



DIGITAL SHIP CONFERENCE ATHENS 18-19 OCTOBER 2005



**USING ITC TO EFFECTIVELY MANAGE A FLEET - THE
GRIMALDI EXPERIENCE**



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THE GRIMALDI GROUP

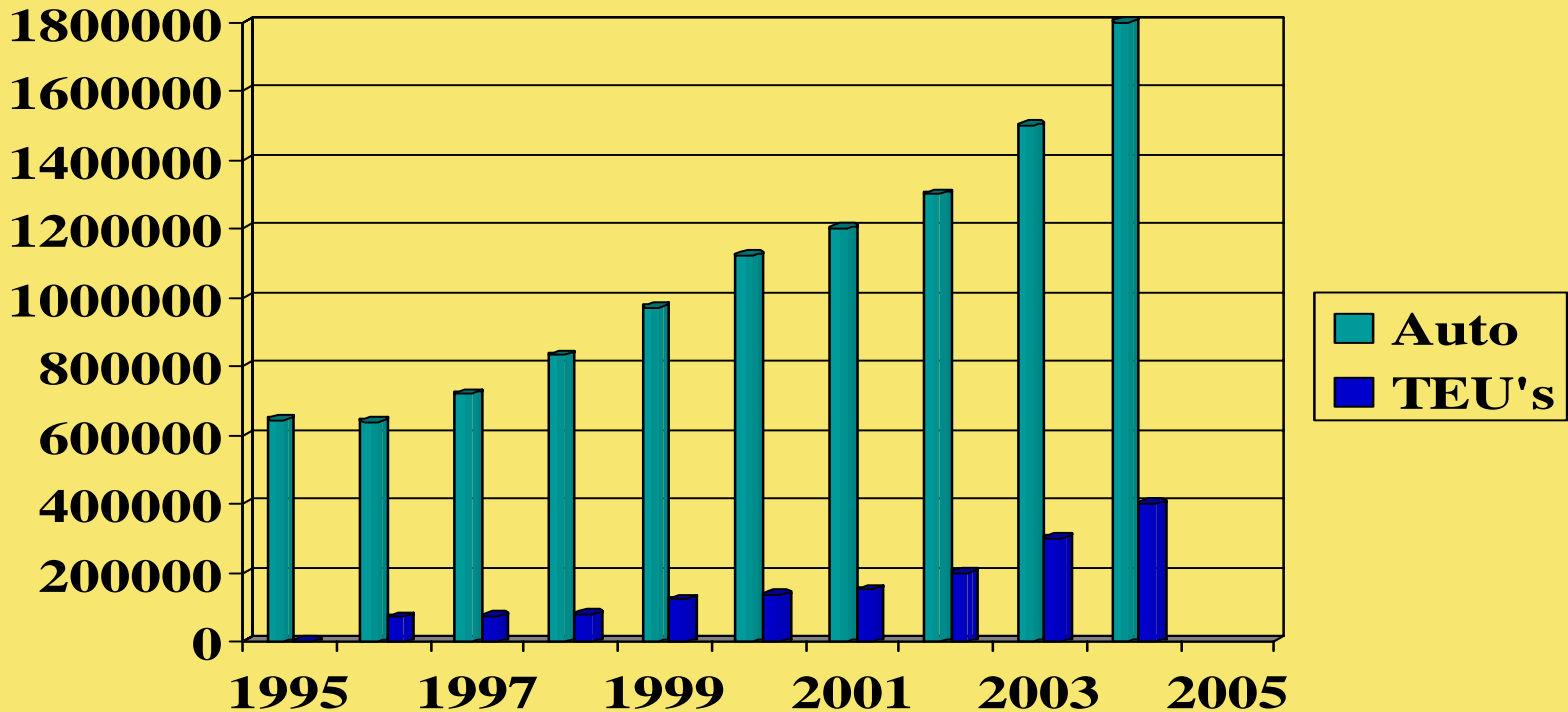
The GRIMALDI GROUP was created in 1945 and today is one of the leader companies in the market of RO-RO, car carrier. The Group has one of the largest fleet in the world of RO-RO / multipurpose and car carrier ships and on all routes served is also very active for transport of container and palletised general cargo. The Group is also specialised in project cargo transport. The expansion of Grimaldi Naples out of Mediterranean market started in 1969, with the first regular car carrier line between Italy and United Kingdom. This service, born for the transport of FIAT cars assigned to the English market, has shortly gained the confidence of the major world car manufacturers that decided to use the Grimaldi Group as car carrier for products assigned to the Mediterranean market built in UK and North Europe and vice versa.





