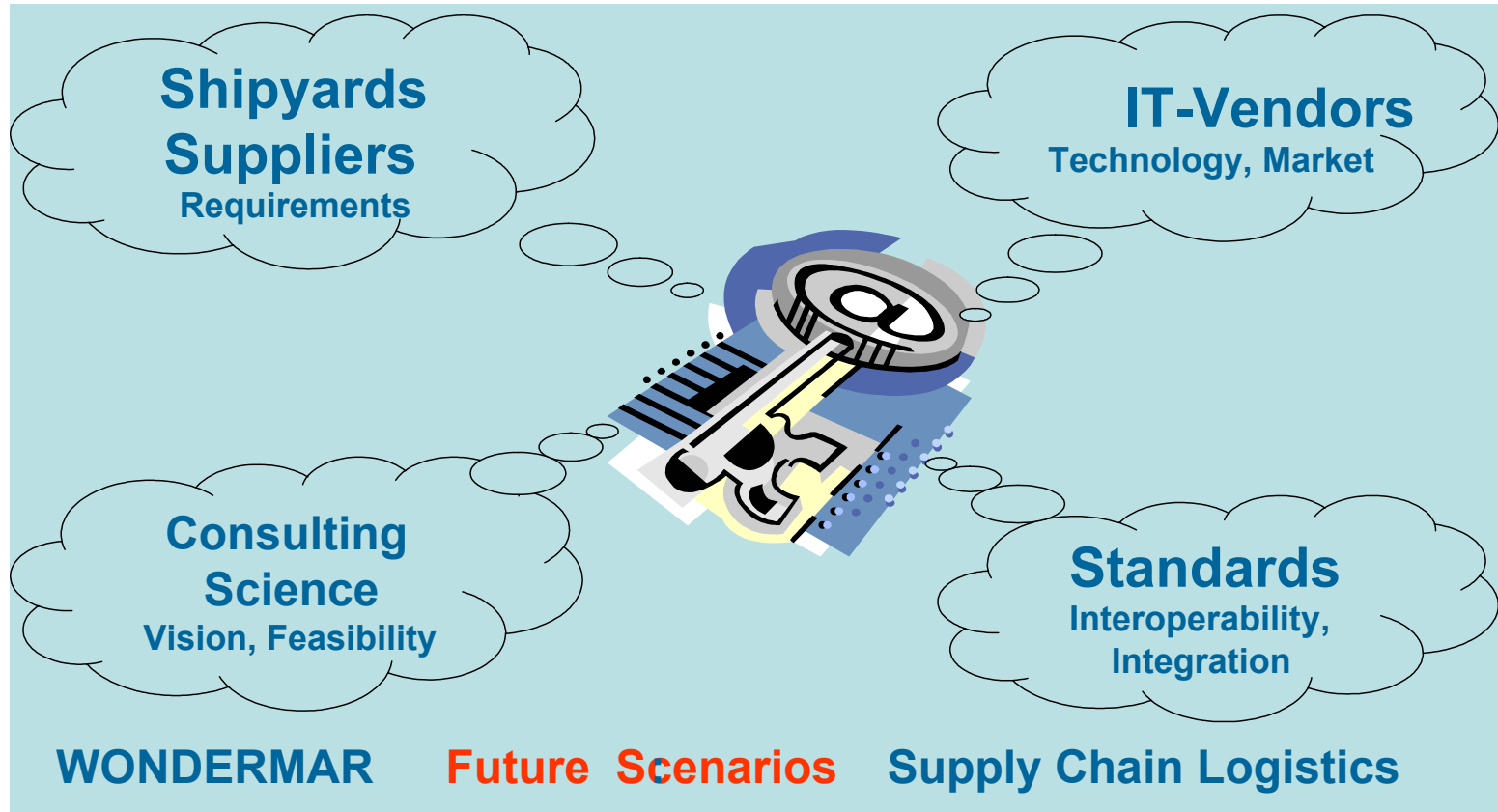




- Technology will continue to improve, increasing the attractiveness of e-SCM solutions for commercial applications.
- Acceptance with the customers will improve. Inter-organisational processes will become more into the focus.
- The potential for productivity improvements is high.
- Search for sustainable solutions, involving the trading partners
- Integration of inter-company processes (e-SCM) lead to sustainable customer-supplier relations



