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WORLD MARITIME UNIVERSITY

Malmö, Sweden

**THE IMPLEMENTATION OF QUALITY
MANAGEMENT AND QUALITY ASSURANCE
STANDARDS.**

The Potential Effects On Shipping Agencies In Jamaica.

By

NICHOLA STEWART

Jamaica

A dissertation submitted to the World Maritime University in partial
fulfilment of the requirements for the award of the degree of

MASTER OF SCIENCE

in

SHIPPING MANAGEMENT

1999

DECLARATION

I certify that all the material in this dissertation that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this dissertation reflect my own personal views, and are not necessarily endorsed by the University.

.....
.....

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I would like to dedicate this dissertation to my family. The tremendous support and confidence they have bestowed upon me have provided me with the strength and motivation to strive for the best that there is.

ABSTRACT

Title of the Dissertation: **The Implementation of Quality Management and Quality Assurance Standards. The Potential Effects on Shipping Agencies in Jamaica.**

Degree: **MSc**

This dissertation is a study of the potential effects of the implementation of quality management and quality assurance standards on shipping agencies in Jamaica. The quality standard looked at detail is the ISO 9000 series with particular reference to ISO 9002 and a brief look at the ISO 14000 series. The ISM code as a related standard is also examined.

The background of the shipping industry in Jamaica is viewed and followed to the present status emphasising the role of the Shipping Association of Jamaica and its function in the development of the industry. The thoughts behind the future of shipping in Jamaica is also looked at.

The shipping agency is examined with particular reference to principles of quality, quality standards and the cost of quality. The implementation of the ISO 9002 in a Jamaican agency is analysed through the use of a network diagram and bar chart making particular references to the likely results and potential benefits.

The concluding chapter examines the results of the analysis and discusses where there may be shortfalls. Recommendations are made for encouragement towards a move in this direction along with how the implementation can be approached.

KEYWORDS: Agency, Quality, Management, Standards, Compliance, Service.

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LIST OF ABBREVIATIONS

BITU	Bustamante Industrial Trade Union
SAJ	Shipping Association of Jamaica
PAJ	Port Authority of Jamaica
EDI	Electronic Data Interchange
WAN	Wide Area Network
JMI	Jamaica Maritime Institute
GMDSS	Global Maritime Distress Safety System
JAMPRO	Jamaica Promotions Corporation
ADB	Inter American Development Bank
KW	Kingston Wharves
UNCTAD	United Nations Conference on Trade and Development
ISM	International Safety Management Code
ISO	International Organisation for Standardisation
ISO 9000	International Standards for Quality Management
BIMCO	Baltic and Maritime International Council
TQM	Total Quality Management

CHAPTER 1

INTRODUCTION

An effective Quality System helps to improve any business in the process of achieving customer satisfaction and cost effective and efficient operations. It has been the belief by some involved, that implementing a quality system can involve the company in too much unnecessary bureaucracy and obstruct improved business performance. However the potential benefits that can be derived from such a system far outweigh any perceived obstacles.

The framework of the International Standard for Quality Management Systems, ISO 9000, provides a basis for a good Quality Management System. In today's highly competitive shipping industry, offering just about the same type of service, quality is often the key to differentiation. The quality of the product delivered is very important, but the quality of the relationship between the carrier, the agency and the customer is even more crucial for long term mutual benefits to be derived. Business performance can be improved through the fact that the system can increase understanding of the customer's requirements along with satisfying them. It can also help to organise and control the business in a manner to minimise errors and waste, thus improving profitability and competitiveness, and reducing costs.

The whole concept of quality and quality standards is not difficult to understand. It is concerned with knowing what your customer wants and providing it right, the first

time, every time. By customers, it is meant to involve everyone for whom the organisation works. This includes those who purchase the products or services, those who use them and the owners and shareholders of the company. The difficulty may rest with achieving total commitment from all involved in the process of implementation. However this can be overcome with a total commitment by management displayed by example. Only management can change the culture of any company. It is their responsibility to ensure that everyone understands the aims, and each person is aware of the role they play. For this, a vast amount of communication is needed along with support documentation setting out in detail the aims, objectives and policy regarding quality and the implementation of a quality system into the company. Achieving total commitment is important for the success of any quality system, because each member of staff is the best person to describe what he/she does, what problems are faced and how best to solve them.

Once the quality system is achieved in the company, it is best to get external recognition through a third party quality accreditation assessor. An approved quality management system assures the customers that the company is committed to quality. Being able to display that the company is ISO 9000 certified provides a competitive advantage in the market and displays a responsible attitude towards quality. This advantage however, can only be attained if management pays adequate attention to the overall business needs and objectives while implementing the system. External assessors may or may not be used in the implementation of a quality system. However if used they can provide an independent assessment of whether the company is ready for registration or not. All companies should keep in mind though that a quality system should not be implemented just to achieve ISO 9000 certification but to be incorporated into the very core of the business in order to gain the benefits of such a system.

Management should be aware that ISO certification does not mean the quality system becomes static. It should develop as the business and market changes. Key parameters should be identified and used to monitor the effectiveness of the system. This should include audit reports, survey results, customer compliments and complaints, and reviews. This will enable management to use their quality system to improve business performance and further enhance the industry.

CHAPTER 2

SHIPPING IN JAMAICA

2.1. BACKGROUND

Jamaica is an island located at latitude N 17° 58' in the Caribbean Sea and therefore heavily dependent on maritime trade. Liner shipping and the movement of containers is the main force behind employment in Jamaican ports today. Kingston is the principle port of Jamaica and is located on the south coast of the island. It is an almost land-locked harbour with approximately 20.7 km², of navigable water and depths of up to 27.4 m. The Port of Kingston is comprised of Port Bustamante, which has twelve berths with a depth alongside of 7.62 - 11.88 m, and a number of private berths. There is a container/transshipment terminal, modern break bulk and roll on/roll off (ro/ro) facilities and two modern cruise ship piers. In addition there are a number of smaller terminals for the shipment of oil, cement, gypsum and lumber. Integration of the container/transshipment terminal with the adjoining breakbulk wharves at Newport West has provided a greater flexibility in the handling of containers, ro/ro and breakbulk cargoes for local distribution, export and transshipment.

2.1.1. The Road to Modernisation

The trend of modernisation and development of the shipping industry in Jamaica, could be said to have started as far back as the 1930s. This was a very difficult period because of the economic depression that existed which spawned a revolution of

rising expectations; not only in the economy, but also from the standpoint of the colonial polity which existed in Jamaica at that time. Conditions of work were brutal and worker moral was at its lowest. Both the sugar and port workers decided to strike and march as a sign of protest against the casual nature of their employment, as well as the low wages they received. Strikes occurred all over the country, but it was the strike on the Port of Kingston in May, 1938, that marked the turning point in the struggle. It led to the formation of the Bustamante Industrial Trade Union (BITU) in the same year and the formation of the Shipping Association of Jamaica (SAJ) in 1939. The companies which comprised the shipping sector and which founded the SAJ were generally involved in operating ships; receiving, storing and delivering cargo; and husbanding ships which came with lumber, dry goods, hardware and machinery and which loaded mail and bananas. The Association immediately accepted that there was a need for an improvement in the working conditions and wages of the port workers. Subsequently the BITU was registered as a trade union in 1939. It was after this that another significant event occurred that marked development. The Jamaican Government decided to register portworkers through the Ministry of Labour. This greatly assisted the establishment of stability in the employer/employee relationship on the port as the port worker was now defined and was to be issued with what became for many a passport to respectability, power and access. (SAJ, 1989, 24).

Although it was sugar that dominated Jamaica's shipping industry up to the mid-19th century and even up to 1838 when slavery was abolished, it was banana exports around which modern shipping developed. It was the banana industry which brought the first steamers to Jamaica and which gave Jamaica its first experience with shipping conferences. It was this industry, through the initiatives of Charles Johnston, Captain. S.D. List and the Jamaica Banana Producers Association, which was largely responsible for the organisation of the shipping industry under the SAJ. Indeed shipping depended on banana exports for much of its prosperity.

2.1.2. Achievements

The development of the Port of Kingston continued at a rapid rate through the decades of the 1940s and 1950s, mainly through the initiatives and work of the SAJ and the trade unions representing port labour. The first achievements were the regularisation and registration of port labour and the streamlining of wharfage operations through charges for cargoes left overtime on the wharves thus causing congestion on the docks. In 1952, the Trade Union Movement was still fledgling with unions and management. The events of 1938 were still fresh in everyone's minds, and so it was against this background that the SAJ and three major waterfront unions, the Bustamante Industrial Trade Union, the Trades Union Congress and the United Port Workers Union formed the Port of Kingston Joint Industrial Council in 1952. The Council afforded on going discussions between all sides about development and potential problems in the industrial relations of the Port of Kingston. It was largely responsible for maintaining stability and industrial calm. It was one of the first and still provides an invaluable service in port development and in facilitating stable and dependable shipping operations in Kingston today.

By this time the SAJ had now turned its attention to improving industrial relations, thereby stabilising port operations and improving the reliability and efficiency of the country's major port by introducing mechanisation. 1960s brought with it the effects of modernising conditions of work on the Port of Kingston and all ports in Jamaica by providing:

- A guaranteed work week.
- A pension scheme.
- Sick leave.
- Vacation benefits.
- A two shift system. (SAJ, 1989, 26).

All this was granted in exchange for a free hand to modernise the port by mechanisation.

2.1.3. Technological Advancement

Technology is usually the driving force behind changes in any industry; shipping is no exception. The spirit of competition usually leads to an increase in productivity and efficiency, but technological advancement has proven to be more effective in bringing about changes. If we look at the shipping industry today against the background from which it has evolved, one would see that the use of containers and gantry cranes have come to dominate the industry, taking over from slings, trays and winches. Intermodalism and the introduction of the container heralded a new day for port operations all over the world. The steamship had increased the speed at which cargo traversed the oceans and the container was designed to move cargo faster and more safely. Containerisation meant faster ship turn-around but required modern lifting and ground transport equipment, and trained personnel. Containerisation was fast becoming accepted as standard in the maritime world. Both the SAJ and the unions recognised the danger to the local shipping industry if the Port of Kingston did not move with the times.

By the mid 1960s, work was well advanced in the development of a new deepwater port for Kingston, west of the city and the old port. The new area was called Newport West and came into operation on October 1, 1965. By 1966, Kingston's first ro/ro facility at the port started receiving some of the most modern merchant ships. The decade of the 1970s saw further mechanisation of Jamaica's leading port and the establishment of the Caribbean Shipping Association. In 1972, the Jamaican Government announced a massive expansion to the facilities at Newport West. Plans to make Kingston a major transshipment centre of the Caribbean had evolved and included the construction of a modern container terminal with all the necessary

handling and administrative facilities. Work was completed in 1975 and transshipment operations began officially on August 14th of that same year. The decade of the 1970s ended with a modern port and modern industrial relations practices in place. The workers in Jamaica's ports were enjoying even more benefits than they had struggled for, in 1938.