THE GRIMALDI GROUP

The Group transports today more than one million eight hundred thousands car per year with 37 owned vessels and 11 chartered ones.





THE GRIMALDI GROUP

The Group has expanded its activities in order to vertical integrate the services offered by means :

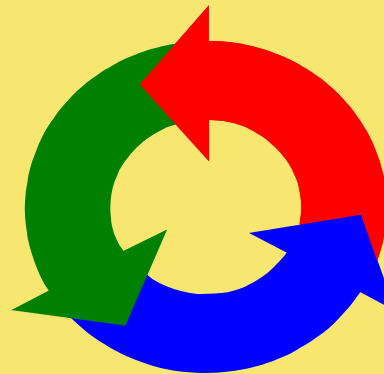
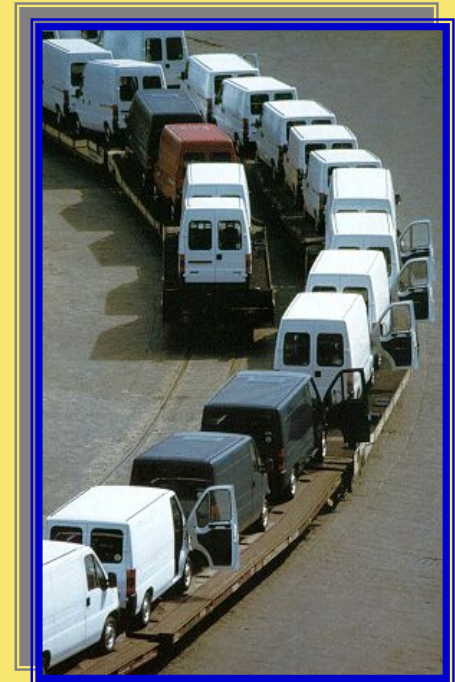
- **Application of "door-to-door" concept taking cars from production site and delivering them directly to the dealer;**
- **Acquisition of port terminal, stock centres for pre delivery checks of cars, truck companies for land transportation of cars in a large number of European and Mediterranean countries**





THE GRIMALDI GROUP

Today the Group own a large network of integrated logistic services in Italy, Spain, Portugal, Denmark and Ireland.





THE GRIMALDI GROUP

The Group operates fix lines between North Europe, South America, West Africa, Mediterranean in addition to intra Mediterranean, Adriatic lines, short sea shipping and ferries.





THE GRIMALDI GROUP

The Group has also completed an horizontal integration by acquiring the shares majority (91.4%) of ACL (Atlantic Container Line), a company operating between North America and North Europe completing in this way his presence on major car carrier and containers routes.





THE USE OF IT TECHNOLOGY IN SHIPPING INDUSTRY

The modernisation of logistic and transport industry and the utilisation of technologies linked to the “New Economy”, are the key to assure service levels and quality of transport in accordance to the new requirements expressed by the Global Market. Today the market demand is not only a cheaper service but a lot of emphasis is also posed on quality and environmental impacts. This logic of global results cannot be independent from the efficient and useful use of “ Innovation Technology”.

If the application of IT is very important for the entire transport industry is much more important for the shipping industry, always considered, wrongly, very traditional and not voted to the modernisation.





THE USE OF IT TECHNOLOGY IN SHIPPING INDUSTRY

In this scenario the ship owners have to understand the necessity of :

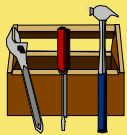
- **A wide and useful utilisation of Innovation Technology**
- **Application of research in new technologies field in order to respond in an adequate manner to the Global Market new requirements**
- **Usage of specific application in EDP, EDI and communication technologies.**
- **Adequate tools to control costs in order to be more competitive.**





THE USE OF IT TECHNOLOGY IN SHIPPING INDUSTRY

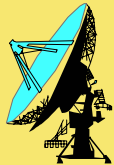
The GRIMALDI GROUP NAPLES, well aware of IT technologies importance in affording the global market needs, has developed or acquired since middle '90s innovative software in the fields of additional service to the transport and technical / economical fleet management.



