3. ELECTRONIC COMMERCE IN THE PORT OF BANJUL

The Gambia has an excellent worldwide telecommunication facilities that is second to none in Africa which has been recently expanded to provide a gateway to the information superhighway, the Internet. The Internet can now be accessed from anywhere in the country. The use of computers and the internet in the Gambia is on the increase in both the public and private sectors.

Almost all core banking services are fully automated, further facilitating the development of a port community system.

At the port of Banjul, the Authority is taking a leading and active role in spearheading an electronic port community system with its users as demonstrated by the diagram on the preceding page.

The GPA in collaboration with the Department of Customs and Excise accepted the recommendation in 1989 to computerise custom and excise procedures in order to enhance smooth clearance procedures and to provide accurate accounts and statistics. This resulted in the ASYCUDA system an acronym for Automated Systems for Customs Data, a customs computer system development by the United Nations Conference on Trade and Development, UNCTAD on request from Economic Community of West African States, ECOWAS.

Liner agents such as Maersk (Gambia) already have in use round-the-clock online cargo tracking systems which enables tracking of all cargo and container movements. It also offers the benefit of participation in numerous electronic data interchange system and Maersk's Advance Information Concept. MAGIC enables tracking of shipments from the moment booking is received until the cargo reaches its destination.

With regards to the Port’s customers, some already have in place or are planning to use computer systems to assist in their business operations.

Within the GPA, substantial investment in IT resources mainly comprising a PC-base Local Area Network (LAN) on which an accounting application, office automation applications, program development tools and desktop publishing are run. It also has access to the Internet and electronic mail.

The GPA was chosen as a pilot project for port computerisation by the Port Management Association for West and Central Africa (PMAWCA) in recognition of its capability and was the first regional port to develop an in-house port operations system.

Given this situation and in a bid to exploit the strategic opportunities offered by IT, the Authority has recently pledged to maximise the utilisation of these resources by embarking on a series of programmes aimed at expanding the use of IT to improve and enhance quality of service to its customers. These programmes will include among others:

- full computerisation of port operations and support services
- presence on the Internet
- spearheading an electronic port community system

With an excellent national telecommunication network and a solid IT foundation, the Banjul Port Community is poised for the integration and development of its distributed information systems into an electronic port community system.

4. CONCLUSION

With the advent of multimodal transport and the concept of door-to-door service, the impact of electronic commerce on ports as links in the production supply chain becomes more pronounced.

The handling of cargo from production to consumption sites is thus inextricably linked with information systems that provide accurate and reliable data in transport and distribution.

In fact, one could argue that the establishment of mergers and alliances among transport operators, linking different segments of the transport chain should provide the basis for the adoption of electronic commerce with a view to enhancing information flow in the multimodal transport chain.

The use of electronic commerce on the entire transport chain will inevitably link customers and their suppliers, enhance planning and operations and improve the quality of service.

Global Challenges for Ports and Terminals in the New Era

Marc H. Juhel
Senior Port Specialist, The World Bank

THE continuous process of change in international transport management in the last ten years, from a segmented modal approach towards a much more integrated transport concept tailored to better meet the pressing needs of customer industries, is resulting in an increasing pressure on ports to adapt their role and function to this more demanding operational environment.

This entails the rethinking of national port development strategies, as well as far-reaching reforms in the legislative, regulatory, and managerial environment within which commercial ports have to operate.

In particular, the need to define new partnerships between the public and private sectors in port operations, investments financing and assets management, leads to a review of the respective roles of public and private actors, and specifically calls for a clarification of the mandate of the public sector, and simultaneously of the missions it would be well placed to undertake. These missions are likely to be more of a catalyst and facilitation nature, together with a stress on assistance to public statutory duties, with a particular attention devoted to transport safety and environmental protection.

Simultaneously, efficiency of inland transport to serve an increasing, and most often disputed hinterland, has become a critical factor of the ports potential future, as well as of overall trade growth prospects. Today's global logistics organization makes it mandatory for shippers worldwide to be able to rely on seamless transport chains, of which the port is a prominent node. Smooth interaction between the port and the city often surrounding it, in terms of transport networks requirements, environmental protection, and overall safety, therefore appears a prerequisite for effective delivery of integrated logistics services. Port authorities are likely to have a major role to play in fostering the development of an...
effective cooperation between interested public and private players, which will be required to make it possible to achieve the expected benefits of integrated transport and logistic operations.

Finally, the institutional context, as well as the assets ownership and managerial framework, must be conducive to an optimal cost-effective utilization of port facilities. This supposes openness to competition in provision of port services, and establishment of appropriate regulation arrangements where market conditions make it necessary. Physical and regulatory integration of transport networks, as well as comprehensive strategies for addressing development planning, environmental and social issues, will also be required to allow national port systems to provide local and regional economies with the services they need.

A. The Elements of the Port Reform Agenda

1. The international support to port improvement schemes was generally straightforward during the 1960s and 1970s. As a common feature in the early years after independence, port infrastructure in most developing countries was badly maintained and often poorly managed. The immediate needs were therefore easily identifiable—ports had to be kept open as a key prerequisite for maintaining trade flows. The provisions for port assistance during that period were centered on engineering and related construction aspects, financing management issues, institution building, and manpower development. The scenario changed drastically from the early 1980s onward, when changing shipper practices, aided by rapidly progressing technology advances like cargo containerisation, induced the ocean transport industry to fundamental restructuring in service networks. Suddenly there was no longer any distinction possible between ports in developing countries and in industrialized nations. The same problems confronted all ports worldwide.