2.1.4. Computerisation

Entering into the 1980s, the SAJ turned its attention to further modernisation of port operations through computerisation. This has been another stage marking development in the Jamaican shipping industry. By the mid 1960s, Jamaica had reached its manual peak in terms of capacity to provide fast and accurate administration. The SAJ, with this in mind, decided to secure computer technology to do the job. New systems and programmes were put in place to enhance competitiveness. Port personnel visited other ports world-wide to gain knowledge about modern port computerisation and containerisation. In 1981, Port Computer Services became a reality, allowing customers direct linkage access to the centre.

2.2 PRESENT STATUS

Shipping in Jamaica has transformed over time and in the 1990s, it has become a multi-million dollar business. With the development of modern berthing facilities and the increase in containers coming to the island, the industry is poised for further growth, despite the setbacks being experienced as a consequence of illicit drug activities on the port. Container throughput movements have increased in the Port of Kingston, during the period of 1995 to 1996 by 30 %. Presently the total container throughput is approximately 483,319 TEUs per year with an aim to increase this figure to 600,000 by the year 2000 when it is expected to have 13 quayside gantry cranes in operation. (PAJ, 1997, 17).

2.2.1. Manning

With this improvement comes the question of manning for changing port operations and the critical cost factor. The aim has been towards reduction in this area, both in numbers and cost. This aim is further enhanced by the fact that Jamaica has positioned itself to be a major transshipment hub between Panama and the eastern seaboard of USA, thus engaging in a high degree of competition, making cost reduction even more crucial. The changes taking place in manpower in the shipping industry throughout the world today is manifestation to the fact that the industry has changed from a large employer of labour to a capital-intensive one.

2.2.2. Shipping Agencies in Jamaica

The shipping industry in Jamaica today also shows an increase in the number of shipping agencies up and running. Presently records show thirty such businesses over twenty in 1994. These liner agencies are responsible for the day to day activities of major shipping lines offering regular or scheduled operations of general cargo and container vessels. The island's proximity to major trade routes has attracted many of the world's top shipping lines to invest in Kingston. Much of the strength of a transshipment hub is the volume of services, deep sea and feeder, that utilise it. The more services there are, the more opportunities there are for relaying or interlining boxes between services. In turn, the more reasons there are for lines to employ Jamaica as a transshipment hub. Increasingly, lines are viewing Jamaica as an ideal hub, situated not only on the crux of the north-south American trade routes but also centrally located to accommodate global east-west traffic. The front line and back-up services available in the port are continuously being upgraded and offer a highly cost effective and competitive option to shipping lines. This is confirmed by the number of well-known names in the liner shipping business which regularly call at Jamaica.

2.2.3. Major Lines

For Zim Lines, Kingston is one of the major hubs for most of its cargo to South America, the Mediterranean and the US Gulf. In 1996, Zim moved 95,253 containers through Kingston. There are two sailing's which call Kingston, a round the world container service operation, Zim Container Services and a vessel sharing agreement, Zim InterAmericas Service (ZIAS), which calls Argentina, Uruguay, Brazil, Jamaica and the US Eastern Seaboard.

Evergreen returned to Jamaica in 1995 and has been calling Gordon Cay since 1996. The line currently operates a weekly west bound round the world service, two Caribbean feeder services using 544 TEU vessels, and an eastbound service via Panama, through Kingston, moving 51,666 containers in 1996. In 1997, Evergreen launched a new service. Kingston became the link for the Central and South America with the US East Coast route.

The New Caribbean Service (NCS) and EUROSAL consortium also use Kingston as a hub. NCS consists of P&O Nedlloyd, Hamburg-Sud, CGM, Hapag-Lloyd and Harrison Lines. The EUROSAL group consists of P&O Nedlloyd, Hamburg-Sud, Hapag-Lloyd, CSAV and FMG. NCS operates a weekly service with six 2,000TEU vessels between Europe and Kingston. This connects with feeder vessels linking Kingston with Belize, Honduras, Guatemala, Hispaniola, Puerto Rico, Haiti and USA. The EUROSAL group operates a sailing every ten days from Europe to the South American West Coast using eight, 2,000 TEU vessels with Kingston as the link. 1996 statistics showed a total of 103,815 transhipped containers between these two groups.

Tropical Shipping has a weekly feeder service to Trinidad via Kingston using two 300 TEU vessels. Columbus Lines has a service every 10 days from Australia to the

US East Coast using the Tropical service to feed cargo to and from the Eastern Caribbean. Kent Line now offers a twice-weekly service from New Brunswick to Central America via Kingston. Kirk Line operates a twice-weekly ro/ro service from Miami to Kingston and Grand Cayman. Seaboard Marine offers a weekly service to Antigua, Barbados and Trinidad via Kingston from Miami. Other regular users include Mitsui and 'K'-Line car carriers, Conti-Lines and Cagema.

Table 1. Movement of containers over Kingston Container Terminal by carrier.

MOVEMENT OF CONTAINERS OVER KINGSTON CONTAINER TERMINAL BY CARRIER 1986	Month	No. of ships	ZIAS	Sea-Land	Zim	NCS	Evergreen	Others	Total
	January	76	1,014	1,061	8,666	6,671	3,373	1,721	22,606
	February	68	868	1,256	6,418	6,539	3,139	2,349	20,569
	March	77	2,348	1,054	6,510	8,262	3,342	2,868	24,384
	April	81	2,579	1,034	5,909	10,049	3,665	3,092	26,328
	May	84	2,197	1,234	6,863	10,419	4,293	2,417	27,423
	June	82	3,262	947	5,388	9,624	4,458	2,343	26,022
	July	91	1,239	895	9,161	8,870	4,473	3,121	27,759
	August	86	898	1,111	8,897	8,541	5,767	2,696	27,910
	September	82	976	1,168	8,548	9,972	4,417	2,723	27,804
	October	81	1,168	1,055	9,557	8,351	6,137	2,890	29,158
	November	70	1,476	940	9,031	7,171	4,258	2,641	25,517
	December	79	1,592	707	10,305	9,346	4,244	2,304	28,498
Grand total	957	19,617	12,462	95,253	103,815	51,666	31,165	313,978	

Source: Port Authority of Jamaica "Ports and Shipping Jamaica 1998".

**Percentage of total container movement
Over Kingston Container Terminal by line for 1996.**

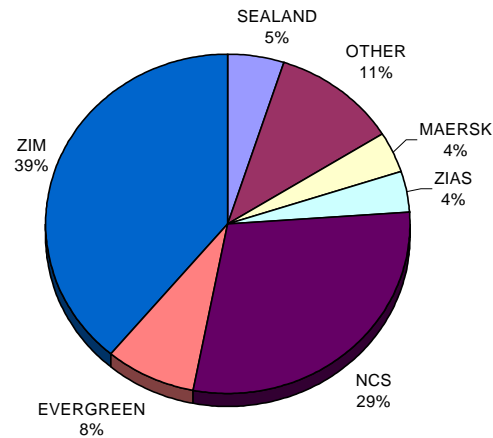


Figure 1

Source: Port Authority of Jamaica “Ports and Shipping Jamaica 1998.”

2.3. THE ROLE OF THE SHIPPING ASSOCIATION OF JAMAICA

The Shipping Association of Jamaica was established during the turbulent years of the late 1930s when Jamaica’s modern political development took its present course. It was a time of far reaching fundamental and often violent change, when the workers of the sugar plantations and the port of Kingston, among other groups decided to strike and march behind their leaders in support of better wages, and a change to the casual nature of their employment status.

The Association now sixty years old represents 63 companies in the private sector of the island’s shipping industry. These include shipping agents, wharf owners, terminal

operators, stevedoring companies, ship owners and operators in the port of Kingston. Presently, the roster shows approximately 400 workers. The Association deals with all matters affecting the interest of its membership, security, computerisation, public relations, liaison with Government and other trade bodies and training.

The Shipping Association, according to its constitution, was set up to:

- Consider and regulate all matters affecting the interest of its membership.
- Protect and support the carrying out of members' business according to fair and honest principles.
- Establish uniformity between members of the Association in rate remuneration for port labour.
- To establish fair and reasonable rates of remuneration and conditions of labour. (SAJ, 1985, 14).

In considering and regulating matters affecting the interest of its members, the Shipping Association's governing body, a nine-member committee, meets at least once per month. These meetings, not only review the affairs of the Association and formulate policies, but consider developments, nationally and internationally, which may impinge on the business of shipping. In addition committees with special areas of responsibilities are appointed from time to time to review and recommend action on specific aspects of the Shipping Industry.

2.3.1. Functions

In the early years the SAJ functioned as little more than the labour-recruiting agency for employers of port labour. The Association then operated three recruiting centres specifically to keep rival union factions apart. Now, it has become a sophisticated organisation offering the local industry a wide variety of services such as:

- Regulating the supply and management of stevedoring labour at Port Bustamante.

- Negotiating and lobbying on behalf of the members for fair and reasonable rates of remuneration and conditions of employment.
- Make submissions to various sectors within Government including statutory and other bodies.
- Meet with the Bank of Jamaica and the Port Authority of Jamaica on matters directly related to the business of shipping.
- Marketing and promotion of the Port of Kingston to potential overseas port users. (SAJ, 1985, 14).

2.3.2. Port Security

Since October 1975, the SAJ has assumed responsibility for security on Port Bustamante. Prior to this, each wharf company had their own security arrangements and shipping agents hired ship watchmen when their vessels were in port. This system had many shortcomings, which did not lend itself to effective port security. So, the SAJ thought it better to centralise port security by establishing an organisation with the sole purpose of arranging and supervising the effective security measures. This entity would not only ensure that capable security personnel were enlisted, but that the quality of the service was maintained at acceptable standards.

Today, the Association offers through Port Security, quality security service to its members operating at Port Bustamante. The 24-hour service features mobile patrols, canine patrols, two-way communications, a central control office and personnel with powers of arrest. The Association has also co-operated with and will continue to support and work with the Jamaica Constabulary and other police force at Newport West.

2.3.3. Port Computer Services Limited

The SAJ also operates a wholly owned company, Port Computer Services Limited, which was designed to handle the computerisation of not only SAJ activities but also to provide computer services for member companies and the port. It has operated, and will continue to operate with an aim of having the entire Industry operating on a central data base system.

Now, with 18 years experience in the information services sector, the company is poised to take the shipping community well into the next century and beyond. Software relating to vessel planning, yard planning, straddle carrier operation and electronic data interchange (EDI) have been procured and currently facilitate the electronic transmission of vessel/gate activities. In addition, the development of a berth planning solution locally is completed and will improve the operational efficiency of the Port of Kingston. It should also be noted that all straddle carriers operating at the port are now equipped with radio frequency computers. The development of a New Accounting Package, Agency Software and the full implementation of a Wide Area Network (WAN), Internet linkages and the continued production of relevant statistical data relating to transshipment activities on Port Bustamante can only augur well for the local and regional community.

2.3.4. Public Relations

The SAJ, mindful of its responsibility to forge a closer link between the maritime community and the public at large, has organised a number of industry wide and public seminars on matters pertaining to the Maritime Industry. A number of periodicals, handbooks and newsletters have been published. These have been designed to facilitate shippers, to improve the operational safety and efficiency of Port Bustamante and to inculcate a deeper public understanding of the Industry. The

port is an earner of foreign exchange and wider public knowledge about how it operates can only assist in maintaining an efficient port.