# The way forward

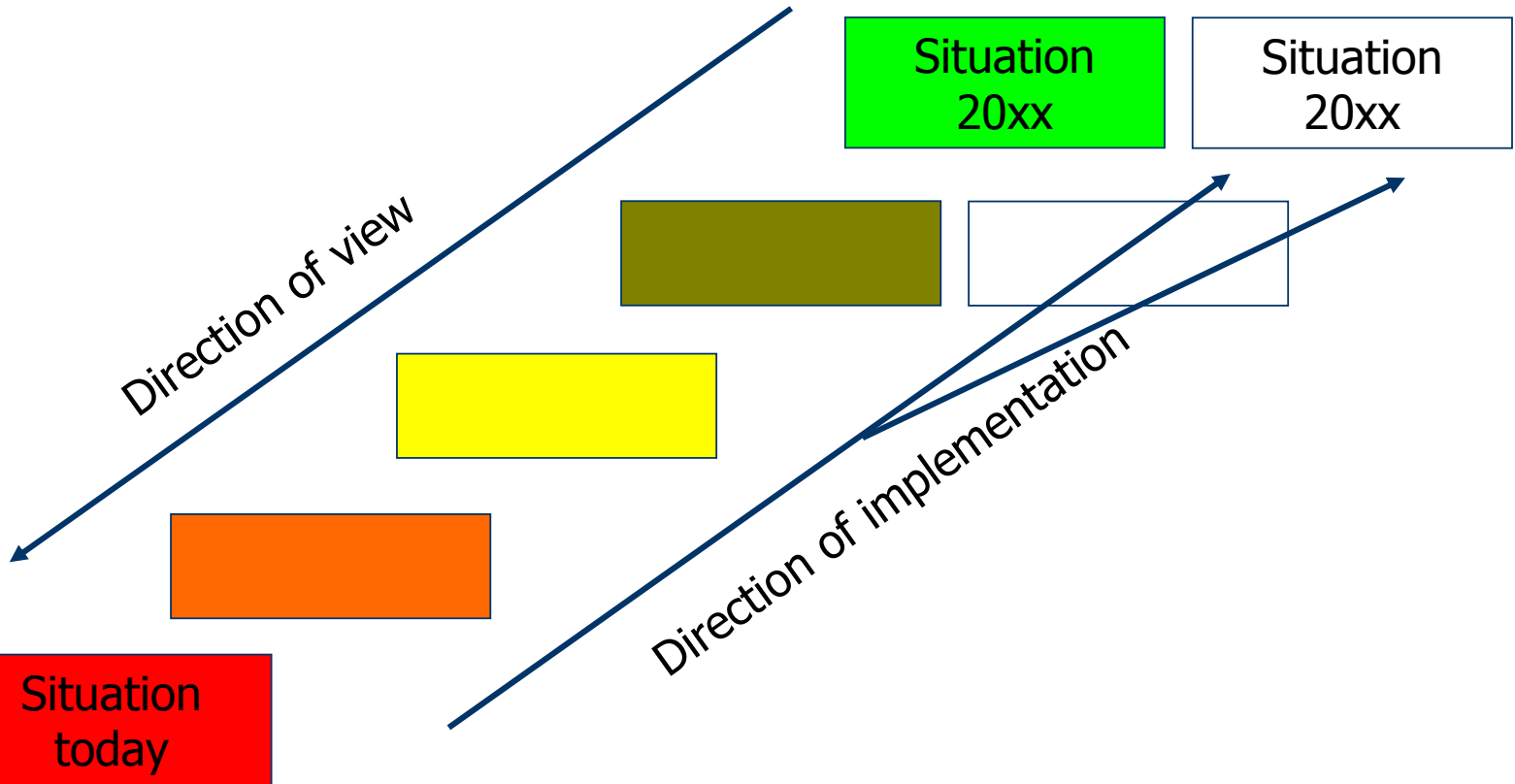


# *Ideas behind the future scenarios*

- Address important problems in the maritime supply chain
- Define an ideal way of working to be reached within the medium - long period
- Identify skills and functionalities needed to implement this scenarios
- Analyse today's state of the art as well as the way shipyards and suppliers work
- Find gaps in the IT support
- Define levels of implementation depending on different types of companies
- Predict costs and benefits of the implementation levels



# *The way towards the future*



# *Virtual marketing and virtual purchasing*

## ■ Two scenarios with a strong relationship

### ■ Marketing

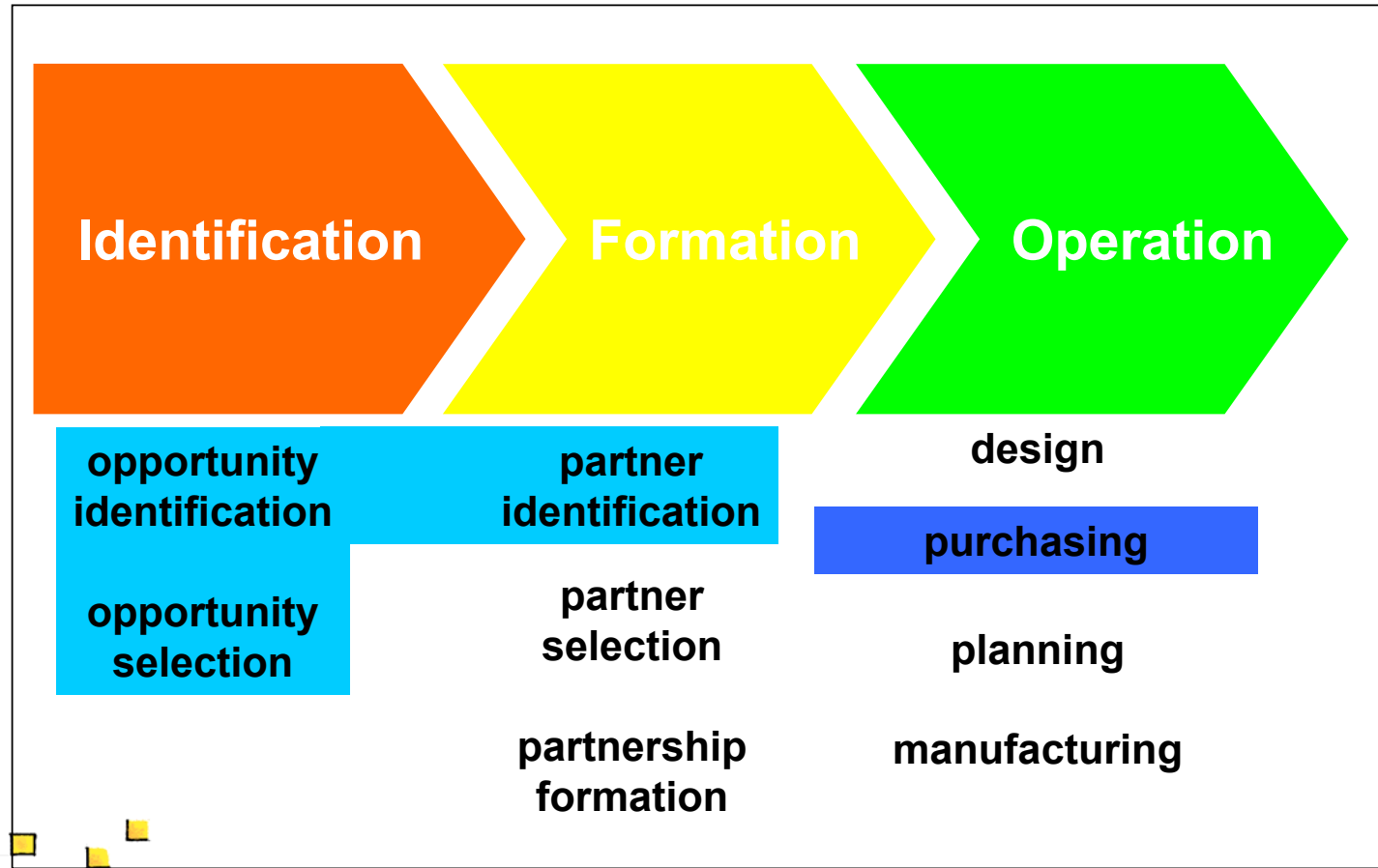
- Attract customers
- Inform customers about new products
- Address different customer groups

### ■ Purchasing

- Actually carry out the procurement processes
- Manage the process from request for quote to delivery
- Consider different product types