2. The key topics addressed under current port sector reform programs include:

   * reformulation of national port system development strategies;
   * reforms of the legislative, institutional and procedural provisions for port systems planning and regulation;
   * reorganization of port management arrangements; and
   * introduction of innovative financing and cost recovery schemes.

3. The need to reformulate national port system development strategies stems from the fact that the configuration of cargo generating hinterlands has changed, and that ocean transport networks have undergone restructuring. As a result, the nature and pattern of demand for services in many ports have become different. Quite often, there are cases where the physical layout of ports is not any longer in line with user requirements. Some of these ports will need to be adjusted to a changed role and function, for instance, by having lost importance as line-haul facility. In other, albeit more limited cases, ports with formerly low importance for international ocean transport have been confronted with unexpected direct service demand. Owing to these circumstances, governments in maritime nations have to reconsider their criteria for national port system development to ensure demand-sensitivity to the changing needs of trade and transport. Since budget constraints and limits to capital market exposure are today common among both developed and developing countries, there is usually a stringent need to search for cost-effective solutions which minimize required investments.

4. Hand in hand with the need to reformulate national port development strategies went correspondingly required reforms in the legislative, institutional and procedural provisions for port systems planning and regulation. As regards planning, the main issue usually was newly concentrated decision-making in central government bodies with little participation of port managements, and mostly no consultation of port users. Concerning port sector regulation, the provisions were commonly obsolete, reflecting market conditions prevailing at the time of their promulgation, which sometimes dates back for more than a generation. Thus port sector regulations in many countries were critically ignorant of the special requirements of the changing trade markets and transport industry organs, and those regulations often constituted severe impediments to trade performance.

5. Today, possibly the most debated issue within the public administrations and port communities in maritime countries relates to options for improving the provision of port services through reorganization of port management. While there is the gradually increasing awareness of the need to adjust port system development strategies to the changing trade and transport market environments, a clear appreciation of the immediate requirement to make port service provisions more responsive to user demands has now become commonplace. The usual shortcomings entail cumbersome organization structures, complicated lines of command, lack of incentives and accountability, outdated management practices, and excessive employment of port labor. The culture of public administrations, inherited legislative provisions, and ill-defined employment objectives are usually the root causes of these shortcomings.

6. There are two concepts which feature prominently in this debate: corporate management and privatization. Corporate management stands for plans to delink the administration of ports from central government. Various forms of proceeding along these lines can be observed. In some countries the management of regional ports is put under the jurisdiction of provincial or municipal governments, and substantial autonomy is granted to individual ports in arranging their day-to-day services. China is a case in point. In other countries, previously state-run ports are pooled and transformed into public corporations with full accountability for the conduct of their business, like in Indonesia. The World Bank has been much involved in helping these and other borrowing member countries through the various stages of putting national ports on a more business-oriented footing.

7. Possibly the most striking feature of rearranging port organizations is the growing participation of private parties in the provision and management of port services. Such arrangements have a long tradition in North American and West European ports which act as landlords while private concession holders organize and conduct a variety of services. The performance characteristics of such services have been superior and very beneficial to individual ports. Confronted with continued low productivity of their state-run ports and in view of the productivity gains among western...
medium to long-term concessions, contract-based regulation, where rules, implementation and enforcement means are provided for in the concession contract itself, seems to be the more adequate vehicle to ensure and monitor compliance, under the supervision of the Port Authority. For more short-term contract or authorization, like working licenses, the standard regulatory set enacted at the ministerial level, possibly locally completed by the Port Authority, would apply.

C.4 Trade Globalization and Transport Networks Integration

36. Globalization of trade and the development of larger trade areas has led to shipping and intermodal alliances to handle the global nature of the supply chain. Shipping companies have merged, with P&O/Nedlloyd and Neptune Orient Lines/American President Lines just the most recent, expanding their geographic reach to create global service networks. Similarly, terminal operators have kept pace, globalizing operations to offer their shipping customers consistent services over diverse trade routes. Hutchinson Port Holdings (HPH) operates terminals in Indonesia, China, the Bahamas, both sides of the Panama Canal, and the UK. P&O either through the mother company or the Australian subsidiary is operating container terminals in Australia, the Philippines, Malaysia, China, Argentina, Mozambique, and the UK. The Port of Singapore Authority (PSA) operates in China, Cambodia, Indonesia, Thailand, Vietnam and Yemen. Stevedoring Services of America (SSA) operates terminals in Mexico, Panama, Thailand, India and Indonesia.

37. Activities of such companies as P&O, HPH, SSA and International Container Terminal Services (ICTSI) are a clear indication of a new trend towards increasing internationalization of terminal operations. In terms of number of containers handled worldwide, HPH counts among the largest operators in the world with more than 7 million TEUs handled in 1996. Actually, the top ten private terminals operators handled 14% of the world container traffic in 1994. In 1997 it is estimated that almost 15% of the world container traffic has been handled by the top five private terminals operators alone. Hence the thrust towards enhanced global network management practices by shipping and terminal operators alike, which is putting increased demands on intermodal land interfaces so as to make available as large an array of transport routes as possible, and to benefit from the resulting increased flexibility in management of international transport operations.