The Shipping Association of Jamaica is the cohesive unit within the Industry, providing a forum for discussion of common problems, formulating policy and guiding development.

2.3.5. Training

The Shipping Association continues to actively invest in human resource development, and training programmes continue to prepare the workforce to be certified and well equipped to meet the technological challenges of today's maritime and shipping industry.

Training has become an even more integral part of the Association's role over time, and courses offered cover operation of machinery, safety and terminal operations. Many of these are in conjunction with the Jamaica Maritime Institute (JMI). A computerised crane simulator leased in 1995 was located at the JMI, and assisted in accelerating the training of gantry crane operators. The Institute continues to strengthen its relations with the local maritime sector by offering its services in education and training to develop and enhance the technical skills and knowledge of the marine and allied industries. Presently a two year part-time Diploma course in Shipping Logistics is offered along with a Diploma in Industrial Systems Operations, and the use of computerised simulators for the training of Global Maritime Distress Safety System (GMDSS).

2.4. THE FUTURE OF SHIPPING IN JAMAICA

Shipping in Jamaica has proven itself to be a dynamic industry within a struggling economy. Growth has been significant over the years and participants of international

trade both inside and outside the island have shown confidence in further growth by the level of investments they have made.

Modern economies find it near impossible to exist, let alone develop without international trade. Since very few social systems are completely isolated, self-reliant and able to meet all their people's needs from their own domestic resources, international trade has expanded at an accelerated rate. This expansion has aided Jamaica, in that it has assisted in maintaining foreign exchange, development of infrastructure and communication links, provision of jobs and education of the people. It has also provided an opportunity for Jamaica, while developing its economy, to facilitate the development of others, through the transshipment process, because of its strategic location in the Caribbean Sea.

Growth of international trade may be one reason why shipping in Jamaica has grown and is poised for further growth. The transshipment process is another. However there is yet, a third. This third reason is actually a group of reasons to invest in Jamaica, put forward by the Jamaica Promotions Corporation (JAMPRO). As such it has encouraged foreign investment into the industry, and are as follows:

- Free movement of capital, profits and dividends.
- Proximity to US Mainland, Central and South America.
- English speaking, well-educated, competitively priced labour force.
- Modern infrastructure.
- Excellent telecommunication links.
- Preferential access to international markets.
- No restrictions on foreign investors borrowing on the local market, both in Jamaican and foreign currency.
- Sophisticated financial sector.
- Wide range of mineral deposits and other natural resources.

- Relief of tax burdens via double taxation agreements with the US, Britain, Canada, Germany, Israel, Sweden and Norway.
- Bilateral investment protection treaties with the US, Britain, Netherlands, France, Germany, Switzerland and Italy.
- Import duty on raw materials has been abolished. Low and reducing import tariff rates on all other items.
- No price controls.
- Few import and export restrictions.
- Accelerated depreciation of capital goods over two years for tax purposes.
- Democratic tradition with both major political parties fully committed to economic liberalisation.
- Free Zones.
- International Finance Companies Act - income tax relief on profits and capital gains.
- Foreign Sales Corporation Act - relief from company and income tax.
- Factory Construction Act - tax exemptions, duty free import of materials not locally available. (PAJ, 1997,53).

These have been reasons for growth in the industry and for belief in a positive future. This is further enhanced by plans locally, to expand the present facilities to make Jamaica even more attractive to investors.

2.4.1. Gordon Cay

The opening of the new container facilities at Gordon Cay, in Kingston in 1996, highlights the Port Authority of Jamaica's confidence in the future of Jamaica as a business and transshipment hub. The Port of Kingston has doubled available container terminal capacity and can now accept the largest container vessels in service. Subsequent planned development phases will guarantee that Kingston continues to

capitalise on its strategic position; ideal for serving the Caribbean and Latin America, and remains the region's premier hub.

The first call at the Gordon Cay container facility was by Evergreen's 4,000TEU vessel. This effectively signalled a new era of expansion for the port's transshipment operations, which comprise 90% of annual container throughput. (PAJ, 1997,9). The ability to accept modern generations of container vessels and the asset of ample terminal capacity are all part of a strategy to offer a new international standard service package to operators and to fuel the already fast growth of this traffic.

2.4.2. Kingston Wharves

A rationalisation and refocusing of objectives at Kingston Wharves (KW), the mixed breakbulk and container facility, also promises to promote this objective. KW is Kingston's single public wharf and is located adjacent to the Gordon Cay container terminal. 70% of the traffic is containerised with the rest break bulk. KW has committed itself to an expansion programme of US Thirty million over a 10-year period, aimed at upgrading and modernising its facilities to world standard. This project is in conjunction with Inter-American Development Bank (ADB). The aims of the programme are to:

- Attract larger vessels, such as fourth and fifth generation container vessels.
- Provide better docking options and faster ship turnaround.
- Improve its competitive position, and enhance profitability.
- Provide better all-round service to customers. (PAJ, 1997, 20).

A study has jointly been commissioned by KW and the ADB to convert the break-bulk facility to handle containers. Early research indicates the study is likely to conclude that improving container facilities is best achieved by reducing existing warehousing space and acquiring modern container handling equipment. Kingston's regional

transshipment potential is widely acknowledged, and the country's position would be strongly enhanced given a full modernisation of breakbulk and container terminal operations. KW has exhibited its commitment to the rationalisation of breakbulk operations by offering to invest US ten million in the Gordon Cay development.

CHAPTER 3

THE SHIPPING AGENT

3.1. THE SERVICES OF A SHIPPING AGENCY

Along with the fact that the port can offer an efficient and competitive service is the fact that there are many shipping agencies that can compliment them by doing the same. A shipping agent operates on behalf of a ship owner, charterer, or operator of a ship, or owner of cargo, in providing shipping services including:

- Negotiating and accomplishing the sale or purchase of a ship.
- Negotiating and supervising the charter of a ship.
- Collection of freight and/or charter hires where appropriate and all related financial matters.
- Arrangements for Customs and cargo documentation and forwarding of cargo.
- Arrangements for procuring, processing the documentation and performing all activities required related to dispatch of cargo.
- Organising arrival or departure arrangements for the ship.
- Arranging for the supply of services to a ship while in port. (UNCTAD, 1988, 1).

3.2. MINIMUM STANDARDS FOR A SHIPPING AGENCY

According to the United Nations Conference on Trade and Development (UNCTAD), 1988, there are minimum standards under which shipping agents should

operate. These standards fall under the categories of qualification, both professional and financial, professional conduct, enforcement and compliance.

Professional Qualifications

The shipping agent must possess the following in order to be considered professionally qualified:

- Have obtained the necessary experience in the profession by working in a responsible capacity with a qualified shipping agent.
- Be of good standing and be able to demonstrate his good reputation and competence.
- Have passed such professional examination(s) as required by the relevant national authorities / professional associations.
- In the case of a corporate entity, employ such persons professionally qualified as above to ensure the proper performance of the entity's function as an agent.

Financial Qualifications

To be considered financially sound the shipping agent must:

- Have financial resources adequate to its business evidenced by references from banks, financial institutes, auditors and reputable credit reference companies, to the satisfaction of the national authorities / professional associations.
- Have adequate liability insurance through an internationally recognised insurance company or mutual club to cover all professional liabilities.

Professional Conduct

There is a code of professional conduct by which the shipping agent shall:

- Discharge his duties to his principal(s) with honesty, integrity, and impartiality.

- Apply a standard of competence in order to perform in a conscientious, diligent and efficient manner, all services undertaken as shipping agent.
- Observe all national laws and other regulations relevant to the duties he undertakes
- Exercise due diligence to guard against fraudulent practices.
- Exercise due care when handling monies on behalf of his principle(s).

Enforcement

National authorities / Professional associations should ensure these rules are complied with. In cases of non-compliance, they may apply the relevant disciplinary actions. These may include:

- Warnings.
- A requirement for undertakings as to the shipping agent's future conduct.
- Temporary suspension of authorisation to operate as shipping agent, if/where granted by the relevant national authority.
- Expulsion of membership from the relevant professional association.
- Cancellation of authorisation to operate as shipping agent, if/where granted by the relevant national authority.

Compliance

Shipping agents already operating who do not meet the foregoing standards should be given reasonable time to conform to the requirements.

3.2.1. The Shipper's Expectation

The minimum standards of UNCTAD, 1988, are only requirements of an agency on one hand. On the other, there are the requirements of the shipper or the customer who

is keeping the agency in business. Competition is extremely high in the shipping industry and shipping lines and their agents have to continuously streamline and upgrade their services in order to keep up with their competitors.

There are three identifiable types of shippers:

- Shippers of raw materials.
- Shippers of consumer goods.
- Shippers of assembly line inputs and high value finished products.

The first type of shipper will consider price above all else, as he is moving bulk cargo of very often, a low value to weight ratio. The second type of shipper will consider price as a factor, but also quality. The nature of the cargo may require specialised equipment and proper handling. The third type of shipper will consider quality before price. This is because the nature of the cargo may be high value, or inputs for a just-in-time production process, and so the completion of the product is dependent on the delivery time of the input. Quality of service, reliability, frequency of sailing's, information systems and stability in the relationship become extremely important because transportation becomes an integral part of business operations.

Product differentiation becomes a key factor in the success of the lines and agencies. The lines that are able to provide a global or world-wide service and the agencies providing a wider range of customers' service will find themselves in a better competitive position than the others in the market. The days of shopping around for the lowest rate are slowly disappearing as quality becomes an increasingly important demand of the customer, and logistic alliances become a crucial component in the globalisation of the economy. Building long term relationships will bring mutual benefits, but maintaining them will require a quality service.

3.3. THE GLOBAL MOVE TOWARDS QUALITY

The Shipping Industry on a global basis, has moved in the direction of growth of mandatory regulations with an aim of improving the quality, and Jamaica is no exception. These regulations have become more complex while at the same time increasing its popularity as a means of protecting the ecosystem as well as the people who travel and work on the sea. In days gone by, shipping was regulated by national laws in co-operation with international laws on safety. This was monitored at the company level with the assistance of classification societies and government marine safety organisations. However time has shown changes the direction of a more international nature. More ships have moved to flags of open registry, increased in size, design and technology and competition has been high in fluctuating and adverse markets. With shipping moving from national bases to a more international one, it is no surprise that regulations are following suit.

In shipping over the years there has been a general attitude of taking an insular view of safety regulation to the extent that current moves towards a systematic approach to safety and risk management may even be placed at the bottom of the company's agenda. (Drewry, 1998, 7). Regulations were seen as more of a nuisance that had to be obeyed rather than a benefit to ensuring quality. This was aided by the fact that quality control and statutory regulation were regarded as separate issues. Quality control was seen as a means of ensuring that a product or service was fit for its intended purpose and would satisfy customer needs. Regulations were seen as a response to major safety failures, imposed by governments, insurers or classification societies, in other words, imposed by people outside the company. A merger of quality and safety management has taken place over the last 25 years so that most companies of any size have a quality assurance department which will normally embrace responsibility for seeing that mandatory requirements as well as production and operational quality standards are followed. (Drewry, 1998, 43). In shipping these quality standards have taken the form of regulations such as the International safety

Management (ISM) code and the International Standards for Quality Management (ISO) 9000 series, with specific reference to ISO 9002. The shipowner may accept these regulations with a view that they could be the stepping stone to achieving higher efficiency with the help of a quality management system. By acceptance he would be opening a door to a more systematic approach to safety and quality control within the company, thus ensuring different types of accidents and injuries can be collected and analysed realistically, making possible timely introduction of preventive measures.