# Marketing and purchasing





# *Do you know the Difference E-market versus Portal*

- E-market = place where products are offered and can be bought and where also your competitor is active.
- E-market improves the efficiency of the systems integrator



# *Difference E-market versus Portals*

- Portal = is a way to guide those who might be interested to your website
- Portal should increase the efficiency of the supplier



- In 2002 HME finished a study
- Market places against Portals



# Results of the HME study

	Market		Portals		
	Tribon	Shipyards exchange	Seaequipment	Seacompanion	Aboard
Protection site	+	+	n.a.	n.a.	n.a.
Confidentiality	+	+	n.a.	n.a.	n.a.
Presence of Buyers	++	+/-	n.a.	n.a.	n.a.
Independence	+/-	+/-	+/-	n.a.	?
Structure in finding	++	++	+	-	-
Increase of own market	++	+/-	+	+	+
After Sales	+/-	+/-	+	+	+
Promotion own company	+/-	+/-	+/-	+/-	+/-
Standardisation	++	--	--	--	--
Presence of maritime suppliers	++	++	+	++	-
Detailed product info	++	+	n.a.	n.a.	n.a.
Efficiency improvement	++	+	-	-	-
Financing	+	+	n.a.	n.a.	?
Initial costs	--	+/-	-	+	+

## *Survival of the fittest?*

- In 2000 about 70 portals started
- In 2002 may be 10 were left
- What is the current position?



# *Use of Portals by Bakker Sliedrecht*

- HME Holland Marine Equipment
- EMEC European Marine Equipment
- Dredging
- FIS



## *Scenario "Virtual marketing"*

- Provide information about material and components for the maritime industry online
- Support supplier benchmarking, selection and product presentation via the web
- Offer products via different types of platforms
- Provide product data in standard formats
- Support online requests for quote
- Product comparisons based on design requirements
- Create integrated platform with defined interfaces to enable suppliers to join
- Interface with purchasing systems



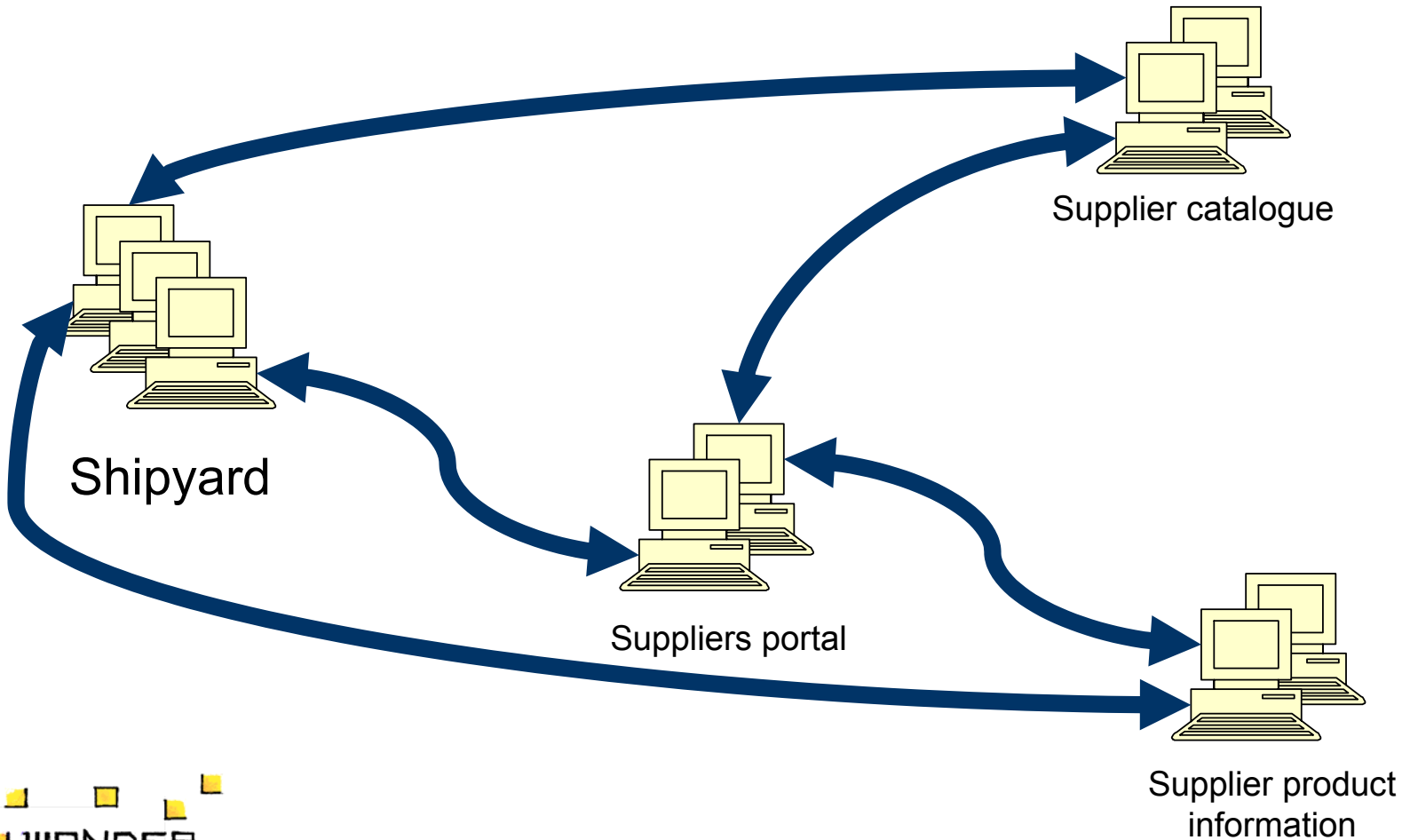
# *Scenario "Virtual marketing" – Process Improvements*

- Identification and comparison of suppliers according to individual criteria
- Suppliers can offer their products to new customers
- Product identification could be supported by "intelligent" catalogues
- Ranking and suggestions of suitable products
- Provide another marketing channel for suppliers
- Searching even for suppliers not registered in the system (via WWW search)
- Accessing configurators in company ERP systems





# Future scenario „Virtual marketing“



# *Scenario "Virtual marketing" – Requirements*

- Product presentation in digital form
  - Advertising material
  - Product data
  
- Global platform for presentation of product information
  - Portal that allows registration of companies and their product programme
  - Search criteria to identify suitable suppliers
  - Supplier evaluation functionality
  