38. Modern and efficient ports are necessary and powerful tools for facilitating and fostering trade and development and more so at a time of globalization of trade. Nowadays, ports must offer efficient and reliable services to ships and cargo, including communication systems, documentation and customs procedures, to allow the timely flow of goods through the transport chain which has, in fact, become a production chain. To assist in this flow, some countries have developed distribution or logistics centres in the port area which are used for the storage, preparation and transformation of cargo. Therefore, ports are no longer simply a place for cargo exchange but are a functional element in the dynamic logistics chains through which commodities and goods flow. An efficient transport system is also a prerequisite to attract foreign direct investment. Ports can be a crucial element in developing a competitive advantage for a country and therefore governments and port authorities need to adopt suitable port policies to allow the nation to reap this potential benefit.

39. The intermodal integration of distribution activities is consequently utilized to facilitate business transactions that move goods from origin to destination. The major objectives of intermodalism are to increase the speed of goods distribution and reduce the amount of unproductive capital, whether in inflated inventory levels, inactive railcars or vessel delays at ports. Intermodal operations make use of long-distance inland transport services which greatly extend the hinterlands of ports. For example, American President Lines (APL) offer shippers in Asia and the US an intermodal system over the land bridge across the United States using articulated tractor trailers that permit the carriage of containers stacked two high. This arrangement allows containers to be delivered to destinations on the east coast of the US 72 hours after being discharged from vessels on the west coast, which is four to six days faster and less costly than the all-water route. In 1986, there were 62 double-stack container trains, each carrying 400-560 TEUs, departing ports on the west coast of the US on a weekly basis. Today, 100 depart the Seattle-Tacoma area each week, and this is expected to grow at approximately 8% per year. The stack train and EDI systems developed in the US provide a technological basis for intermodal operations, but the institutional framework which is evolving in Europe to facilitate the uninterrupted movement of goods between countries with different legal regimes will probably lay the groundwork for its rapid extension throughout the world.

40. More generally, ports today are called to play an economic role which proves to be far more extended than it used to be previously. UNCTAD describes this evolution in defining what it called the "third generation ports": after having been at first merely an interface location for cargo between land and sea transport, next a transport, industrial and commercial service center, the "third generation port" is a dynamic node in the international production/distribution network. Port management appears therefore switching from a rather passive policy of the mere offer of facilities and services to that of active concern and participation in the overall international trade process. These efforts are therefore directed towards promoting trade and transport activities which, in turn, generate new revenue-making and value-adding businesses. As a result, ports are more and more turning into integrated transport centres and logistic platforms for international trade. But, as experience already shows, this is easier said than done, and the public sector responsibility in helping this happening—or in hampering it—must not be overlooked.

C.5 New Trends in Shipping and Logistics

41. Simultaneously, efficiency of inland transport to serve an increasing, and most often disputed hinterland, has become a critical factor of the ports potential future, as well as of overall trade growth prospects. Today's global logistics organization makes it mandatory for shippers worldwide to be able to rely on seamless transport chains, of which the port is a prominent node. Smooth interaction between the port and the city often surrounding it, in terms of transport networks requirements, environmental
ensure fair competition, avoid monopolies and rent-seeking activities, and assisting port authorities in dealing with labor redundancy issues, possibly in financing socially adequate redundancy schemes.

The Statutory Mission:
14 The public sector’s role here would be to help Governments take care of some of their statutory duties as national authorities: this will deal mainly with transport safety, environmental protection, coastal management, and port/cities relationships. Specific intervention would regard in particular:

(a) Navigation safety: navigation aids, vessel traffic services, hazardous cargoes transit management;

(b) Environmental protection: compliance with international conventions on maritime environment, on dredging and exploitation of marine resources, adherence to regional agreements to enforce and monitor international regulations and agreements;

(c) Coastal management: shore and coastline stabilization, beach nourishment and coastal defence structures, shoreline defence policy;

(d) Fostering common development policies between ports and cities: helping in setting up common planning boards or consultation committees on land development issues, assisting in designing port relocation operations and relating legal and financial arrangements for the disposal of redundant port facilities.

The Facilitation Mission:
15 The public sector’s role here would be to assist Governments implement measures aiming at improving the effective use of all modal transport networks, primarily by addressing the basic issues relating to the ports’ nodal position in the international trade pattern. Specific intervention would regard in particular the trade facilitation process. The public sector’s facilitation mission may therefore include the following tasks:

(a) Strengthening public governance: improving institutional ability to monitor new public/private partnerships and oversee operations without interfering in the commercial sphere, helping devise and implement clear mechanisms to manage transactions between public and private bodies without hindering open competition;

(b) Helping the trade facilitation process: improving customs regulations and practices, assisting in designing and implementing efficient enhanced communication systems, assisting in trade documentation harmonization efforts;

(c) Spearheading initiatives conducive to trade integration: assisting in the design and implementation of first development initiatives to induce value-adding activities to settle in port areas, helping finance facilities aiming at attracting distribution and logistics services within the port complexes, assisting in financing the first development phases of potential dry ports facilities and related intermodal connections.

C. Issues and Challenges
16 Assets ownership and assets operations are two distinct matters. However, there are combinations of ownership and operations structures which have proved over time to be more or less conducive to cost-effective use of assets and to overall efficiency in the delivery of port services. Moreover, the corporate structure of the port enterprise itself can have a significant bearing on the assets management policy.