“The value put upon having international specifications covering the characteristics and quality of goods, as expressed in national or industrial specifications, and increasingly in ISO standards has grown as world trade has expanded. In addition to assisting in the purchase and sale of goods and services of agreed quality, the standards of behaviour and competence of personnel implicit in the ISM code, ISO 9000 and expanded upon ISO 14000, in improving safety performance and in avoiding environmental pollution, are inevitably taking centre stage in the regulatory scene.” (Drewry, 1998, p44).

3.3.1. Increase of Regulations

Over the past thirty years, there has been an increase in regulations. Legislators have had the need to address the following issues:

- Growth in the size of tankers, and pollution potential.
- Dangers associated with the growth in the size and changes in design of passenger ships, particularly ro/ro passenger.
- Increased traffic concentrations, particularly in coastal waters and port approaches, and the interaction of ships carrying hazardous cargoes and passengers.
- Failure to institute shipboard and shore-based systems appropriate to modern conditions.

- The increased probability of operational and accidental safety lapses and pollution incidents as a result of greater traffic volumes, particularly with a significant proportion of vessels under questionable management.
 - Intensive employment, ageing ships, and lack of maintenance and repair.
 - Growing commercial pressures impacting upon safety in navigation, cargo handling and other operational aspects.
 - Extension of navigation to previously quiet ocean and coastal areas.
 - Carriage of an increasingly wide range of hazardous and toxic cargoes.
 - Poor practices in the port/ship interface with regards to ships carrying dry bulk, oil, chemicals, containers and dangerous toxic cargoes.
 - Failure to keep uniform and high standards in ship design, shipbuilding, shiprepair and the survey of ships.
 - Less tolerance of breaches in safety and environmental protection measures on the part of the administration and the public.
 - Lack of standardisation in safety aspects of ships and in equipment.
 - Inadequate radio communications.
 - Wider introduction of high-speed vessels and other advanced types.
- (Drewry, 1998, 4-5).

The fact that regulations have increased should not mean that “the burden of rule following” has increased. Some are mandatory, such as the ISM code, but others are voluntary, such as the ISO 9000 series and should be taken in the light it was meant. When implemented and used in its proper manner it can bring benefits to the company by ensuring a certain quality standard is maintained, management is sharpened and economies are put in place. In shipping, it also places stress on the importance of human input and training in the safe operation of ships.

3.4. THE COST OF QUALITY

“Quality information allows managers to see the financial implications of poor quality, prioritise improvement efforts, balance prevention and inspection, and set budgets.” (Drewry,1998, 89). A Quality cost analysis however may not solve any problems and may fail to take into account qualitative benefits such as stronger customer loyalty rising out of the improved quality, so one should be careful in ensuring that an overall picture is taken into account, to ensure accuracy. The cost of improving safety and introducing quality assurance systems can be high, but the cost of industrial accidents can be even higher.

Quality related costs can be placed into two categories. They are as follows:

A. Operating quality costs.

B. External assurance quality costs.

A. “Operating quality costs are those costs incurred by a business in order to attain and ensure specified quality levels. These include the following:

- Prevention and appraisal costs or investments -

Preventive: Costs of efforts to prevent failures.

Appraisal: Costs of testing, inspection and examination to assess whether specified quality is being maintained.

- Failure costs or losses -

Internal failure: Costs resulting from a product or service failing to meet the quality requirements prior to delivery (e.g. product service, warranties and returns, direct costs and allowances, or product recall costs, liability costs).”

(Drewry, 1998, 53).

B. “External assurance quality costs are those costs relating to the demonstration and proof required as objective evidence by customers, including particular and additional quality assurance provisions, procedures, data, demonstration tests and

assessments (e.g. the cost of testing for specific safety characteristics by recognised independent testing bodies).” (Drewry, 1998, 53).

Table 2 Example of a Quality Analysis.

Example of quality analysis, 1 January-30 June 1988		
(Sales £2 million)		
	£'000	% of sales
Prevention costs:		
Design review	0.5	
Quality and reliability training	2.0	
Vendor quality planning	2.1	
Audits	2.4	
Installation prevention activities	3.8	
Production qualification	3.5	
Quality engineering	3.8	
Sub-total 1	18.1	0.91
Appraisal costs:		
Test and inspection	45.3	
Maintenance and calibration	2.0	
Test equipment depreciation	10.1	
Line quality engineering	3.6	
Installation testing	5.0	
Sub-total 2	66.0	3.30
Failure costs:		
Design changes	18.0	
Vendor rejects	1.5	
Rework	20.0	
Scrap and material renovation	6.3	
Warranty	10.3	
Commissioning failures	5.0	
Fault finding in test	26.0	
Sub-total 3	87.1	4.36

Source: Drewry, 1998. “Cost of Quality in Shipping.”

The London Chamber of Commerce and Industry conducted a survey in 1994 on the advantages and costs of becoming ISO 9000 certified. The following were the results:

- 74.4% believed they gained competitive advantage.
- 42.2% believed they gained new business.
- 86.1% believed certification had improved their business.

4.7% by cost control
58.1% by management systems
64.7% by staff attitudes toward quality
62.4% by operations systems.

- 55.8% used external consultants.

The survey also showed the following to be the costs in British pounds:

- Company of 1 - 12 employees £6,900
- Company of 13 - 49 employees £13,800
- Company of 50 - 200 employees £20,000
- Company of 200+ employees £67,000.

(Drewry, 1998,54).

3.4.1. Life cycle costs

Shipping is a service industry and as such has costs related to life cycles. These are acquisition costs, ownership costs, operating costs and administration costs. Acquisition costs refer to capital expenditure in acquiring a product or service. Ownership costs refer to costs of keeping the product or service in operation. Operation costs refers to training and replacing stock. Administration costs refer to costs of keeping records and documentation, electronic or otherwise. These life cycle costs can be reduced with the use of reliable products along with a suitable quality plan. All products and services go through life cycle phases where the cost of correcting defects and failures can increase significantly. If the product has to be corrected at the stage of design or even production it will result in far less costs than if it were to be corrected or recalled while on the market. Life cycle costs usually increase where there is insufficient management commitment to quality.

Figure 2 shows an example of availability and cost to the user of a product or service. The user's total quality costs are plotted against the availability where availability is a product of reliability and maintainability. The cost falling to the user due to product failure is also plotted along with an optimum price curve.

Availability and cost for user.

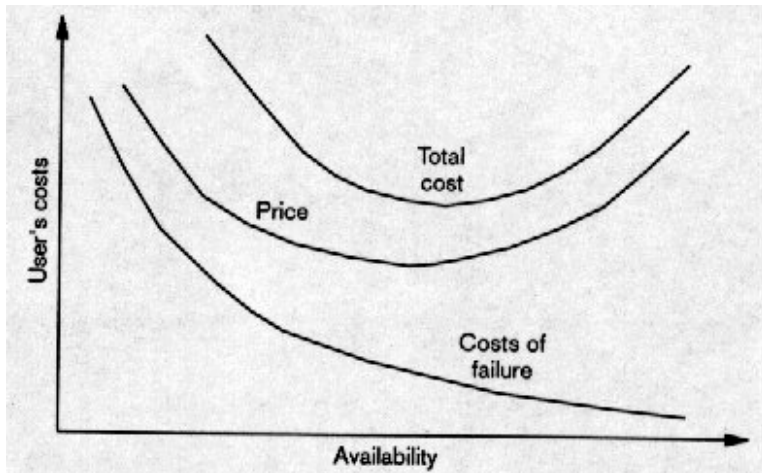


Figure 2

Source: Drewry, 1998. "Cost of Quality in Shipping."

Figure 2.1 looks at the life cycle of a quality system and the costs and benefits. At the early stage of any product, the incremental costs of quality, decreases to the supplier while the incremental benefits of quality increase. However as the product matures in its cycle, the costs of quality, with regards to maintenance increases, to the user while the benefits of quality decreases.

Quality system life cycle and benefits.

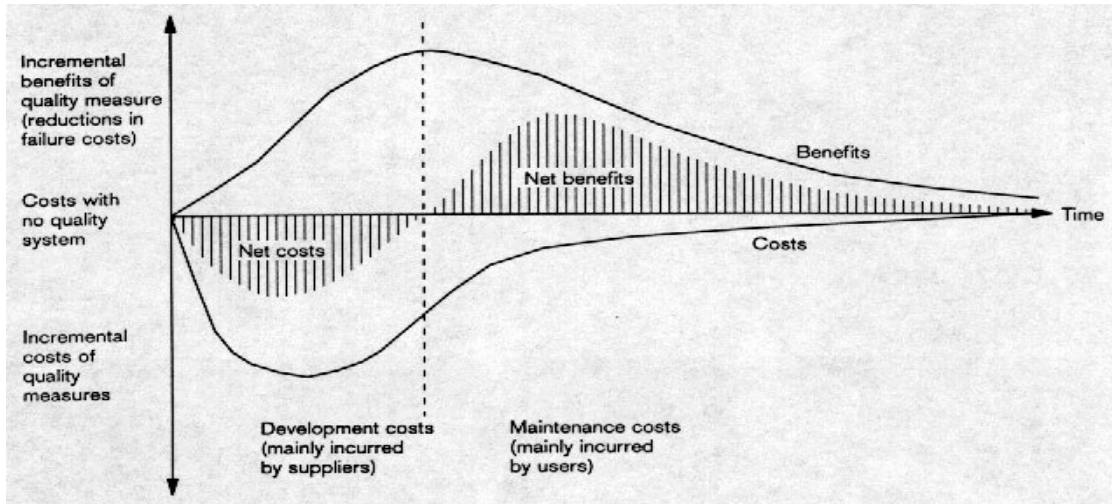


Figure 2.1.

Source: Drewry, 1998. "Cost of Quality in Shipping."

CHAPTER 4

PRINCIPLES OF QUALITY

4.1. QUALITY

Quality can be defined as “the fitness for use of a product or service”. (Mottram, 1998, 189). There has been a global trend towards more stringent customer expectations with regards to quality, and so, it is thought to be achieved when a customer’s needs are satisfied. Along with this trend has also been a trend in realising that continuous improvements in quality are often necessary to achieve and sustain good economic performance. (UNCTAD, 1997, 165). An organisation’s product or service is usually dependent upon certain requirements or specifications. If these are not met, then the thought is that there are deficiencies within the system. Consequently to lessen this occurrence, quality system standards and guidelines have been developed. These compliment the relevant product or service requirements given the technical specifications. The International Standards for Quality Management (ISO) 9000 series encompasses many national approaches in this sphere.