- Data exchange standard



## *Scenario "Virtual marketing" – Skills needed*

- Awareness of virtual marketing potentials
- Willingness to let customers evaluate the organisation
- Enable purchasing department to actively select new suppliers
- Business partners must agree to this selection process
  - Yard <-> owner relationship



# *Scenario "Virtual marketing" – Implementation levels*

- Specify marketing portal modules
  - product presentation
  - product comparison
  - supplier information
  - supplier benchmarking
  - supplier selection
  - request for quote module
    - ▶ contact to suppliers
    - ▶ auctioning
- Specify interfaces to related systems
- Implementation



## *Why no virtual marketing*

- We are a system integrator&subcontractor
- We do not have anonymous products
- We do not have a catalogue



# *What are our products?*

- Our products are solutions
- Solutions are not sold on the E-market



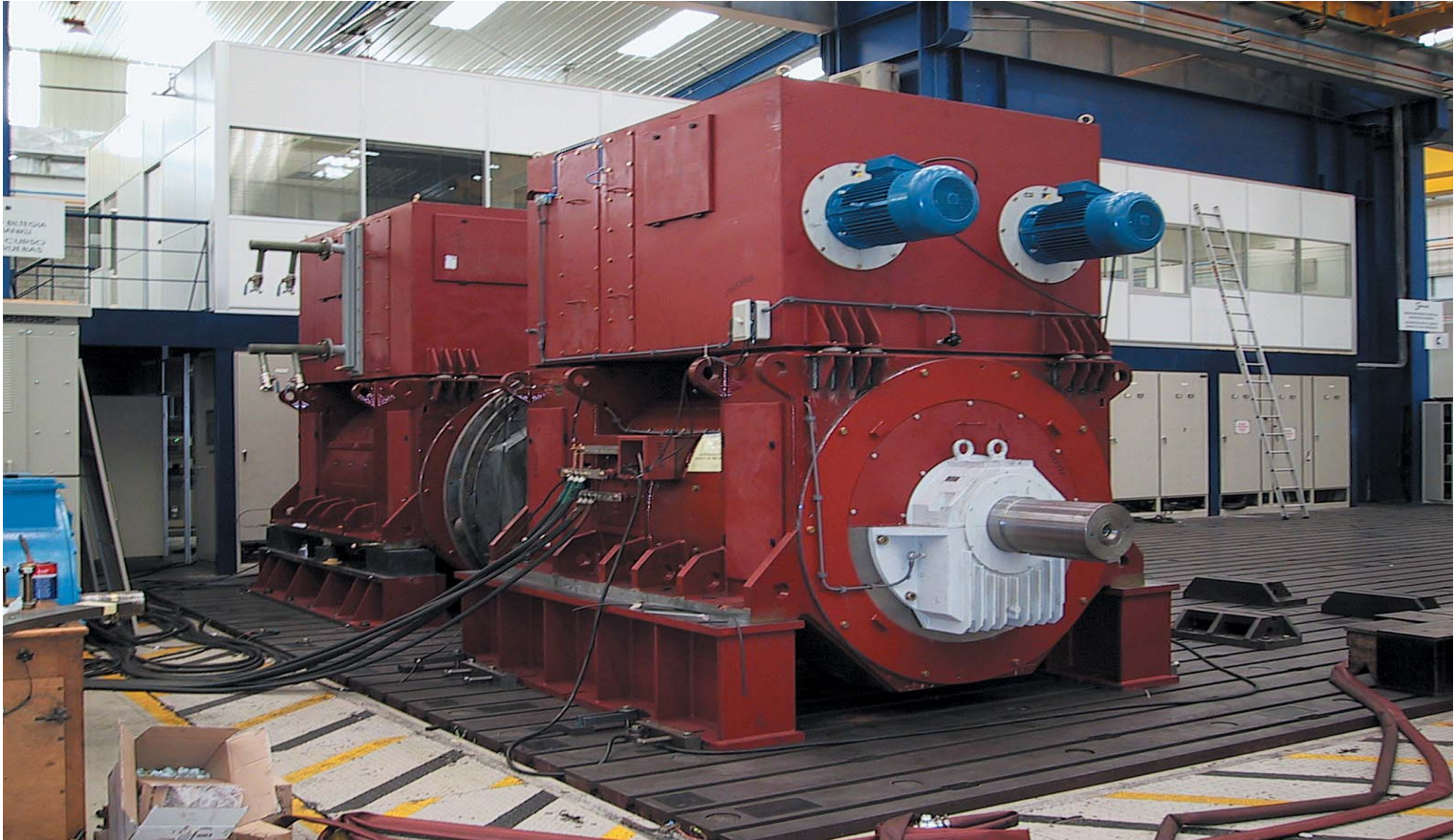
# *Fishery protection Vessel*



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# *Very low noise propulsion motor*