17 A 1997 world review of the top 100 container ports thus demonstrates that 14 out of 100 conform to the Landlord Port model, in which the Port Authority owns the basic infrastructure only, land and access and protection assets, and leases it out to operators, mostly on a long-term concession basis, while retaining all regulatory functions. This is the standard we will consider from now on.

C.1 Corporate Structure
18 Port enterprises, once they are separated from Governments’ administrative departments, and whatever their operational pattern may be, can basically adopt two main corporate setups:

• public institution financially autonomous, with a Board comprising representatives from central and local public powers, and from port users/customers, working with commercial accounting principles;

• joint-stock company, with a Board comprising representatives from public and private shareholders, working under common commercial law.

19 The public institution formula makes quite explicit the separation between statutory public management and monitoring duties on one hand, and commercial activities left to the private sector on the other. Port users/customers would have to be represented in the Board, with the shortcoming that nobody having a direct financial stake in the port enterprise itself, parochial interests can sometimes prevail over long-time interest of the port community at large, which in some cases may include a significant part of the national economy.

20 The joint-stock company formula presents at first sight the distinct advantage of setting up a more businesslike corporate framework, where shareholders will indeed have a financial stake in the port enterprise. Even if the shareholding structure has to be predetermined in order to meet the public ownership criteria—meaning a majority of shares would have to belong to public bodies, either central, regional or municipal—one can expect this corporate setup to instil a more direct sense of financial responsibility among shareholders. An associated issue will then relate to private shareholders. To keep up with the principle of separation between public monitoring duties and private commercial activities, private port operators would have to be barred from owning shares in the port enterprise, as the port enterprise would not be allowed to own shares in any private company operating within its dedicated area. Alternative arrangements providing for cross-shareholding possibilities are by no means impossible, but would require strong, and likely difficult to implement, conditionalities to prevent any weakening of the port’s capacity to further its long term public management objectives, while maintaining equal access and treatment to all port users. In cases where port operators will be prevented from owning shares of the port enterprise, a complementary body would have to be set up, in the form of a...
OPEN FORUM

Port Council, to allow port users to voice their views and concerns to the Port Authority. The role and functions of this Port Council will have to be explicitly spelled out in the Port Authority's by-laws.

C.2 Competition and Contestability

21 The Landlord-type Port Authority, which now tends to become the prevailing model of port operational organization, leaves the commercial operational field entirely to private operators. Since this formula is now being implemented even in ports with limited traffic levels, this raises the issue of competition conditions.

22 The concession formula, which entails allocation of a determined portion of the port area to an operator for a specific period of time, with or without the requirement to build or develop new facilities, physically affects on a continuous basis the organization of operations in the port, to establish a context for fair competition within a single port under these conditions—competition in the market—means being able to set up several operators with equivalent handling capacity to serve the same traffic. While this may be possible in large multipurpose ports, this may prove difficult in most of the ports the Public sector may have to deal with.

23 In fact, concessions will generally be implemented mostly in the cases of homogeneous traffic, which lend themselves more easily to rationalization of the operational environment: unitized cargoes (containers, roll-on/roll-off traffic), industrial bulks (ores, cement, grain, petroleum products and other liquid bulks). Industrial bulks terminals will generally be part of integrated industrial processes, which makes them natural candidates to be concessioned to the main industrial operators: actual competition takes place at another level, on the output side. Container or roll-on/roll-off terminals are much more subject to direct competitive pressures at the transport level, provided, however, there is enough traffic through a single port to set up a competitive environment. As in Rotterdam (The Netherlands), Hong-Kong (China), Buenos Aires (Argentina), or Laem Chabang (Thailand).

24 Where the traffic level is such, at least at the time when the concession is considered, that it would just support a single operator to ensure financial viability—100,000 teus/year or below for container terminal operations, for instance—the situation comes close to a natural monopoly situation, where competition for the market can take place. This will require a clear regulatory framework to be enforced by the Port Authority. However, even in this case, two kinds of situation may occur:

- either there is competition between alternative transport routes involving different modal combinations, and possibly using foreign ports (Baltic Countries/Finland/Russia, Poland/Germany), in which case the lack of competition within the port itself is not so much of an issue, and the corresponding regulatory framework needs not be overly developed;
- or the traffic is actually captive, which creates a monopoly situation which will require careful regulatory action, including productivity and tariff controls, to avoid rent-seeking development. In addition, the concession contract should be open again for rebidding at regular intervals, the time frame being defined according to the depreciation period of the assets the concessionaire has been requested to finance

25 In this latter case, the role of the Port Authority, as far as the growth in traffic would allow for it, would be to make room for another competitor to step in as soon as the traffic level would make it viable. Usually the first concessionaire will try to protect itself against this eventuality by building safeguards in his concession contract, and the Port Authority will have to carefully check that these proposed safeguards do not go over what can be considered as a reasonable protection to start up a new operation, without granting exclusive traffic rights. On a complementary fashion, it would be highly advisable to foster the development of a cross-bordering mode of transport, which would play a major role in the development of the port. This requires guarantees to avoid the formation of a monopolistic situation and the corresponding safeguards such as minimum operating conditions, minimum productivity levels, etc. To maintain this situation viable, the Port Authority may also decide to limit the number of licenses, as long as the productivity remains acceptable.