The objectives of an organisation are often the factor influencing its quality system. These objectives often differ according to the culture and the nature of the business, therefore resulting in different quality systems and different quality products or services. An international standard by which quality can be judged is fast becoming a requirement by all rather than the desire of a particular customer. Hence the growing

need for businesses to attain the necessary certification that proves they are complying with ISO quality management standards.

Shipping is a service industry with two interrelated aspects: the technical aspect and the commercial aspect. The former is directly related to ship personnel and the latter, to onshore personnel. Overall however, it has the characteristics of a rigid “command and control” hierarchy. The objective of a quality system, along with producing an international standard service, should be to lessen this rigidity by pushing the decision making process downward within the organisation. This is a concept put forward by David Mottram. According to him, all shipping companies should have an objective of creating processes and organisational structures which make it easy to get things done. This in turn will lead to proactive attitudes and higher profitability.

With the above in mind, what then can quality in shipping be? According to UNCTAD, 1997, quality in shipping is determined by certain characteristics:

- Quality is a focus on the customer.
- Quality is a goal of achieving “zero defects”
- Quality is a frame of mind that must pervade the entire organisation - top management, middle management and the workforce.
- Quality is an earnest attempt to do things right, from the beginning not simply do them better.

4.2. QUALITY ASSURANCE

Quality Assurance is “prevention of problems with quality by means of a system designed to involve everyone in the organisation in continuous improvement and the development of a quality culture”. (Mottram, 1998,1). If there is consistency in the approach and operation of an organisation then it is likely that the result of the product or service will also be consistent. Whatever system is used, will be according

to the organisation's structure and responsibilities, along with resources and operational requirements. It must however, exude total commitment from top management. This does not mean to simply direct orders to subordinates, but to display socio-emotional support by getting directly involved in the process and showing further commitment and trust by giving authority to other members of the "team". The team in this capacity being all the members of the organisation working towards one goal, that of maintaining the quality standard set. According to David Mottram, the interrelation between commitment and pushing authority down the organisation, is a difficult task for any manager to grasp. However the objective should be to create a competitive, innovative, quality organisation and this requires commitment and involvement along with creating a learning organisation and constantly encouraging the decision making process to be pushed down.

This need for total commitment is repeatedly referred to, by advocates of quality assurance. According to Marsh in his book *An Introduction to Quality Assurance in Shipping*, he made reference to the fact that a lack of commitment indicates a failure to grasp the principle of quality management. He also said, "if management at all levels is not fully committed to quality management, it is doomed to failure". He further stated that one simply cannot legislate for commitment, it must stem from within and become a culture of the company.

Though this commitment is very important, alone it cannot achieve, nor does it guarantee quality and quality improvement. Total management concepts and methods have to be understood by all and applied correctly for benefits to be achieved. Management must familiarise themselves and their team with the international quality standards put forward and use these standards as a framework or tool to instigate a continuous improvement process within the organisation. The quality standards that can be used are the ISO 9000 series, the ISM code and the ISMA

standards. These standards on their own, do not guarantee quality, but can be used as a benchmark against which a company's commitment to quality can be measured.

According to Peter Cremers from Anglo Eastern Ship Management in Hong Kong, any continuous improvement process within an organisation must encompass certain characteristics:

- High standards of totally independent internal auditing.
- Accident reporting and analysis.
- Regular and sincere management reviews of the systems.
- Regular feedback to employees
- A strong training programme.
- Continuous commitment from the top. (BIMCO, 1999, 235).

Shipping is a service industry and as such shipping agents are providing a service both internally and externally. Internally to the principal(s) and externally to the shippers or consignees. Quality assurance is needed to ensure a set quality standard service is maintained. The reputation of any organisation is often linked to the quality of its product or service. Within this highly competitive industry, the better service provider will be in a more successful position. More and more demands are being placed on shipping agencies by all parties to display compliance with international standards through certification. ISM is presently mandatory and ISO is voluntary. It is however fast becoming increasingly possible that shippers/consignees will soon refuse to do business with companies that do not hold the necessary certification that their agency complies with ISO quality management standards.

In Jamaica at this time, it is not the common situation for an agency to be ISO certified. However the need is increasing both to keep up with the ever changing dynamic industry and the expectations of the shippers/consignees. Also, if a shipping company is ISO certified the requirement is usually present for all dependants to have the same, and this would include the shipping agency. Implementation will not be an easy task given the required start up costs, necessary training and additional

administrative needs. However the potential benefits should outweigh the costs which should reduce over time, and prove to be an advantage by enhancing overall quality.

4.3. TOTAL QUALITY MANAGEMENT

An aspect of quality management is called *Total Quality Management, (TQM)*.

According to UNCTAD, 1997, TQM has four stages:

- Optimising product quality.
- Expanding quality efforts.
- Applying TQM to product development.
- Creating the capacity to realise dreams.

To implement all four stages will take a significant time, up to forty years, and so it needs to become a way of life and a part of the culture of the organisation. A quality management system should be developed and implemented for the purpose of achieving the company's objectives set out in the quality policies. It should be appropriate to the type of activity and service being offered.

According to UNCTAD, 1997, a quality management system has two interrelated aspects:

- The company's needs and interests: for the company, there is a business need to attain and to maintain the desired quality at an optimum cost, the fulfilment of this quality aspect is related to the planned and efficient utilisation of the technological, human and material resources available to the company.
- The customer's needs and expectations: for the customer there is a need for confidence in the ability of the company to deliver the desired quality as well as the consistent maintenance of that quality.

Each aspect requires evidence of the quality of the system and the quality of the product or service in the form of information and data.

With the introduction of quality management, shippers will be better able to guarantee their own customers that they will obtain their goods in a better condition, on time and with less hassle. Carriers will benefit from greater support from shippers who will continuously use the service and maybe even establish relationships of mutual benefit.

4.4. THE QUALITY MANAGEMENT MODEL

Quality management involves maintaining the highest level of quality that an organisation and the people within it can stand. It is the responsibility of the quality manager to ensure the needed changes takes place. He/she is likely to encounter some form of resistance to change, as this is a natural human response, maybe from a misunderstanding or a difference of perception. However the task is not to have employees blindly accept change, but to do so through improved training and motivation. (Mottram, 1998, 172). According to Glen Plant, 1998, it can also be done through “exerting influence: assertive persuasion, reward and punishment, common vision, participation and trust.”

The objective of having a quality manager is to actually implement quality standards, and ensure the results of the product or service complies with the requirements. There are certain procedures or steps to be followed when implementing a quality management system or model. According to David Mottram in his lectures on *Principles of Management*, 1998, they are as follows:

Development

- Ascertain what standards apply to the organisation.
- Research standards and associated guidelines.
- Compare the organisation’s activities against the requirements of the standards and determine work required to meet them.

- Obtain quotes for documentation, consultants and external assessors.
- Present cost proposal to senior management for review and approval.
- Create implementation plan, programme and budget.
- Conduct awareness seminars for the staff.

Implementation

- Create and issue draft system documentation.
- Organise internal audits to check implementation of system.
- Establish pre-assessment by external agency.
- Issue formal system documentation.
- Organise continued internal audits.
- Establish management reviews.
- Organise assessment by external agency.
- Organise 6 monthly surveillance visits by external agency.
- Organise 3 or 5 year re-assessment by external agency.
- Create a quality manual
- Create a procedure and instruction manual
- Ensure everyone is aware of their responsibilities and how to achieve them.
- Organise continuous means for correcting errors and ensuring continuous improvement.
- Ensure everyone participates in the future development of the system.

Prior to implementing any system, preliminary plans have to be made. Below are flow charts showing the procedures involved in making a preliminary analysis and in planning a quality system.

Analysis for Quality Planning

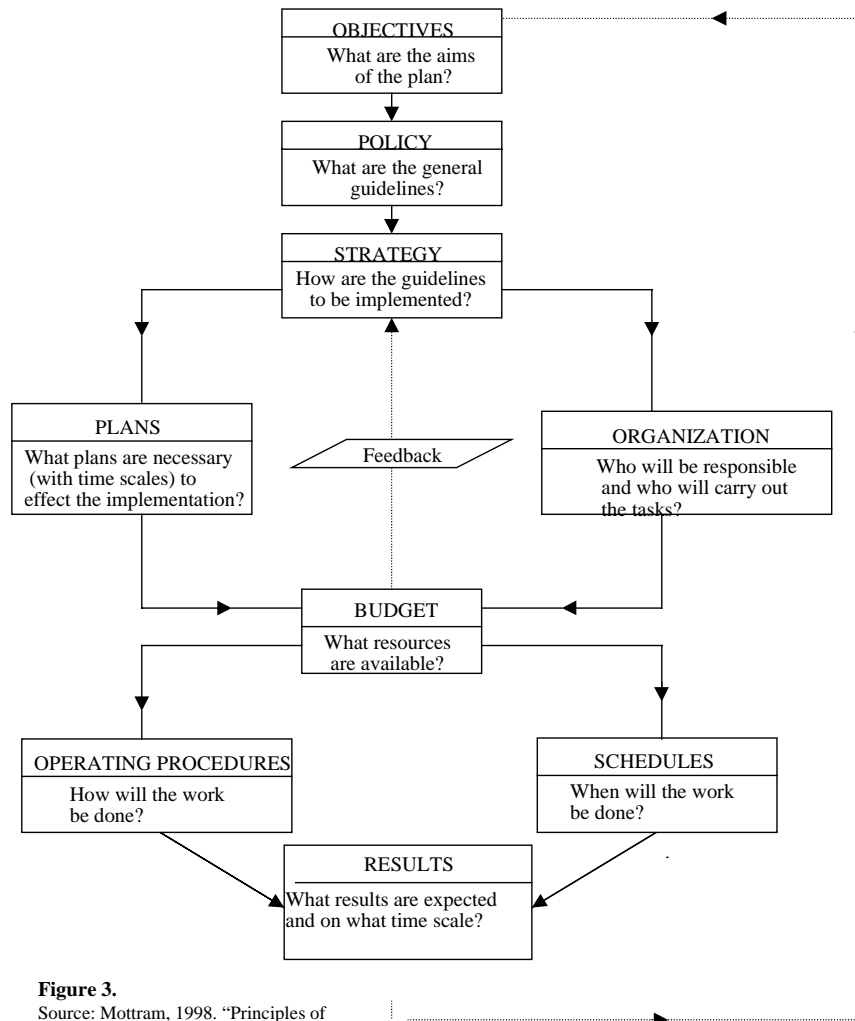


Figure 3.
Source: Mottram, 1998. "Principles of Management."