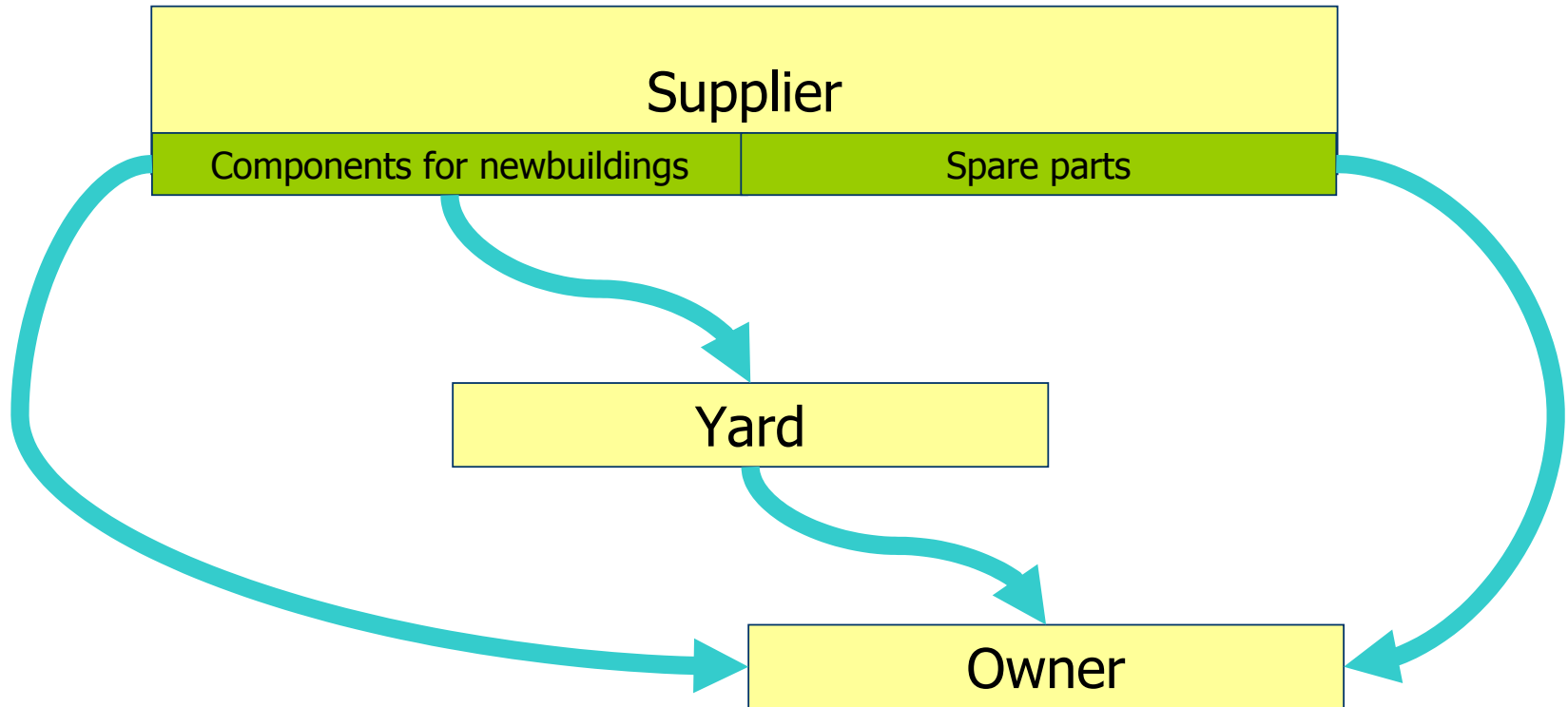


## *Beneficial Solutions for the owner*

- Solutions are “sold” to owner first
- The yard follows and buys the system



# *Different views on marketing*



## *Scenario "Virtual purchasing"*

- Fully integrated online quoting, ordering and delivery
- Generating RFQs, and orders by means of online messages in a standard format
- Integrate internal supplier and yard systems into the purchasing process
- Improve data exchange
- Avoid paper documents
- Reduce data conversion processes
- Avoid loss of data during data conversion

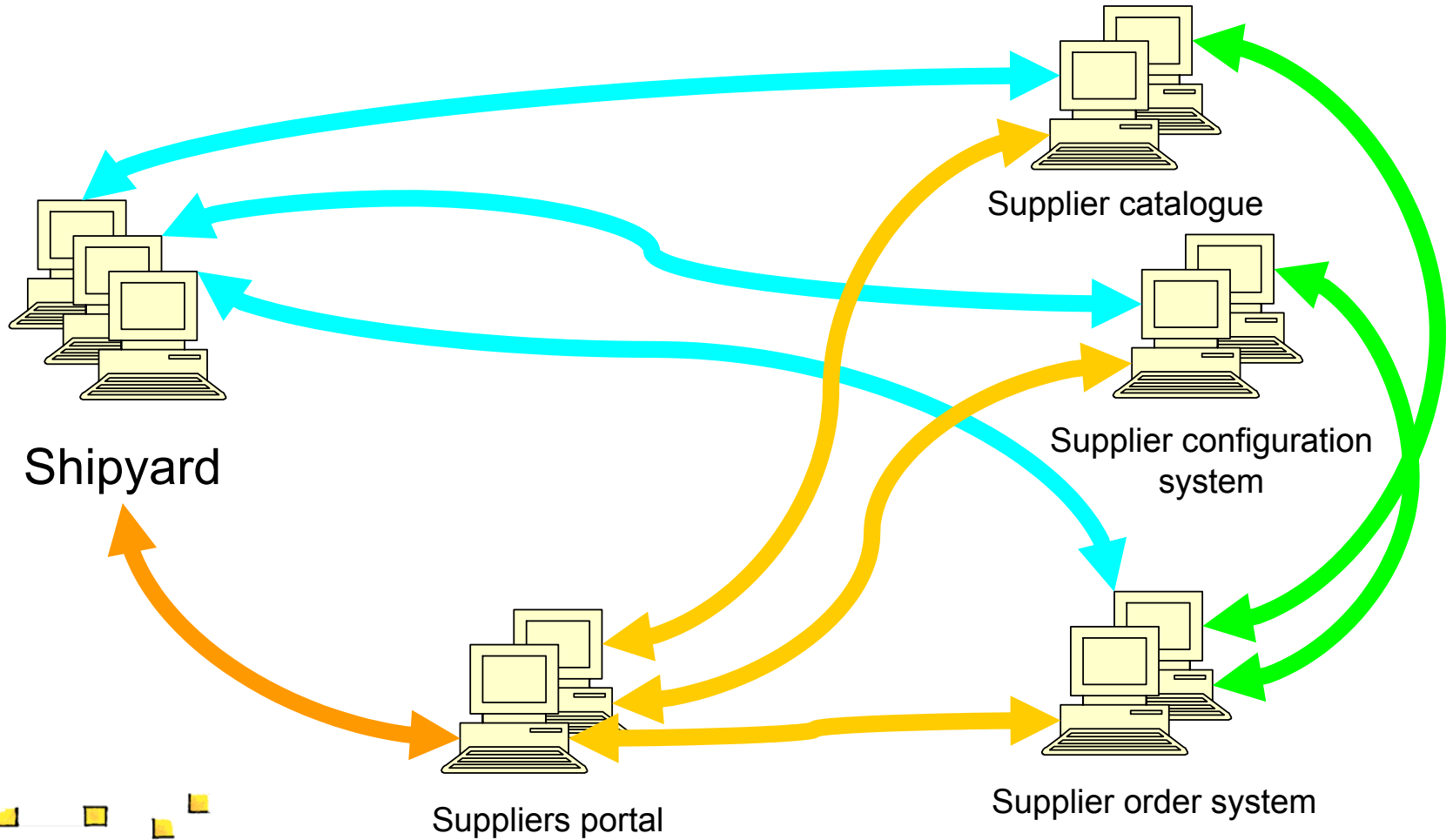


# *Scenario "Virtual purchasing" – Process Improvements*

- Less misunderstandings
- Direct import of order information into delivery and storage systems
- No media breaks in data transfer
- Full integration of business, product and logistic data
- Show consequences of component selection by means of simulation