26 However, concessioning is not the only way to bring the private sector into the commercial port operations, in particular in the case of medium to small scale multipurpose port facilities. These ports will generally handle limited levels of general cargo traffic, sometimes mixed with a small proportion of containers or unitized cargoes. Assuming 250,000/300,000 tons of general cargo would be a minimum for an independent cargo handling company to be financially viable, including heavy equipment costs, this would put the floor for possible competitive concessioning around one million tons of general cargo per port. Below this level, the Tool Port formula may appear appropriate in such instances, meaning the Port Authority would remain responsible for providing the main ship-to-shore handling equipment—usually light to medium multipurpose cranes—while cargo handling would be carried out by private companies under licenses given by the Port Authority.

27 Under this operating scheme, the port operational areas remain open to all licensed operators, who may just rent warehouse spaces according to variations in their customer base. The private operators, who own and operate all yard equipment, will compete for cargoes through contracts negotiated with the ships or shippers' agents, and the Port Authority will have to ensure that safety regulations are complied with. In granting licenses, the Port Authority should refrain from spelling out operational technicalities, such as number and type of equipment to be used, which is the role of the owner-operator's choice. However, the Port Authority would grant licenses under conditions of minimum productivity performance, and reasonable financial guarantees. To maintain the competition viable, the Port Authority may also decide to limit the number of licenses, as long as the productivity remains acceptable.

27 The public Service Port itself can actually offer a scope for private provision of services. Although the combination of low traffic and the social requirement to keep the transit cost low will usually preclude any short-term financial profitability, public authorities can still look for private operation of the port facilities under a management contract, whereby the operator will be paid a management fee to operate the
port under specific conditions in terms of tariff, operating and maintenance practices. Although there is no real transfer of commercial risk to the operator, it is, however, possible to build in efficiency incentives by indexing part of the fee to cost-effectiveness indicators in the management of the facilities. An alternative option would be the “negative concession” scheme, as already successfully experimented in various public transport operations, where a concession would be awarded to the operator requesting the lowest subsidy, under the same set of operating and tariff conditions. A larger risk is then transferred to the operator, which will be under pressure to increase port throughput to maximize his revenues. Passenger ferry services between Scotland and the Shetland Islands were awarded in April 1997 for a five-year period to a P&O subsidiary using this formula.

C.3 Governance and Regulation

C3.1 Sector Legal/Institutional Setup:

29 To provide for a clear separation of policy and regulation responsibilities at both the central and local levels, very often a three-tier institutional pattern will prove to be quite an effective solution. Under the assumption that the ports will evolve towards a landlord port setup, with commercial activities fully carried out by private operators, the new public management framework could then be devised along the following lines:

- a central body at the ministerial level, comprising top representatives from relevant ministries, mayors of port cities, and Port Authorities managers, works out national port policy and strategic planning objectives, and defines main sector regulations to be enforced by the Port Authorities;
- the Port Authorities, autonomous public institutions or public joint-stock companies, are granted the right to use state-owned land, administer, maintain and develop port infrastructure assets to the extent required by port activities, manage and enforce navigation safety measures, enforce environmental protection regulations, monitor the concessions and leases contracts governing private sector activities in the port area, and market the port facilities to attract new investors;
- the private operating companies carry out commercial activities related to cargo traffic management and handling.

C3.2 Legal Framework for Private/Public Partnerships:

30 To ensure credibility, openness and transparency in the transformation process, a sound and precise legal framework defining how private/public partnerships can be set up and organized appears as a prerequisite to get international participation and long-term financial commitments from potential investors. In particular, prior to any kind of Build-Operate-Transfer (BOT) operation, a concession law spelling out the principles of the process and establishing rules and responsibilities for each party, possibly complemented by a set of regulations describing the practicalities of the approach, will be a significant step towards the success of forthcoming concessioning operations.

31 Since there are also other ways than concessions of securing private participation in port activities (see para 26), the national legal framework for private/public partnerships must also incorporate these formulas, or at least establish which entity will be responsible for monitoring them. The basis of the licensing process, for instance, must be made clear in the law, which can specify that port authority regulations will further precise implementation criteria, along the lines mentioned in para 27.

C3.3 Regulation Policy:

32 Regulation typically involves both economic and technical issues. Economic regulation, which usually aims at monitoring tariff and pricing policies, is all the more necessary than competition is weak or sometimes still nonexistent. But conversely, as soon as competition develops, either internally or externally (see paras 23-24), the need for strong economic regulation decreases. Indeed, when competition pressure is well established, there is no reason to maintain any constraining pricing regulation, other than a timely monitoring of tariff practices to assess the soundness of market processes and prevent any potential collusion from developing among competitive service suppliers.

33 Technical regulation is required to ensure compliance with generic safety, labor, and environment protection standards, as well as to implement what the Port Authority may believe to be appropriate minimum performance requirements, in particular when competition is weak. Traffic safety is a major concern with ship movements in and around port mooring and berthing areas, and with cargo handling operations ashore. Dedicated provisions for handling and storage of hazardous cargoes must be spelled out in port regulations, based on international conventions (International Maritime Dangerous Goods-IMDG Code) and making allowance for specific local conditions.

Environmental protection standards will have to address the different potential environmental risks pertaining to local port activities, among those listed in para 24.