Plan for a Quality System

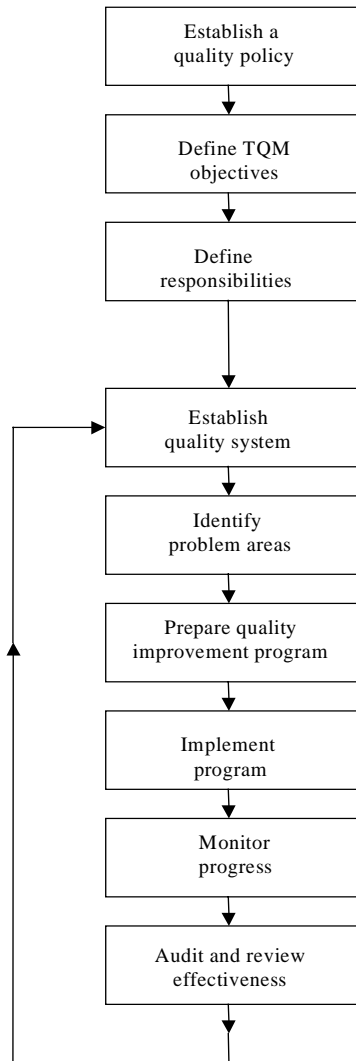


Figure 4.
Source: Mottram, 1998. "Principles of Management."

4.5. BENEFITS OF AN EFFECTIVE QUALTY SYSTEM

If you say what you do by writing it down, and you actually do what you have written down, and can prove as such to your external auditor, then the outcome should be beneficial to the organisation. According to Peter Cremers in his article in BIMCO Review, 1999, 235, "for every dollar in insurance claims there are at least five dollars of hidden or indirect costs which cannot be recovered. So in reality the shipping

industry loses quite a few billion dollars due to losses.” The benefits achieved by a company after implementation of a quality system are estimated by a classification society and presented in BIMCO Review, 1999, 235, as follows:

Quantity Benefits

- 10 - 15% Reduction in P & I premium.
- 15 - 25% Reduction in hospital hours.
- 23 - 35% Reduction in loss of man-hours.
- 30 - 40% Reduction in environmental protection fines.
- 35 - 45% Reduction in sick leave.
- 50 - 90% Reduction in damage to cargo.

Quality Benefits

- Improved staff motivation.
- Improved communication with sea staff.
- Improved market reputation.
- Improved employee’s perception of the company.
- Improved management
- Better employee retention
- Better service provided by the shipowners.

It is always more comforting both economically and psychologically to use capital to improve service rather than pay for losses. The implementation of a quality system lends itself to that possibility.

CHAPTER 5

QUALITY STANDARDS

According to a past British Prime Minister, Margaret Thatcher, “Quality is about making products that don’t come back for customers that do.” Essentially, establishing a standard to maintain a certain level of quality allows the customer to be confident that their expectations and requirements will be met. It also satisfies the expectations and requirements of quality assessors, the management and staff of the individual company and the existence of a quality assurance process.

Quality standards began centuries ago when craftsmen were hand-making products. These standards were on an individually set and feedback was on a one to one customer basis. Then as time evolved, craftsmen began working in groups, creating standards on a communal basis and supplying products on a greater scale. This led to them being seen as suppliers, and as such, customers began imposing their quality standards on them. Very soon, standardisation became extremely important, especially in some industries such as military weaponry. This continued to drive the development of refinement of product and quality standards. By the 19th century, quality standards were being institutionalised and documented, many of which have developed into international quality standards as we know them today.

5.1. THE ISO 9000 SERIES

The International Standards for Quality Management, ISO 9000 series, were put forward by the International Organisation for Standardisation (ISO), Geneva, Switzerland in 1987, for the purpose of developing industrial standards that facilitate international trade. It is a set of quality system standards that provide a framework to assist organisations in developing and assessing the quality of the process behind production and service. The guidelines and principles are in the direction of good management practice and specifications to ensure that products and services meet customers' requirements. They also provide a framework for measuring the consistency of an organisation's systems for dealing with customer orders, purchasing, stock control, service provision and service delivery. The standards are very generic in order to be applicable to any product or service process world-wide, emphasising principles, goals and objectives rather than mandating specific methods, practices and techniques.

Though a voluntary process, once a company has undertaken to implement ISO 9000, a requirement becomes mandatory. This is, the fact that every business activity involving quality must be conducted in a three part cycle: planning, control and documentation. Planning will ensure that goals, authority and responsibility are defined and understood. Controlling will ensure that requirements are met, corrective actions are taken and problems are anticipated and averted. Documentation will ensure the understanding of objectives, feedback for further planning and evidence of performance.

There are four standards put forward by ISO, in the 9000 series. They are as follows:

- ISO 9001: 1994. Quality systems. model for quality assurance in design, development, production, installation and servicing

- ISO 9002. 1994. Quality systems: model for quality assurance in production, installation and servicing
- ISO 9003: 1994. Quality systems: model for quality assurance in final inspection and test
- BS 5750 Part 4: 1994. Quality systems: guide to the use of ISO 9001/2/3. (IMF, 1996, p3).

ISO 9002 is the standard that is used by the shipping industry because there is no requirement for design. It also should be noted that there has been an update in the ISO 9000 series in 1999, to harmonise with the ISO 14000 series.

Some countries have adopted harmonised versions of ISO 9000. They have given their standards their own designation even though they are exactly the same as ISO 9000. Table 3 below gives a demonstration of this.

Table 3. Harmonised Versions of ISO 9000

<u>Nation</u>	<u>Standard</u>
Australia	AS 3900
Belgium	NBNX 50
Canada	CSAZ 299
France	NFX 50
Germany	DIN ISO 9000
Hungary	MI 18990
India	IS 10201
Ireland	IS 300
Netherlands	NEN ISO 9000
New Zealand	NZS 5600
Norway	NS 5801
South Africa	SABS 0157
Spain	UNE 66900
Sweden	SS ISO 9000
United Kingdom	BS 5750

Source: Johnson, P 1993. "ISO 9000. Meeting the New International Standards."

5.2. REASONS BEHIND ISO IMPLEMENTATION

The ISO 9000 series have been adopted and implemented for different reasons according to the industry in which a particular company is operating. One reason is for quality management purposes and another is to obtain certification or registration to the ISO quality system standard. Implementing for quality management reasons, is a way of “spring cleaning one’s household” or getting one’s business in the proper order to produce a quality product or service and ensure that quality becomes the nature of the business and not just something to strive for. Obtaining certification or registration provides the benefits of a quality management system along with strategic advantages. One such advantage is thought to be that the company with certification is more likely to be more successful on the market in terms of business acquisitions than the company without. This directly relates to the confidence that the customers have in the quality of the product or service. Another advantage is the possibility to retain customers that require ISO certification and attain a larger market share and a higher level of credibility with both current and potential customers in the market. Other companies believe that ISO certification will reduce the number of supplier quality assurance audits they must undergo. Companies in the production of a regulated product often have to attain certification as a directive from the European Community. In spite of the various reasons, according to the Institute for Quality Assurance, most organisations try to attain certification as a result of pressure from their customers. More and more customers are attaining ISO certification and want to do business with only organisations that have done the same.

5.2.1. Achieving ISO Certification

ISO certification is awarded by a third-party registration body after they have reviewed documentation, conducted audits and is satisfied that the organisation’s

quality system conforms to the ISO standards, that is, to the company policy and what is said, is actually what is being done.

Registration is renewable and enforced by semi-annual surveillance visits by the registration body. These are to review any changes to the quality system and ensure that corrective actions required under the previous assessment have been carried out. It is easier to attain for an organisation that already has an existing quality system in place. However once achieved, the standards must be upheld in order to keep it. These standards focus on performance, documentation and objective evidence. The certification is given on a facility rather than an organisation basis. So if an organisation has more than one facility it would need to obtain more than one certification. Each facility would become certified to one of the three parts of the ISO quality system models that is most applicable to the scope of operations.

The ISO 9000 standard is an ideal quality system for facilities, which are serious about quality. It is fast becoming a necessary tool for any business presently doing or expecting to do business with EC nations and various other countries and individual organisations. The competitive edge it gives along with the internal benefits makes it, within itself, a powerful strategic tool.

5.3. STEPS TOWARDS ISO IMPLEMENTATION

ISO 9002 is the quality system that an organisation wishing to prove that it can control the quality of service expected by the customer, would seek to attain. Shipping is a service industry and therefore the companies should gear towards achieving this quality system model. There are certain steps to follow in order to correctly incorporate this model into any business. They are generic and can be adapted to individual situations. These steps have been put forward by A Chauvel on

behalf of a French organisation, Bureau Veritas in *10 Steps for Implementing ISO 9002* and are as follows:

- **Step 1**

Take an initial assessment of the company's existing quality system. This will assist in determining the actions that need to be taken in order to bring the company in line with the standard's requirements.

- **Step 2**

Establish an objective, time for implementation and deadline date. These should take into consideration the daily workload of those involved with the project along with the necessary and available human and financial resources.

- **Step 3**

Management must establish a quality policy as part of the whole documentation process and display its total commitment to its success.

- **Step 4**

Management must define the company's organisational structure and describe the responsibilities and authority of everyone involved.

- **Step 5**

Establish a quality team responsible for bringing the company quality system into action. The leader should also be a part of management in order to facilitate direct feedback.

- **Step 6**

Establish a quality manual, describing the company policy, organisational structure and functions in the first chapter, along with the general functioning of the quality system being applied within the company, in the subsequent chapters.

- **Step 7**

Document the quality practices, resources and sequence of activities necessary to fulfil the requirements for quality. Drafts need to coincide ISO

requirements along with company quality policy. The work-force should be involved in drafting procedures for their particular activities.

- **Step 8**

Set up a measuring and reporting system to monitor progress on the project and to keep management informed.

- **Step 9**

Develop and improve quality management skills of personnel through training, in order to implement and maintain an efficient quality system.

- **Step 10**

Determine whether quality activities and related results comply with ISO 9002 standards and whether these arrangements have been implemented effectively. If this is positive then a submission for certification application can be made.

These steps can be made within the company itself with no outside assistance. However there are external organisations and individual consultants who can assist companies in setting up a quality system that complies with ISO standards. They can also assist in the fact that they are outsiders and so their comments and views should be objective and impartial, resulting in a true determination of whether or not the company is in a position to achieve ISO certification.

5.4. ADVANTAGES AND DISADVANTAGES OF THE ISO 9000 SERIES

ISO standards are aimed at achieving customer satisfaction through the process of providing a quality service or producing a quality product, getting it right every time. This includes training, empowerment, performance measurement and managing change. The process to achieve the positive result can be tedious and costly but there are advantages to having it in the end. According to the *Institute of Management*

Foundation, 1996, there are advantages and disadvantages of ISO 9000. The former far outweighs the latter and they are as follows:

Advantages

- Provides consistency in the organisation's response to customers
- Gives the customer confidence that the intended quality is being delivered
- Improves communication by talking about what you do and how you do it
- Clarifies tasks so that everyone knows what they are doing and how
- Generates a training and reference manual
- Aids the pursuit of value for money from suppliers
- Sets a target to aim for in a quality programme
- Gives you a recognised cachet.

Disadvantages

- ISO 9000 can be time consuming
- The process can be expensive
- The personnel often need convincing that it is not just a bureaucratic process.

So, in recap, the ISO can be a long and expensive process, but with the correct and applicable plan from the beginning this can be minimised. It can be extremely helpful within the organisation itself, with regards to procedures and outcome. It can also help to keep existing customers and acquire a larger market share through the competitive advantage it provides. Cost savings can be achieved through having less errors and "getting things right the first time." (IMF, 1996. 1).