Maintenance - Inventory- Administration



Advanced Purchasing



E Mail , Fax, Telex, Data, Grimaldi Navigator©





AMOS MAINTENANCE & PURCHASE CUSTOMER VIEW

The AMOS software was chosen by the GRIMALDI GROUP as integrated maintenance management system for its fleet, judging this package as a good response to the the previous mentioned requirements covering the wide range of needs for maintenance, purchasing, inventory and cost control. The fact that AMOS software is modular and integrate, specially with regards to the communication module, was an other good point. Others advantages seen in the package were :

- The system is multi - platform**
- The system is simple and user friendly without any restriction in completeness of information and their management**





AMOS MAINTENANCE & PURCHASE CUSTOMER VIEW

In addition to the inherent strength point of the software itself, it is also necessary to highlight the global service and consultancy offered by SPECTEC. In fact the added value to the software is the capability to offer to the customer the following services:

Structured Data Base Realisation

Maintenance flow organisation and planning expertise

Personnel Training

Customisation and interface-ability with other customer software





THE GRIMALDI AMOS PROJECT

The GRIMALDI GROUP project for the implementation of an Integrated Maintenance Management System (IMMS) for its fleet and office started in June 1996 in parallel with the large and intensive new building program that still continue today. It was immediately clear that with the urge planned increase of the fleet a system capable to manage information about maintenance, purchasing, inventory and costs was absolutely necessary. The first step was the choice of the software, its installation on the existing fleet while preparing the introduction on the new buildings. The second step was the interface realisation with existing company software and full scale implementation.





THE GRIMALDI AMOS PROJECT IN NUMBERS

The Grimaldi AMOS project in numbers is :

- **N° of ships managed by AMOS system 37**
- **N° of ship to be managed by AMOS system 10 (new buildings)**
- **Office data base (actual dimension) 2 GB**
- **Typical ship data base 40 MB (Average value)**
- **Number of Purchase Order per year 12,000 (actual)**
- **Average number of managed spare parts per ship 10,000**
- **Average number of managed consumables articles 12,000**
- **Average N° of AMOS MAIL messages exchanged per ship and year 25.000**



THE GRIMALDI AMOS PROJECT - THE RESULTS

The results achieved with the implementation of IMMS can be grouped in two main categories :

• QUALITATIVES

• QUANTITATIVES





THE GRIMALDI AMOS PROJECT - THE RESULTS

QUALITATIVES RESULTS

- **Complete management of total maintenance process;**
- **Centralisation and availability ashore of all vessel data;**
- **Possibility of specific maintenance data analysis, vessel bench marking;**
- **Reduction of lead time, order issuing costs, easy invoice control;**
- **Stock and inventory control, spare parts trace ability, consumables control;**
- **Efficient and effective cost control and budgets management;**