34 An issue of particular importance in getting the balance right between explicit regulation and implicit market forces has to do with public information disclosure policy. Traditionally, there is in almost all cases a natural asymmetry in information between operators, public authorities and port customers, at the expense of the latter. And since public pressure, when based on reliable information on costs and service quality, has always proved to be quite a strong incentive to perform efficiently and to eliminate rent-seeking practices, an explicit public disclosure policy, making mandatory the release by port operators of relevant productivity and cost-effectiveness indicators, may well help in keeping with optimal efficiency in commercial port operations, without having to rely only on heavy-handed economic controls. These information disclosure requirements should therefore be included into all concessioning and licensing agreements.

35 Other critical decisions in regulatory design are from where to regulate private port activities—central versus local authorities—and where to locate specific regulations—universal versus contract-based regulation. While it would seem logical to have the nationwide policies on traffic safety, environmental protection, labor and competition rules, designed and adopted at the central level, their implementation would as logically be the mandate of the local landlord-type Port Authorities. These Port Authorities would also design and implement locally warranted operational regulations depending on specific traffic or local constraints. In the case of
medium to long-term concessions, contract based regulation, whose rules, implementation and enforcement means are provided for in the concession contract itself, seems to be the more adequate vehicle to ensure and monitor compliance, under the supervision of the Port Authority. For more short-term contract or authorization, like working licenses, the standard regulatory set enacted at the ministerial level, possibly locally completed by the Port Authority, would apply

C.4 Trade Globalization and Transport Networks Integration

36 Globalization of trade and the development of larger trading areas has led to shipping and intermodal alliances to handle the global nature of the supply chain. Shipping companies have merged, with P&O/Nedloyd and Neptune Orient Lines/American President Lines just the most recent, expanding their geographic reach to create global service networks. Similarly, terminal operators have kept pace, globalizing operations to offer their shipping customers consistent services over diverse trade routes. Hutchinson Port Holdings (HPH) operates terminals in Indonesia, China, the Bahamas, both sides of the Panama Canal and the UK. P&O either through the mother company or the Australian subsidiary is operating container terminals in Australia, the Philippines, Malaysia, China, Argentina, Mozambique, and the UK. The Port of Singapore Authority (PSA) operates in China, Cambodia, Indonesia, Thailand, Vietnam and Yemen. Stevedoring Services of America (SSA) operates terminals in Mexico, Panama, Thailand, India and Indonesia.

37 Activities of such companies as P&O, HPH, SSA and International Container Terminal Services (ICTSI) are a clear indication of a new trend towards increasing internationalization of terminal operations. In terms of number of containers handled worldwide, HPH counts among the largest operators in the world with more than 7 million TEUs handled in 1996. Actually, the top 10 private terminals operators handled 14% of the world container traffic in 1994. In 1997 it is estimated that almost 15% of the world container traffic has been handled by the top five private terminals operators alone. Hence the thrust towards enhanced global network management practices by shipping and terminal operators alike, which is putting increased demands on intermodal land interfaces so as to make available as large an array of transport routes as possible, and to benefit from the resulting increased flexibility in management of international transport operations.

38 Modern and efficient ports are necessary and powerful tools for facilitating and fostering trade and development, and only so at a time of globalization of trade. Nowadays, ports must offer efficient and reliable services to ships and cargo, including communication systems, documentation and customs procedures, to allow the timely flow of goods through the transport chain which has, in fact, become a production chain. To assist in this flow, some countries have developed distribution or logistics centres in the port area which are used for the storage, preparation and transformation of cargo. Therefore, ports are no longer simply a place for cargo exchange but are a functional element in the dynamic logistics chains through which commodities and goods flow. An efficient transport system is also a prerequisite to attract foreign direct investment. Ports can be a crucial element in developing a competitive advantage for a country and therefore governments and port authorities need to adopt suitable port policies to allow the nation to reap this potential benefit.

39 The intermodal integration of distribution activities is consequently utilized to facilitate business transactions that move goods from origin to destination. The major objectives of intermodalism are to increase the speed of goods distribution and reduce the amount of unproductive capital, whether in inflated inventory levels, inactive railcars or vessel delays at ports. Intermodal operations make use of long-distance inland transport services which greatly extend the hinterlands of ports. For example, American President Lines (APL) offers shipping in Asia and the US an intermodal system over the land bridge across the United States using articulated railway wagons that permit the carriage of containers stacked two high. This arrangement allows containers to be delivered to destinations on the east coast of the US 72 hours after being discharged from vessels on the west coast, which is four to six days faster and less costly than the all-water route. In 1986, there were 62 double-stack container trains, each carrying 400-600 TEUs, departing ports on the west coast of the US on a weekly basis. Today, 100 depart the Seattle-Tacoma area each week, and this is expected to grow at approximately 8% per year. The stack train and EDI systems developed in the US provide a technological basis for intermodal operations, but the institutional framework which is evolving in Europe to facilitate the uninterrupted movement of goods between countries with different legal regimes will probably lay the groundwork for its rapid extension throughout the world.

40 More generally, ports today are called to play an economic role which proves to be far more extended than it used to be previously. UNCTAD describes this evolution in defining what it called the "third generation ports": after having been at first merely an interface location for cargo between land and sea transport, next a transport, industrial and commercial service center, the "third generation port" is a dynamic node in the international production/distribution network. Port management appears therefore switching from a rather passive policy of the mere offer of facilities and services to that of active concern and participation in the overall international trade process. These efforts are therefore directed towards promoting trade and transport activities which, in turn, generate new revenue-making and value-adding businesses. As a result, ports are more and more turning into integrated transport centres and logistic platforms for international trade. But, as experience already shows, this is easier said than done, and the public sector responsibility in helping this happening-or in hampering it-must not be overlooked.