5.5. THE ISM CODE AS A RELATED STANDARD

A typical question raised by those in the shipping industry seeking to attain ISO certification is whether or not ISO encompasses the International Safety Management (ISM) Code and removes the need for it. According to the requirements of the two, the answer would be no. They both have different objectives. “ISO 9002 falls within the framework of a contract between two parties for the provision of a service, whereas ISM concerns ship safety management and prevention of pollution.” (Chauvel, 1994, 5). The ISM Code is now mandatory for most in the maritime field and it became mandatory for all in 2001. The ISO system is still voluntary but it is advisable for any company to obtain both certifications simultaneously.

“The scope of the application of ISO 9002 is wider than that of the ISM code without involving the central point of safety at sea and environmental protection.” (Chauvel, 1994 6). The ISM code does not make any reference to contract review, purchasing and supplies, inspection of testing instruments or handling of statistical techniques, all referenced by ISO 9002 and all important to safety. However the ISM code and the ISO system are complimentary to each other and provide advantages in dual certification. Initial assessments need to be carried out only once and both reference documents can be incorporated into the quality programme at the beginning. Personnel can familiarise themselves with both systems simultaneously and implement them as one project. Both certifications can be carried out at the same time in one operation and assessments needed to maintain both certificates can be done together.

Table 4 shows the purpose and the relationship between the ISM code and the ISO 9002 standard.

Table 4. Purpose and Relation between the ISM code and the ISO 9002 standard.

	<u>ISM Code</u> <u>(Mandatory)</u>	<u>ISO 9002 Standard</u> <u>(Voluntary)</u>
Field of Application	Safety of Ships and pollution prevention	Quality Assurance of products and services
Applicable to	Marine management and Shipboard operation,	Contractual relationship between customer and supplier
Purpose	Demonstrate the capacity of the system to meet safety and pollution prevention	Demonstrate ability of the Marine management and shipboard operation to meet customer requirements
Means	Implementation of the safe operation of ships and pollution prevention	Implementation of a quality assurance system
Scheme of Certification	<ol style="list-style-type: none"> 1. Company assessment Document of compliance (3 years) 2. Ship assessment: safety management certificate (3 years) 	<ol style="list-style-type: none"> 1. Company and ships assessment: Quality system certificate (3 years)
Maintenance of certification	<ol style="list-style-type: none"> 2. Follow-up assessment of the company and ships each year 3. Re-assessment after 3 years 	<ol style="list-style-type: none"> 2. Surveillance visit on: Company every 6 months All ships during 3 years 3. Re-assessment after 3 years

Source: Bureau Veritas, 1994. "Ten Steps for Implementing ISO 9002."

5.6. ISO 14000 SERIES AS A RELATED STANDARD

The ISO 14000 series is a follower in the footsteps of the ISO 9000 series. It is a series of environmental management standards that will affect every aspect of a company's environmental operations. The standards describe the basic elements of an effective environmental management system. These include creating an environmental policy, setting objectives and targets, implementing a programme to achieve those objectives, monitoring and measuring its effectiveness, correcting problems and reviewing the system to improve it and overall environmental performance. The ISO 14000 standards see better environmental management as a means to better environmental performance, increase in efficiency and larger returns on investments.

The shipping industry is one, which needs to be aware of environmental issues and do all possible to not add to the present situation but to help in the clean up process. More and more companies in the marine world have become proactive in their environmental management and it has become an integral part of the business strategy. On the other hand, customers also have become more interested in environmentally friendly products and processes, leading companies to take a closer look at product design, processes, packaging, distribution, disposal and service. ISO 14000 is a voluntary standard but having it may well become a company's passport to doing business.

ISO 14001 is the standard, organisations wanting to control the environmental impacts of their activities, products and/or services, would use, and therefore the one relevant for the shipping industry. The environmental management strategy should be incorporated in the overall management strategy of the company. The standard in itself does not guarantee optimal environmental outcomes but in the long run will improve performance. (Tibor, 1996, 49).

Prevention of pollution is a very important concept in the shipping industry and is also an important concept in the ISO 14001 standard. It is defined as “use of processes, practices, materials or products that avoid, reduce or control pollution, which may include recycling, treatment, process changes, control mechanisms, efficient use of resources and material substitution.” (Tibor, 1996, 53). This definition offers the flexibility for any organisation to make it applicable to their methods.

Overall ISO 14000 is an international attempt to standardise a systematic approach to environmental management. It is developing a common global language for understanding environmental challenges while raising the level of knowledge and awareness on the importance of management in promoting better environmental performance. It is highlighting positive alternatives to expensive and complex command and control regulations, such as the ones found in the shipping industry, and it is offering incentives to businesses world-wide to take a closer look at the way their activities interact with the environment.

For shipping agencies, attaining the ISO 14001 certification will demonstrate a level of commitment to protecting the environment and ensure the company policy is geared towards this direction. The implementation process will lead to the education of the personnel, in the manner in which goods and services are to be provided in order to ensure harmony with activities and the environment.

CHAPTER 6

IMPLEMENTATION OF ISO 9000 IN SHIPPING AGENCIES IN JAMAICA

6.1. INITIATING THE QUALITY ASSURANCE SYSTEM

The term “Quality Shipping” has become an important one in the vocabulary of the international shipping industry today and the Jamaican shipping industry is no exception. With the aim of being able to provide a service with a standard that is comparable to the international level, the ISO 9000 quality management system would provide an appropriate tool to assist the move in this direction. Shipping agencies in Jamaica provide a service on behalf of their principles and all have their own quality standards. A level field on which to operate would provide a better environment for fair competition and place the customer in a better position to have their requirements met.

As in all organisations implementing the ISO 9000, the top management of the Jamaican shipping agency has to take a decision to implement this system and display total commitment from the onset. The implementation should be looked upon as a project to be completed within a specified time frame and with specified resources. Communication is absolutely necessary from the beginning to disseminate any feelings of added pressure, workload or increased bureaucracy, by the personnel. In most agencies in Jamaica, the workload is divided into departments and then into teams. Each member of these departments and subsequently, teams, have also to be

committed for this system to work as it should and provide the organisation with the benefits it can.

If the agency already has a working quality system of its own in place, then, the implementation of the ISO 9000 will be easier than if there were no working quality system or no organised method of operations and checks. If there is insufficient expertise and know-how within the organisation to implement this system, then the process can be made to move quickly and efficiently with the use of consultants. They, in co-ordination with management, can allocate funds in the right manner and ensure the correct estimation of time for each activity is made in order to have the system implemented within the specified time. A miscalculation of time for activities or a delay in certain ones could result in a delay of the whole project, which could be increased costs for the organisation, and a delay in attaining the ISO certification.

6.2. PLANNING THE IMPLEMENTATION

When implementing the ISO 9000 quality management model, there are generic steps to be followed as discussed in Chapter 5. For shipping agencies in Jamaica, these steps should be applied according to the situation at hand and made applicable where necessary. When planning the implementation of the ISO quality management model, top management should appoint a quality manager and if necessary contract a consultant prior to the beginning of the process. This can greatly assist in the organisation of the activities and in the making of appropriate estimations. The consultant can also assist in interpreting the ISO 9000 in the context of the specific agency. It is at this point that the quality manager and the contracted consultant should do an assessment of the existing quality system.

6.2.1. Quality Information Systems and Communication

Once an analysis of the agency's quality system or lack thereof is done, it becomes necessary to establish objectives, time schedules and deadlines. Top management should decide these upon with the assistance of the quality manager and the consultant. It is also the responsibility of top management along with the quality manager to develop a quality policy for the agency bearing in mind the quality policy of the principal. After this is in place, the organisational structure and responsibilities should be defined, a quality team established and training begun. These can be done not only by management, but with the assistance of department heads and supervisors. This way, the process of getting everyone involved, is begun. The quality team along with the quality manager can then write a quality manual for use by all in the agency.

6.2.2. Documentation

A process of documentation has to be followed in implementing the quality system. Firstly, there has to be documentation of all system-level procedures. Secondly, there has to be documentation of all instructions. The quality manager, the quality team and members of the general staff, may accomplish these activities. Each person is usually the best to say what he or she does and this is also a way of involving all personnel in the implementation of the system. Following this, there has to be the development of records, forms and reporting systems done by the quality manager and the quality team as a way of monitoring and checking procedures.

6.2.3. Auditors And Accreditation Assessors

At this point, the system should be ready to be checked by appointed internal auditors. They will analyse whether the extent of compliance within the agency is

ISO standard or not. Finding it is to be so, external auditors should be contracted to do the same process. If all is well, Accreditation Assessors, like a Classification Society, can be called in to do their assessment for ISO certification.

Once ISO certification is attained, it is not kept by the agency for indefinite periods. Review assessments have to be done annually to ensure standards are maintained.

6.3. NETWORK SCHEDULING AND ANALYSIS

Network scheduling and analysis is a way of breaking down a project and displaying it in the form of graphics, while showing the relationship and the interdependence between activities. Resources and time needed to complete each activity is taken into consideration and attention is focused on those activities crucial to the project's completion. These form what becomes known as the *critical path*. This means that any delay in the completion of any one of the activities along this path will delay the completion of the whole project.

There are several steps to the completion of any network analysis. They are:

- the preparation of the network diagram
- the estimation of expected time for each activity
- the computation of the critical path schedule
- the interpretation of the results
- The development of a bar chart based on the results. (Butman, 1999, 4).

Network Diagram

One type of network diagram is the Precedence Diagram. This method graphically shows the network activities in nodes with arrows in between which represents the dependency relationships among the nodes. The time for each activity is calculated, taken into consideration and displayed. Some activities may be done simultaneously

while others cannot be started until the completion of the previous one. Activities may also overlap, in that one may start before a previous one has been completed.

Expected Time Calculation

There are two types of activities, deterministic and variable. Deterministic is where an activity only has one time estimate. Variable is where an activity's time cannot be sufficiently estimated and so is calculated by using three time estimates. They are:

- Optimistic (a)
- Most likely (m)
- Pessimistic (b)

The formula followed for expected time (t_e) is: $t_e = \frac{a + 4m + b}{6}$

6

Critical Path Calculation

To calculate the critical path of any project, the time for each activity has to be estimated. The computation is made by adding the total time needed for each line of successive activities from the beginning of the project to the end, in a forward motion through out the network. The line of activity requiring the longest period of time is actually the critical path. This is because a delay in any of these activities will cause a delay in the entire project. This forward calculation also give the earliest time for the start of each activity, the earliest expected time for the completion of each activity and the earliest expected occurrences for each event. The lines of activities requiring less time actually have a float or slack time, which can be calculated by a backward movement through the network. This backward movement will give the latest allowable start time for each activity, the latest allowable finish time for each activity and the latest allowable occurrence time for each event.

Bar Chart

The Bar Chart can be used to display the schedule of a project along with the sequence of events and the critical activities. It is plotted from the earliest point in the project to the estimated finish and can be adjusted with changes in the project as time passes. This method is extremely flexible and allows for progress to be visible and milestones to be plotted. The critical path can also be shown in this form of diagram and thus can be monitored.

