

QUALITY AND COMPETITIVENESS IN THE PORTS INTEGRATION OF PORT AND MARITIME SERVICES

I. Padrón¹ and F. Arvelo²

Received 15 June 2007; received in revised form 18 June 2007; accepted 6 June 2008

ABSTRACT

A project for defining “Quality of Service Systems” has been developed in the Spanish Ports, in accordance to the norms ISO 9000:2000. This project focuses more in the management of the institution itself rather than in results or commitments of services oriented towards port operations. The present paper specifies the stages developed for the proposal and validation of a quality of port and maritime service system.

Key words: quality of services, Ports, Operational Guide

INTRODUCTION

As a result of the work carried out, service manuals have been approved to serve as the base for adopting the system in the different ports, and the approval and possible certification of the different operating firms.

The system designed and conveyed in the mentioned manuals, contemplates as well the creation of a permanent observatory of the service level, which may also be the germ/embryo of a larger observatory incorporating more port services and the area of costs and prices of the services.

The work has been developed in collaboration with Port Authorities and their operators, and the manuals have been revised by the Spanish Federation of Tow-

¹ Ph. D. in Civil Marine, Dean of the Higher Education School of Navigation and Ocean Studies of the University of La Laguna, Professor of the Department of Navigation Sciences and Techniques. ²Ph. D. in Civil Marine by the University of La Laguna, Chief Engineer Officer of Merchant Shipping.

boats, ANARE (National Association of Tugboats) and the Spanish Association of Vessel Runners. They have also been revised by ATEIA (Freight Forwarders Association) and by ANAVE (Spanish Ship owners Association).

INTEGRATION OF PORT AND MARITIME SERVICES

The project

The Quality of Service Project, applied to the integration of Port and Maritime Services, and driven forth by the Public Entity State Ports, has as aims:

- To design and validate a System of Maritime and Port Quality.
- To study the conditions for rendering port services to the vessels and their requirements/needs as client.
- To study the service conditions offered by the vessel and the requirements of the merchandise.
- To define the quality standards with the consensus of all the operators.
- To design and elaborate the documentary support which will gather all the commitments.
- To define the follow-up mechanism of the system (management processes and continued improvement).
- To be able to ensure the quality of the rendered services, through an optional Certification of Services.

For this purpose, it was decided to fulfil a diagnosis of the situation in a first phase, and in a second one to define a Quality of Service System, developed in four Normative Documents: three of them specific for port operators and another one specific for maritime transport.

The parts involved in the Project have been:

- State Ports and Port Authorities (Barcelona, Baleares and Las Palmas de G. Canaria and S/C de Tenerife).
- Ship owner companies (Barcelona - Palma de Mallorca and Barcelona - Las Palmas and Tenerife).
- Supplier of vessel services (pilotage, towing and anchorage).
- End clients: Shippers/receptors.

The Port Authorities, as those ultimately accountable for the port services will be also involved in the process.

The Project consists of four fundamental Phases, three of which have already been carried out:

- Diagnosis of the state of departure and analysis of all the documentation related to the scope of the Project.



- Design of the Normative Documents of standardization of the port and maritime services, fulfilling the field work in 3 Port Authorities: Barcelona, Palma de Mallorca, and Las Palmas de Gran Canaria and S/C Tenerife
- Validation of the previous documents by all the parties involved (specifically by the part of the users of the services, their suppliers, the Public Entity itself, and experts in inspection)
- Certification of the quality of service of those operators who voluntarily petition it to show to an independent third party the conformity of their services with the requisites developed in the normative documents

THE DIAGNOSTIC PHASE

The aims of this phase were, apart from defining and planning the Project, identifying the state of departure in the involved port Organizations and the existing standards of quality, as well as determining the characteristics of the service which are relevant for satisfying the expectation of the clients and users, in each one of the port activities that make up the chain of service, as is shown in Fig. 1. These characteristics will be the base of the future certification in those Organizations who voluntarily petition it.

An initial mapping of the processes was developed with the previous analysis, as well as fieldwork in four ports (Barcelona, Palma de Mallorca, Las Palmas and Tenerife), consisting of interviews with operator representatives, observation of the work systems and processes of the operators and gathering of new information (operation procedures, control methods, records, client data, claims, quality indicators ...).