C.5 New Trends in Shipping and Logistics

41 Simultaneously, efficiency of inland transport to serve an increasing, and most often disputed hinterland, has become a critical factor of the ports potential future, as well as of overall trade growth prospects. Today's global logistics organization makes it mandatory for shippers worldwide to be able to rely on seamless transport chains, of which the port is a prominent node. Smooth interaction between the port and the city often surrounding it, in terms of transport networks requirements, environmental...
protection, and overall safety, therefore appears a prerequisite for effective delivery of integrated logistics services. Quick and safe access to port facilities from inland transport networks becomes a basic requirement to be met in all cases. But this does not happen without calling into question the way both the port and the city are organized, managed, and the way public transportation infrastructure is planned and financed.

43 The transport chain is today fully integrated within the production system, and as far as international trade is concerned, within the trading pattern itself. This is a concept under which the transportation/distribution activities are considered as a subsystem of the whole production system. In a traditional industrial society the transportation chain of goods from the producer to the final user was normally divided into several parts. Shippers rarely cared about onward transport matters in the receiver’s country and receivers paid little attention to the forwarding costs before their goods reached the ship’s rail. This is no longer the way people look at their cargo transportation today. It is now the integrated transportation chain which matters. From the buying of raw materials at the production site to the delivery of products to the receiver’s warehouse, production, transportation, storage, distribution, information, are all integrated into one unique network.

44 This production-driven need for an integrated transport chain has led to intermodalism. The major objectives of intermodalism are to increase the speed of cargo distribution and reduce the amount of unproductive capital, whether in inflated inventory levels, inactive railcars, or vessels delays at ports. Since new trade patterns require quicker, cheaper and safer transport of goods than in the past, the main obstacle was found to be at each transport mode interface, which caused delay and increased the cost of the whole transport chain. This is a point where the interaction of ports and cities traffic management policies can make a difference, and we will get back to it later. Modernized port facilities themselves are only part of the solution, and inland distribution networks have to be improved and well integrated with ports at the same time, both at the local and regional level. This does not happen without calling into question the way both the port and the city are organized, managed, and the way public transportation infrastructure is planned and financed.

45 Implementing an efficient logistics system will first call for some basic characteristics of the main infrastructure facilities to be met. On the port side, the main requirements of modern traffic will be:

- Direct and rapid access to the sea;
- Quays with long berths, deep water and large back areas;
- Direct, easy and safe connections to main inland transport networks, highways, railways, waterways

46 On the city side, these demands will usually translate into additional constraints, coming on top of street urban management issues:

- Direct access to the sea may come in conflict with other uses of the seashore, for housing or recreational purposes;
- Large operational areas may conflict with land-use plans for city expansion or modernization of public services;
- Direct connections with inland transport networks will require close cooperation between port management and city managers in charge of urban traffic infrastructure; furthermore, port industrial traffic often does not merge easily with urban road traffic, and safety and environmental issues may be at stake.

47 Should physical limitations make the situation unsustainable, a drastic move by the port can be considered, but this would be more easily met some ports have already begun to address this issue by considering, or implementing, relocation programs from burgeoning city centers.

48 The concept of logistics is now widely accepted. Logistics, in short, is a procedure to optimize all activities to ensure the delivery of cargo through a transport chain from one end to the other. In order to optimize the whole system, the logistic approach is to decide when, where and how actions should be taken. The key elements to develop an advanced logistics strategy will usually include:

- Understanding the cost behavior of the entire logistics systems and incorporating it into off-shore sourcing and manufacturing decision making;
- Promoting strong relationships with carriers and vendors that include quality certification procedures;
- Designing a flexible transportation system that allows for quick routing and mode selection changes;
- Developing a supportive logistics information system that is effectively integrated with manufacturing and purchasing processes.

49. However, the relocation option is definitely an expensive proposition—even when existing
facilities can be somewhat traded with the city against new land—and is not by far implementable everywhere. So in most cases port and cities will have to face together the two main problem areas of space and accesses.

50. Beyond their original need for large operational areas, stemming from the technological evolution we mentioned earlier, space will have to do in the first place with the new logistical functions ports have now to undertake to keep up with the requirements of international trade. There is a significant number of activities which can be classified as value added services in the field of logistics. It is therefore useful to give an overview of these activities and an insight into their functions and relations. Value added services can roughly be divided into logistics activities strictly speaking, and general value added services. The logistics activities themselves can fall in two categories:

- **General Logistics Services**: storage, loading/unloading, stripping/stuffing, groupage, consolidation, distribution.
- **Value Added Logistics (VAL)**: repacking, customizing, assembly, quality control, testing, repair.

General value added services will include such services as equipment maintenance, equipment renting and leasing, cleaning facilities, tanking, information/communication, safety, security services, offices.

51. A sustained tendency can be observed towards a growing importance of VAL activities. Producers are concentrating on their core business in line with customers demand for high quality specialized products. New players in this field appear: the logistic services providers. These parties take over parts of the production chain (assembly, quality control, customizing, packaging, etc.) and of the after-sales (repair, re-use). Undoubtedly, containerized and general cargo have the highest VAL-potential. The challenge for ports is to offer the possibility to welcome these activities and services.