# Future scenario „Virtual purchasing“



# Scenario "Virtual purchasing" – Requirements

- Provide better functionality than currently available purchasing solutions
- Full integration of all tools involved
- Makers lists must be available online
  - internal (yard specific)
  - external (customer specific)
- Security must be guaranteed
- Easy integration of new partners (suppliers, yards, owners, class societies)
- Completeness of information provided
  - Technical
  - Purchasing
- Support of different product types



# *Scenario "Virtual purchasing" – Skills needed*

- Availability of portal access to all people involved in the process
- Purchasing must be closely integrated with design and production
- Simulation skills
- Interfaces between design, engineering and purchasing applications
- Quick updates of product information
- Digital signatures



## *Scenario "Virtual purchasing" – Implementation levels*

- Introduce WWW-based purchasing systems
- Integrate these systems with existing company tools
- Change all purchasing processes towards WWW-based ones
- Implement digital signature
- Introduce purchasing simulation





# *Use of Virtual Purchasing*

- We do not offer our products in this way
- We do not buy components in this way
- We do use “virtual” aftersales

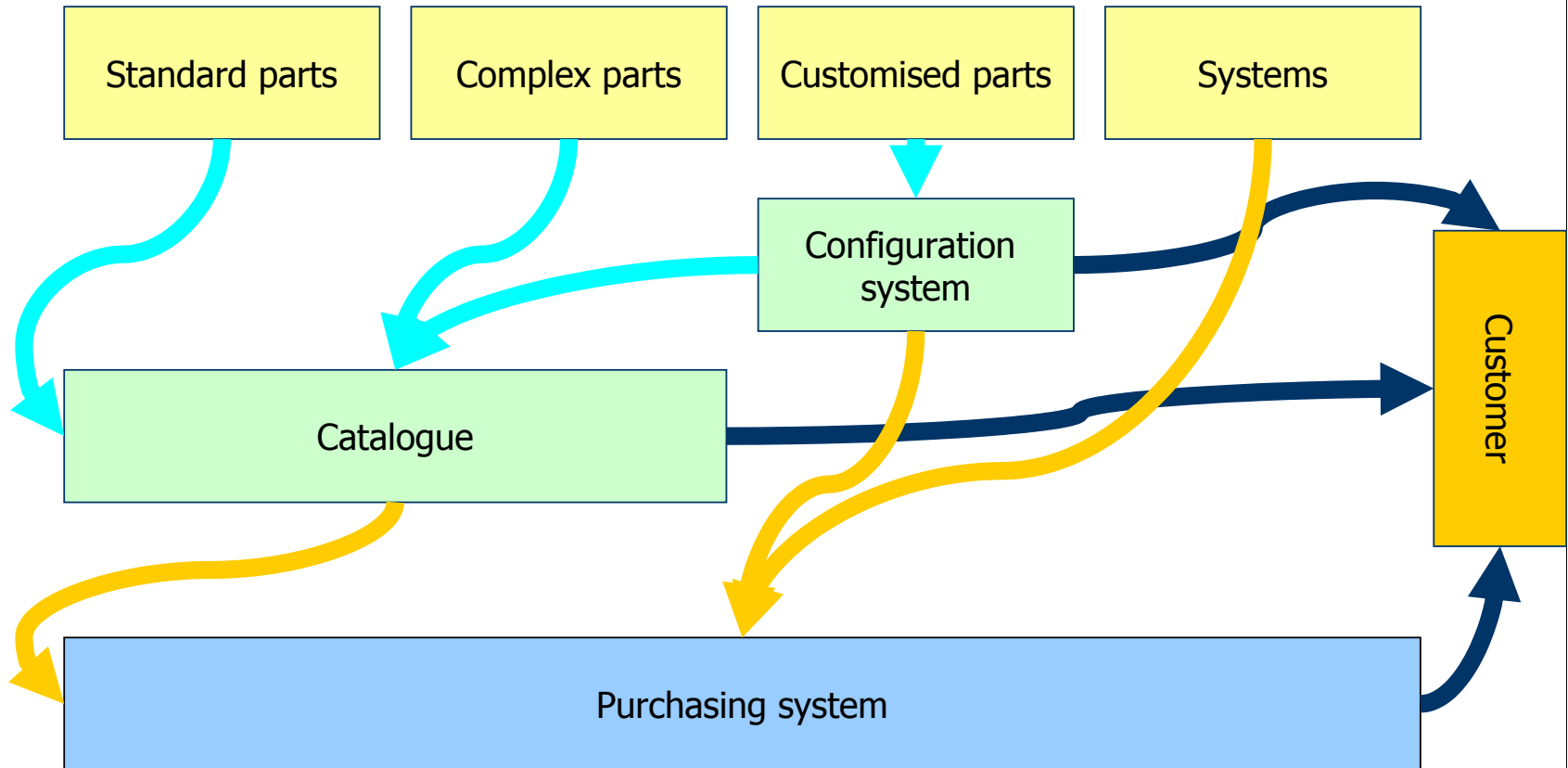


## *Why no virtual purchasing*

- Logistic system does not interface
- fax is faster, easier and less mistakes



# *Different products require different systems*



## *Requirement for virtual purchasing*

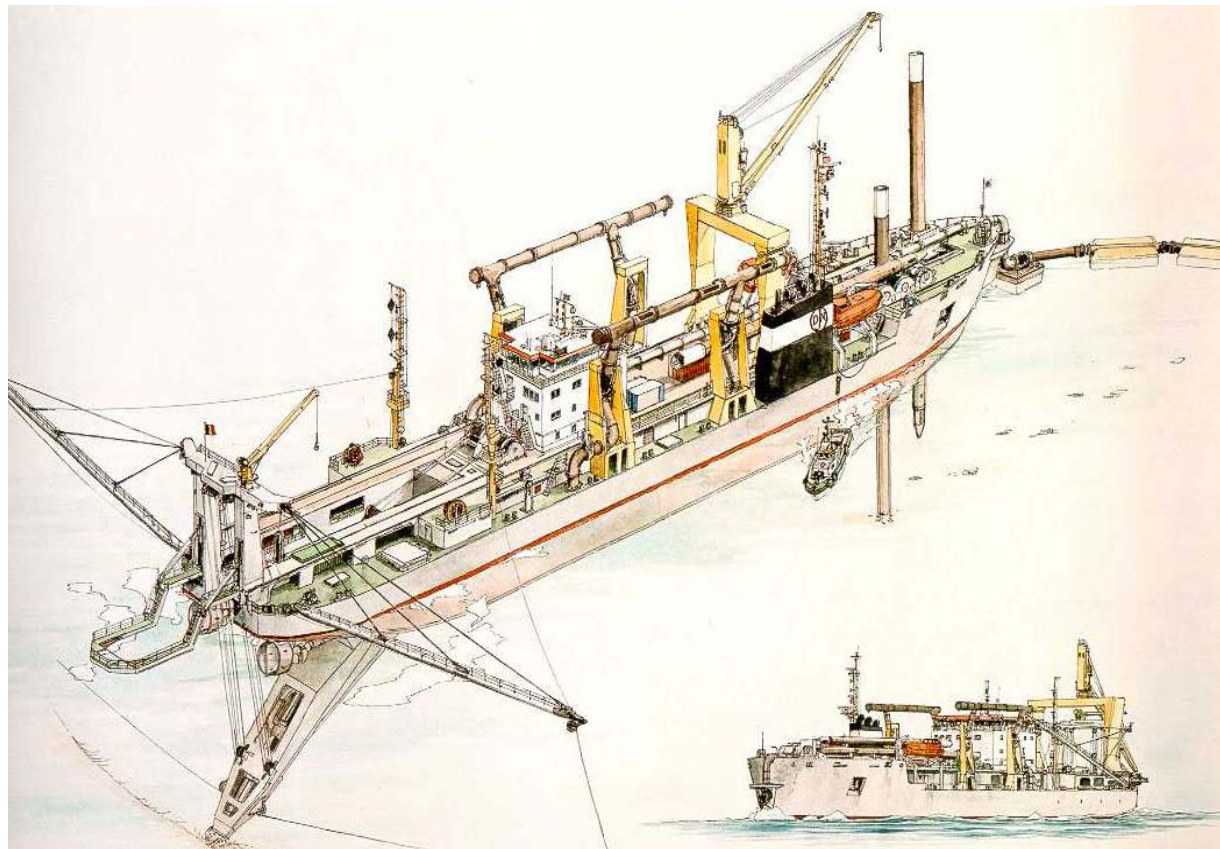
- To improve the shipbuilding proces in general
- Simple and open interface
- Able to interface between several logistic systems



- Completely different process
- Integration of your system in the ship
- Completely different interfaces
- Adding in the same design
- That's a different position in the supply chain: design and production

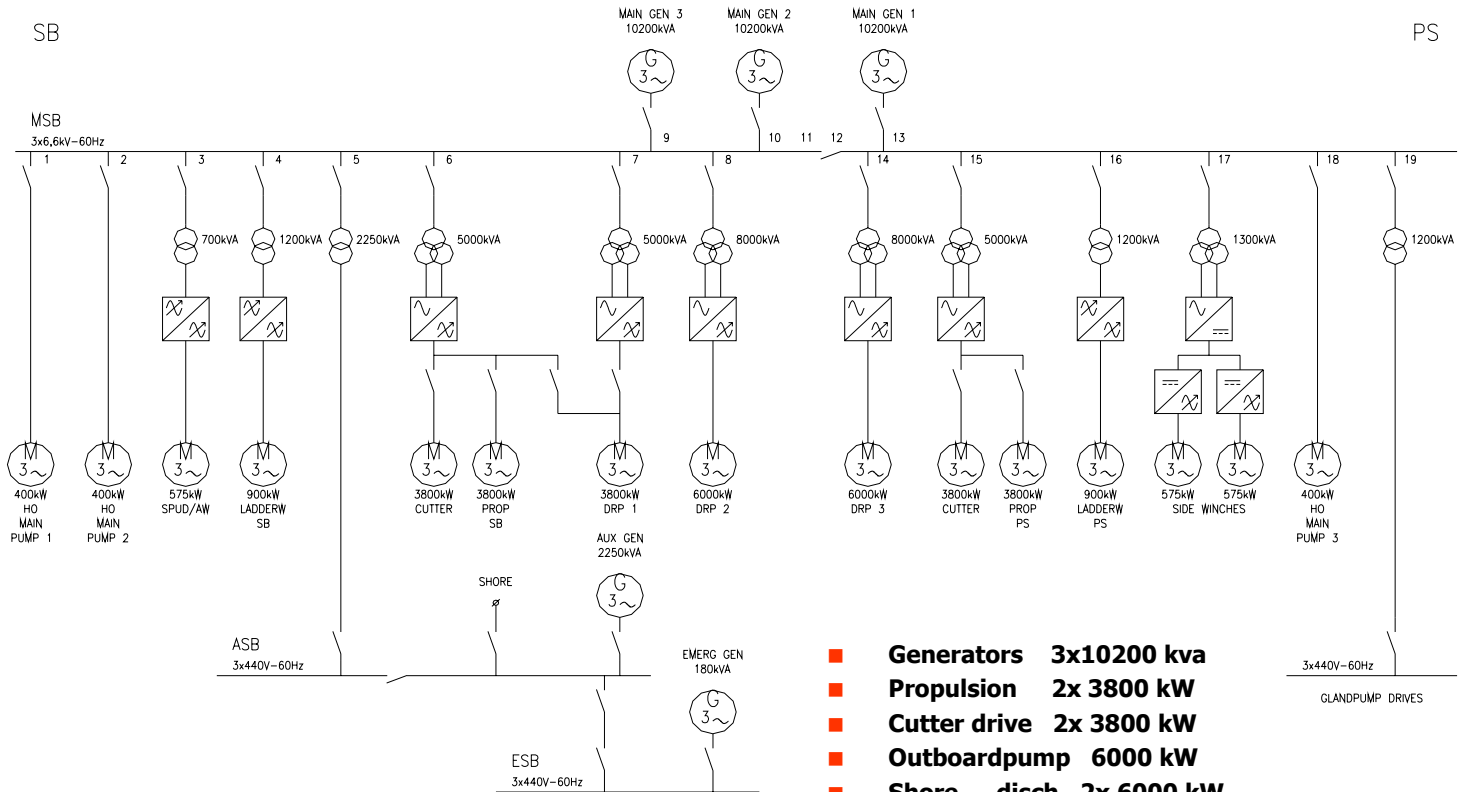


# *Aftersales: Largest Cutter Dredger in the world*



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# Electrical Powerplant & Drives