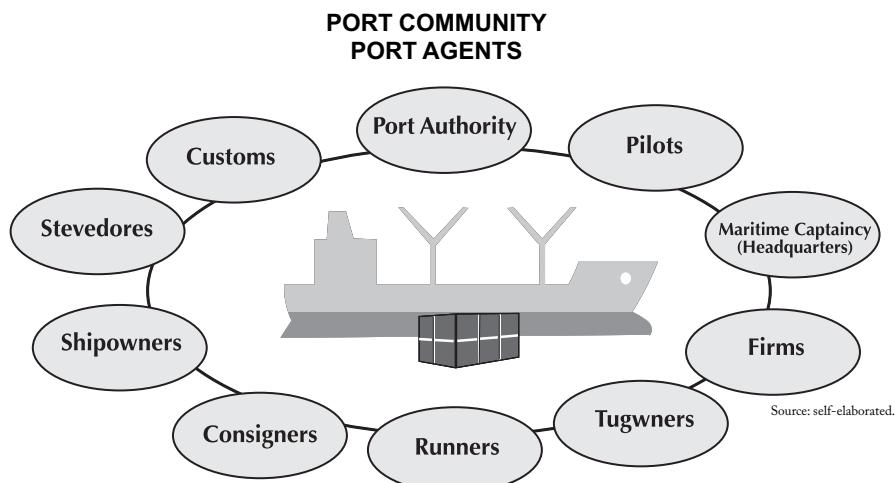


Figure 1. Components intervening in port activity.

Following the analysis of the interviews held and the documentation consulted and always considering the frame of reference established by the State Ports as well as the regulation applicable to each case, it is concluded that the characteristics of service expected by the end client of the merchandise, and that in turn the maritime operator (vessel) requires of its port operators, had to be based on the following parameters: prices, security, reliability, information, availability and personalization.

With the base, were the characteristics defined of services common to the agents or logistic operators considered (Ship owner companies and as port services Pilotage, Anchorage and Cast off and Towing) or specific ones in some cases, in the form of general commitments.

DESIGN OF THE NORMATIVE DOCUMENTS

The characteristics and details of the document, were the object of development and consensus in work teams created to this effect, with the aim of establishing objective parameters of compliance. As a result of the conclusions reached in the work teams, a specific document was developed for each one of the agents provider of services, detailing their service commitments (Manuals for the Quality of Service of Anchorage, Towing and Pilotage), as well as a specific one for Maritime Transport.

As a premise for departure, each agent and in all cases was obliged to comply with the applicable regulations, understanding as such the obligations enforced in the normative and in the specific documents (general and particular) which regulate the services of pilotage, anchorage/cast off and towing.

The commitments or characteristics for service established are the following:

For port operators

- a) **Management of material and human resources:** Personnel Training and Qualification; Continued Training Improvement; Human Resources; Material and Equipment.
- b) **Transparency in Invoicing:** Clarity and Transparency of Bills; Breakdown of Bills; Fare Policy.
- c) **Quality measurement and continued improvement of services:** Measurement of the Level of Quality of Service; Permanent Analysis of the Levels of Quality of Service and Improvement of the Service; Continuous Follow-up of the Client's Satisfaction/Opinion.
- d) **Security in the operations, control of environmental aspects and prevention of work risks:** Security of Port Operations (Anchorage/Cast off, Pilotage and Towing), Plan for Emergency and Work Risks; Environmental Aspects.



- e) **Client Information Service:** Quality of Information provided for the Client; Quick Answering.
- f) **Control of processes and operations:** Responsibility and Direction of Operations; Response Capacity; Availability, Communication the Interested parties.

For maritime transport

- a) **Management of material and human resources:** Personnel Training and Qualification; Continued Training Improvement; Human Resources.
- b) **Transparency in Invoicing:** Clarity and Transparency of Bills; Breakdown of Bills, Fare Policy.
- c) **Measurement of quality and continued improvement of services:** Measurement of the Level of Quality of Service; Permanent Analysis of the Levels of Quality of Service and Plan for Improvement, Continued follow-up of Client Satisfaction, Quality of the Port Service.
- d) **Security in the operations, control of environmental aspects and Prevention and Occupational Health:** Security of the Vessels and the Maritime Traffic; Collaboration in the Security of Port Operations; Prevention Risk; Environmental Aspects.
- e) **Client Information Service:** Quality of Information provided to the Client; Response Efficiency; Contracts.
- f) **Control of processes and operations:** documentation of Operation Processes, Control and Follow-up of Operational Processes; Regularity; Continuity; Frequency; Capacity of Service Supplies; Port Processes; Communication with Interested Parties.
- g) **Handling and treatment of merchandise:** Processes; Means; Information of Incidences; Collaboration with other Agents.
- h) **Passenger services:** Commercial Process; Information; Port Installations; Embarkation and Disembarkation Processes; Schedules, Service during Navigation; Safety on board; Satisfaction Perceived. Only applicable to lines of mixed transport.

VALIDATION OF THE NORMATIVE DOCUMENTS

With the object of guaranteeing the participation of the different interests to which the Standardization of the sector is directed, and with the object of complying with the requisites of the Certification of Services, regulated through the European norm, EN 45.011, a Technical Committee was summoned formed by: experts in

inspection, representatives of service suppliers, representatives of the institutions related to its users, and members of the certification body (SGS ICS Ibérica). Its role consisted in examining and validating the four normative documents designed, ensuring that:

- the requisites specified and the regulations established are objective, measurable, and controllable,
- the characteristics to certify bear an added value for the users, and a better image for the sector,
- the criteria established comply with the laws and norms applicable to each service in question,
- when opting for a consequent certification, the information of the characteristics of the service does not confuse users.