THE GRIMALDI AMOS PROJECT - THE RESULTS

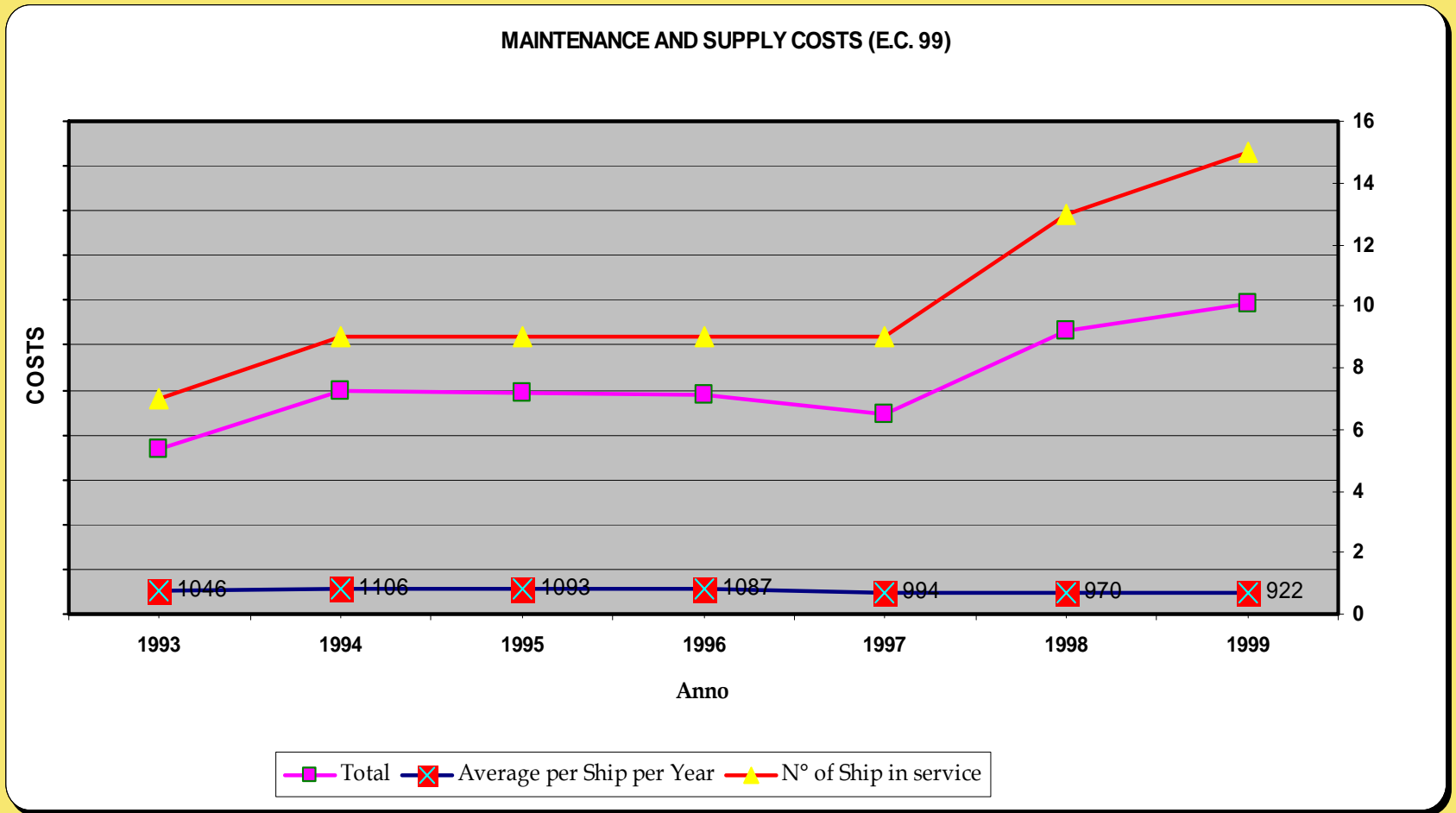
QUANTITATIVES RESULTS

Maintenance and Purchasing costs reduction as follows:

- **8.5%** first year
- **2.5%** second year
- **5%** third year



THE GRIMALDI AMOS PROJECT - THE RESULTS





THE GRIMALDI AMOS PROJECT - THE RESULTS

COMMUNICATION

Reduction in communication costs trough Inmarsat A and B about 35%





THE GRIMALDI AMOS PROJECT - THE RESULTS

The reason why the shown results were reached are in our opinion well represented in the following “Key Factors”:

- The commitment of Grimaldi management in the adoption of IMMS**
- The assignment to dedicated people of this project (a new function was created in the Company);**
- The integration of IMMS with the Company Accounting and Financing system with the consequent reinforcement of Cost Control capabilities;**





THE GRIMALDI AMOS PROJECT - THE RESULTS

- **The continuous research of process improvements;**
- **The continuous research of better results;**
- **Personnel training;**
- **The support supplied by SPECTEC in the development of a complex project with complex customizations**





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THANK YOU

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