- **Generators 3x10200 kva**
- **Propulsion 2x 3800 kW**
- **Cutter drive 2x 3800 kW**
- **Outboardpump 6000 kW**
- **Shore disch. 2x 6000 kW**
- **ladder winch 2x900 kW**
- **side winches 2x575 kW**
- **spud winches 1x575 kW**

- The Wondermar II expert group „Supply Chain and Logistics“ has identified a first set of future scenarios.
- These scenarios are not only to be seen as achievable goals but also as landmarks for further development.
- The scenarios will be further detailed and are published on [www.wondermar.net](http://www.wondermar.net).
- You are welcome to contribute!





What do **YOU** think?



# *Statements on supply chain & logistics*

- For suppliers, virtual marketing platforms only work for simple products, not for complex parts or systems
- For shipyards, virtual marketing platforms only work for simple products, not for complex parts or systems
- Virtual purchasing cannot totally replace traditional purchasing processes.

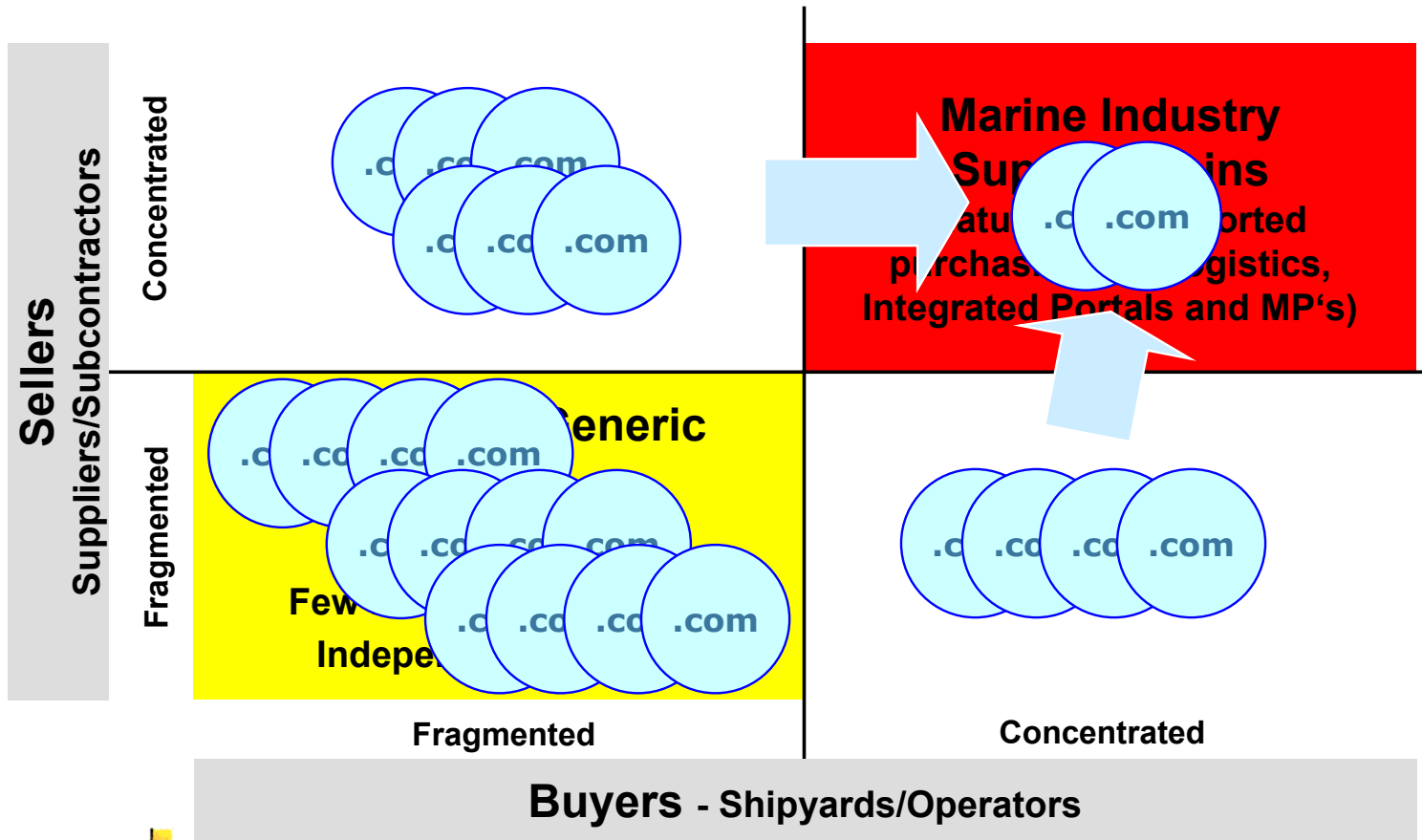


# *Statements on production*

- Standardising with one software supplier for all design, even if that means that we have sub-optimal systems in some design areas, is still better than having the best system for each design area but risking communication problems.
- Training of staff in the use of existing software is more important than buying new tools.
- Ensuring incompatibilities in design are eliminated is difficult enough – trying to go beyond that into design optimisation is unrealistic and unachievable.
- Simulation tools have enough functionalities – the problem is that users do not use them, or do not use them properly.
- Automation in outfitting is too difficult and will never happen.



# Who's in the driverseat ?



- Is there an ultimate e-SCM solution?
- Numerous, Different and Heterogenous Business Processes!
- Different Interest of Participants!
- Fast Changing Technologies!
- -> Even in „transparent and small“ shipbuilding many e-SCM solutions will exist in parallel!



# *Scenario "Virtual purchasing" – Current problems*

- Purchasing requires communication between different departments and with external companies
- Large amounts of data have to be exchanged
- Different media are in use
  - Paper
  - Proprietary files
  - Online connections
- No integration between the software tools in use
- Data inconsistencies
- Difficulties to get the information required
- No opportunity to freely select suppliers