With this philosophy, the 4 standardization documents of the port and maritime sectors were validated by the Committee formed by:

ANARE: Spanish National Tugowners Association

ANAVE: Spanish Shipowner's Association

ATEIA: Freight Forwarders Association

EPPE: Public Service of Weather Forecast Euro Meteo

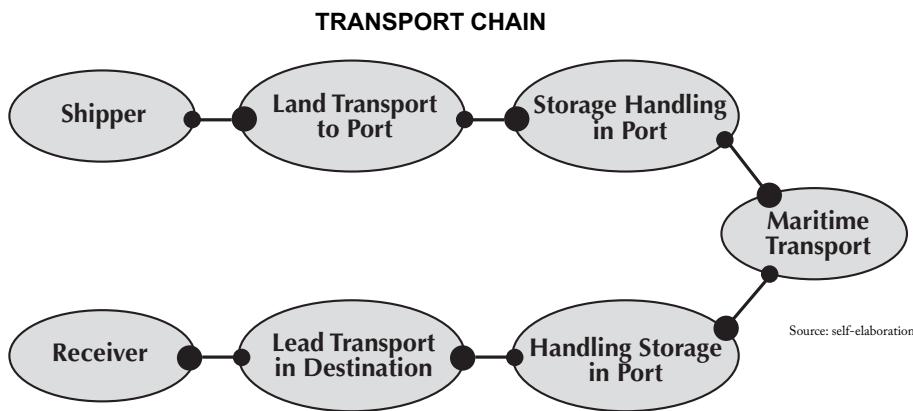


Figure 2. Functioning scheme of the logistics of Maritime transport.

CONCLUSIONS

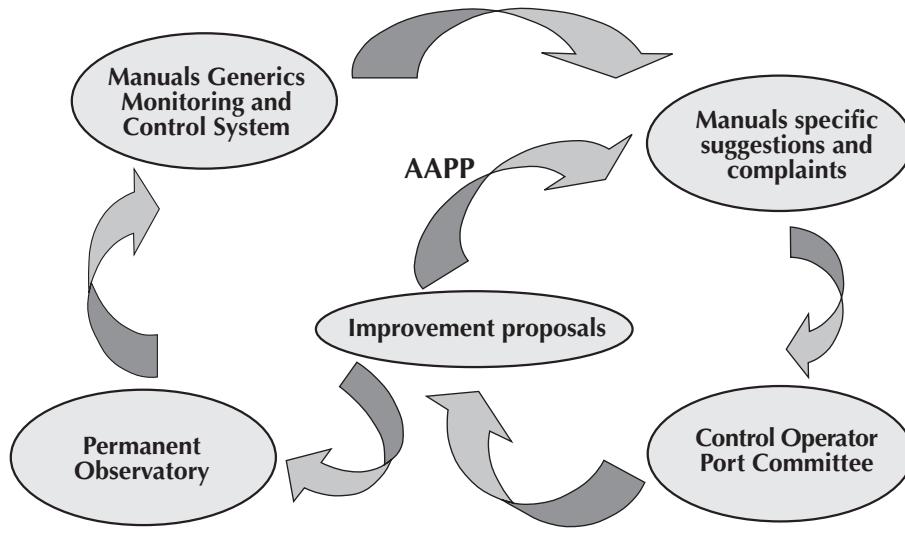
The joint quality plans with which it is intended to fulfil harbour clientele expectations and requirements with respects to service quality. In this sense, it was



established as an objective, to build support in the logistics chain which connects Tenerife's port with Barcelona's port, focussing attention mainly in the traffic of goods.

Between the achievements attained with the establishment of this type of quality plans we find: the simplification of the customs bureaucratic paper works, developments in computing and information systems, reduction of accidents and, consequently, the reduction of insurance premiums.

With respects to the action line, these will be designed according to the requirements of operators and clients of both harbour communities, being found between the critical factors: reliability in delivery dates, supply of returnable equipments for container fillings and agility intensification.



Source: self-elaborated.

Figure 3. Continuous Improvement application Scheme.

REFERENCES

- Cargo Systems (1999), Recent developments in information technology for container terminals, 140 pp.
- Container Handling Automation & Technologies Conference (22 y 23/2/99), Londres.
- Terminal Operations Conferences (TOC'99 y anteriores).
- NOVOTEC LGAI, 2001. Las Normas ISO 9001:2000. Ed. Gestión 2000. Barcelona: 147 pp.
- Woodside, G.; Aurrichio, P., Auditorias de Sistemas de Gestión Medioambiental Introducción a la Norma ISO 14.001. Ed. McGraw –Hill: 250 pp.
- Lloyd's register Quality Assurance Ltd. Operaciones España (LRQA)
- AENOR: PNE UNE 81 -900 "Reglas generales para la implantación de un sistema de gestión para la prevención de riesgos laborales".
- Simons & Grimaldi. Organización de la seguridad en el trabajo.