6.4. A NETWORK SCHEDULE AND ANALYSIS OF THE IMPLEMENTATION OF THE ISO 9000 IN THE JAMAICAN SHIPPING AGENCY

Project Description:

In order to ensure that shipping agencies in Jamaica are all able to satisfy the requirements of their customers, and provide a service in an efficient and effective manner, they all should implement a quality system of an international standard. ISO 9000 quality management model will provide the level field needed on which all agencies can operate and a standard by which they can be judged.

Table 5. Activities related to the Implementation of ISO 9000.

Project Content:

Activity	Description	Successive Activity	Responsibility	Duration in days
1	Commence Project	2, 3	Administration	0
2	Appoint Quality manager	4	Administration	2
3	Contract Consultant	4	Administration	7
4	Assess existing Quality system	5, 6	Quality manager / Consultant	10
5	Establish objective, time schedule and deadline	7	Top Management / Quality manager / Consultant	15
6	Develop Quality Policy	8	Top Management / Quality manager	4
7	Define organisational structure and responsibilities	9	Top management	2

Activity	Description	Successive Activity	Responsibility	Duration in days
8	Establish quality team	9, 10	Quality manager / Dept. Heads	2
9	Train Personnel	17	Quality Manager / Quality Team	20
10	Develop Quality manual	9	Quality manager / Quality Team	20
11	Document system-level procedures	14	Quality team / All staff members	7
12	Document instructions	14	Quality team / All staff members	7
13	Develop records, forms and report system	14	Quality manager / Quality Team	15
14	Appoint internal auditors	15	Administration	1
15	Do assessment audits	16	Internal auditors	10
16	Contract external auditors	17	Administration	3
17	Evaluate if extent of compliance is ISO standard	18	Quality team / External auditors	7
18	Organise review assessments by Accreditation auditors	19	Classification Society	2
19	Attain ISO certification	14	Classification Society	1

Project Results:

The project can be completed in a period of 89 days.

The Critical Path falls along activities 1, 3, 4, 6, 8, 10, 13, 14, 15, 16, 17, 18, 19.

Precedence Diagram Showing Critical Path

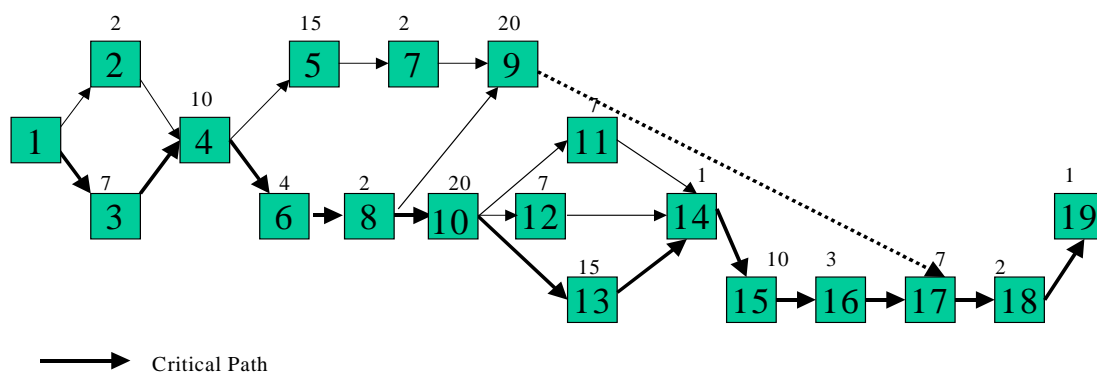


Figure 5.

Bar Chart Showing ISO Activity for a Jamaican Shipping Agency

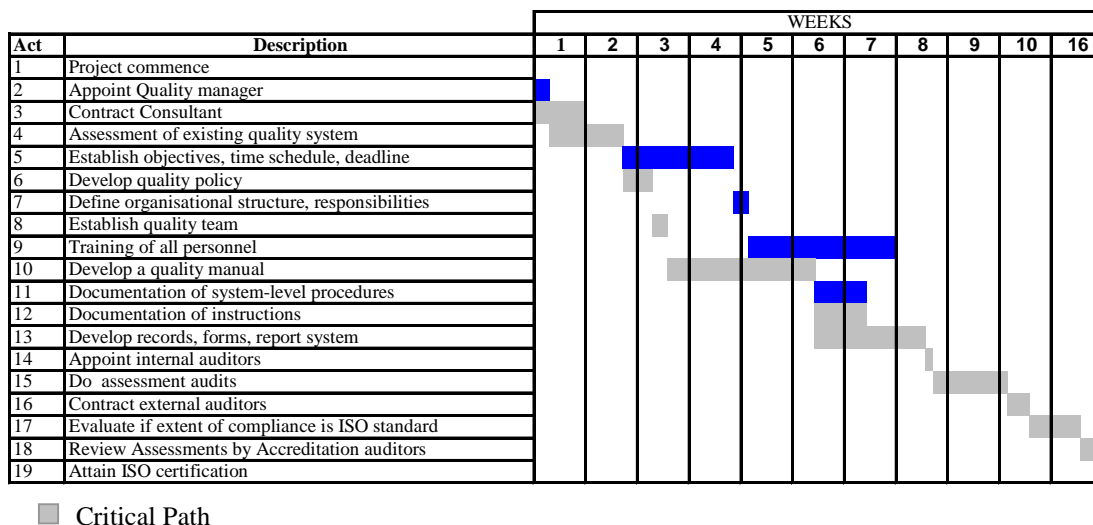


Figure 6

6.5. THE POTENTIAL EFFECTS OF IMPLEMENTING THE ISO 9000 ON SHIPPING AGENCIES IN JAMAICA

Jamaica is of the intention to lend itself to being a major transshipment centre. The strategic geographical location has provided a head start in this direction and the confidence of the major lines calling at her ports, has further enhanced this attribute. The services being provided by the Port Authority and the Shipping Association of Jamaica have also assisted in the improvement of the industry over the years. However if the services being provided by the agencies are not of an international standard and not of a consistent nature in meeting the customer’s requirements, then all efforts of others within the industry can be lost. If all the agencies within the Jamaican shipping industry were to implement the ISO 9002 quality management model, a consistency in the industry’s response to customers would evolve, and customers would then have the confidence that the intended quality is being delivered. The level field on which all agencies being ISO certified would operate, would provide a basis for fair competition. As almost all the agencies in Jamaica are

providing the same type of service, competition based on the quality of the service would provide a healthy environment for the industry.

Within the agency itself, there would also be benefits. Communication would be improved by saying what you do and how you do it. Clarification of the tasks would ensure that everyone within the agency is aware of the job function of the next person and if they were absent, could fill in for them with the help of the reference manual. Training would be generated, which is always a benefit to any organisation. Quality could always be maintained and assessed through the system of reports and checks that would be implemented.

With improved quality in service comes greater satisfaction from both within the agency and the industry. Training will boost confidence in personnel to do the job right, the first time, every time. With this improvement in performance will come trust from higher management to push decision making authority further down the ladder and thus divide the workload into a more manageable proportion for all involved.

Improved service through quality assurance has the ability to bring with it an increase in competitive advantage and eventually an increase in the market share. Many organisations within the international shipping industry are becoming more impartial to doing business with only ISO certified agencies. If the Jamaican agencies were to acquire this certification then the possibility exists for the local industry to grow at a tremendous rate.

Thus the potential effects of implementing the ISO 9000 in Jamaican shipping agencies would be beneficial both to themselves and to the industry. Quality is always an advantage as it adds value to any product or service and assists in satisfying stated or implied needs. With the globalisation, quality has become an

increased requirement in having a competitive advantage over other players in the market.

CHAPTER 7

CONCLUSION

The ISO 9000 Quality System standard is not just the most recent thrust or fad towards the concept of quality. It is a model that provides a framework for organisations to use beneficially, through implementation into the company's daily activities. It consists of generic practical procedures that can be adapted by most types of businesses. Once implemented, the idea is that the organisation now adopts quality as a part of the culture and continues to do what they say they do.

The process of implementation can be long and tedious without the assistance or advice of experts in the field. However once an appropriate plan is established and everyone displays total commitment to the project, it can be a fairly simple process. The benefits in the long run far outweigh any costs that might be incurred in the short run. If the organisation is able to decrease the costs and number of errors and waste through the quality system, then overall finances within the company could improve. Staff moral and customer satisfaction could also improve simply through having less mistakes and requirements for corrections.

In Jamaican Shipping Agencies, the implementation of the ISO 9000 would be of a tremendous benefit both to the agencies themselves and the national industry. It would be an opportunity to "spring clean" and change the culture to one of quality and high standards. Competition could be based on the level of service and efficiency. The agency displaying the highest level could command the highest share

of the market, which would be a fair reward for quality work. At this time, the Jamaican shipping industry is growing and so is the need for consistent, quality service. More and more, organisations within the European Community and the United States of America are enforcing the idea that ISO certification is a requirement to conducting business with them. If Jamaican shipping agencies expect to remain in the industry and grow as time evolves this is surely a path that they should follow.

The shipping industry in Jamaica has grown and changed over the last thirty years, striving to meet the industry's needs as they have developed. This is yet another development on the international scene and as such another required step for Jamaica to take. It would mean an upward movement in the quality of standards being offered and a step in the right direction towards establishing Jamaica as a major transshipment centre.

RECOMMENDATIONS

An aim to attain ISO certification is an advisable road for Jamaican Shipping Agencies to take. The level of service the system can lead an agency to provide would have lasting effects on the national industry. The attitude within the various agencies should be steered towards establishing a quality culture and intolerance for tardiness, mistakes and lack of commitment to the company's policy and objectives. The purpose towards continuous improvement of both product and service should be constant. Total commitment should be the only option to the system and this should be displayed through actions of management first, then through the actions of other members of staff.

Training should be a continuous venture for the agency not just for the implementation of a quality system but at all times to ensure that the expected

standard of service being offered is maintained. Methods of supervision should emphasise quality. Staff members should not fear superiors but respect them for the level of professionalism they display and the level of authority bestowed upon them by the company. This should lead to harmony in the work place and effective work conditions. Communication should be widespread and free covering all departments and ensuring that all members of staff are aware of any new proceedings, processes or advances in technology. It should also be a two-way situation where staff members feel comfortable and encouraged to express their ideas and are rewarded for attaining goals.

Teamwork should be encouraged. This will help to remove barriers from among workers of different departments. All personnel should be striving towards one goal, that is, the provision of a quality service and continuous improvement. The idea that the job must be done correctly the first time should be foremost in each person's mind and attitude. This will result in overall improvement of the service being given by each agency.

Both progress and results should be analysed by management and reported to the general staff. In this way, all will be kept informed of what has happened and what needs to be done in order to make the desired results of the company plans, happen. These should be documented and assessed at regular intervals to ensure the system is working.

Management has to plan for a quality system that is specifically fitting to each agency. When this is done, total commitment should be displayed and all staff members should be made aware of these plans and how they will be actioned to attain the desired results. In the end, an agency providing a service of international standards should evolve.

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