52. When grouped together in a common dedicated area, General Logistics Services and Value Added Logistics activities become what is sometimes called a Distripark. Rotterdam in the Netherlands, Wakefield in the United Kingdom, Verona in Italy, Bremen in Germany are examples of this kind of arrangement.

General cargo ports are generally a preferred choice to set up distriparks, since they are already intermodal transport nodes and main traffic gateways. But such a facility demands significant space: actual requirements will obviously depend on the traffic nature and volume, but usual figures show existing distriparks ranging from 50 to 100 ha, with 20 to 50 separate companies, the average company plot size reaching 24,000 square meters. So when considering the implementation of this kind of facility, the port and the city must obviously work together to find out the most adequate land use plan meeting both the port logistical objectives and the city development concerns.

53. But logistical services are dynamic activities, and they generate significant traffic flows. Average truck movements per day in European distriparks range between 3,000 and 4,000. So accesses to the distripark, and connections between the distripark and the port, must be properly designed to accommodate such flows. Needless to say, it would be highly advisable to make every attempt to keep this traffic from merging with local urban traffic or city streets. This objective will again call for close cooperation between the port and the city on access design and implementation.

54. On the management side of these logistics facilities, it would seem that port authorities, now evolving worldwide towards the landlord model, and therefore withdrawing from direct commercial operations to concentrate on their core public statutory duties, could well be the most suitable body to initiate the planning and implementation, then the marketing and the management of distriparks. Due to obvious common concerns, port authorities and municipalities could also form together specific companies to develop and promote these activities.

55. As has already been mentioned, accesses are critical to the success of any logistical center. As a matter of fact, accesses are critical for the port itself, with or without a distripark. This is indeed a pervasive issue today, in many ports worldwide. A few years back, the US Congress allocated US$20 billion to a multi-year program aiming solely at improving road accesses to US ports. In many countries, to make things worse, priority in land access to ports was often given prominently to railways, at the expense of road traffic. This was specifically true in former centrally managed economies, like in Eastern and Central Europe. So with the pronounced shift towards road transport now taking place in these countries, the limitations in road access to ports quickly became one of the most conspicuous bottlenecks of the transport sector.

56. A potential way for cities and ports to address together the space constraint, while still offering the global logistical services the market expects, could be to manage space and accesses in a more dynamic way than was previously thought possible. Most logistics services, if they can benefit from being carried out close enough to the port, do not need to take place physically in the port itself. In fact, it will often be preferable to set up the logistics services area outside the port itself, where it will be easier to find adequate land available at a reasonable cost, the main criteria being easy connections with the different land transport modes. Of course, the connection with the port will remain the critical issue to make the whole system work, but in many instances solving this specific connection problem may well prove to be cheaper, or to make more economic sense for both the port and the city, than to try to expand port land at high cost: the traffic generated on this expansion would require higher capacity accesses anyway, and would just concentrate the traffic management problem at the single port/city interface.

57. This consideration leads to the development of inland logistics centers, or dry ports, inland container depots (ICD), where all logistical operations not strictly requiring to be carried out in the port itself can take place. The concept relies therefore on the possibility to shuttle goods between the seaport and the dry port as efficiently as possible. Examples of this arrangement include the Virginia Inland Terminal from Virginia Port Authority in the United States, the recently opened Manila Inland Container Depot and rail link of ICSTI in the Philippines, the Harbin Inland Port and Harbin-Dalian rail link in China. Of course, beyond the sheer physical link between the two locations, the concept also supposes appropriate regulatory arrangements, in particular with customs, to allow for quick removal of imported goods from the port grounds, final clearance procedures taking place at the dry port, or even later at the receiver’s place.

58. So it is surely fair to say the future of ports will hinge more and more on...
their capacity to develop their offer of logistics platforms, associated with their regular transit operations. And as we just mentioned, this capacity will likely depend in turn on the arrangements ports can reach with the businesses in order to provide adequate infrastructure connections between the port area and the inland platform.

60 In fact, municipalities are already becoming much more directly involved in port management worldwide, through implementation of the decentralization reforms taking root in many countries. The new Port Authorities, either public authorities or joint-stock companies modelled after the corporate setting of private businesses, make room today for the cities as one of their main partners in long-term strategy and decision making. Whether municipalities sit as a shareholder at the board of the Port Authority, or as a partner in the Port Council, they are now at the core of the development strategy of the port, and, as we just said, this strategy today clearly must look beyond the port's gates, and be included in the overall local community's development plans.

61 Undertaking such a strategy requires an effective cooperation between public and private actors, in particular when implementing the first steps of the program. While the private sector can bring in its professional knowledge in setting up integrated logistics and transportation systems, including its own assets financing capacity, public authorities, at both national and municipal levels, have to provide an appropriate legal framework, and sometimes also a basic set of adequate infrastructure, to spearhead the process and make it possible for the private operators to play the part it is expected to play.

62 Therefore, the need to address the issue of transport as a major element in a country's external trade competitiveness makes it mandatory to take a comprehensive look at the interfaces management between transport modes. The port usually being a critical node in international transport systems, its integration in a country's transport networks supposes that the following questions, very much of a public nature, have been appropriately taken care of:

63 Physical Integration: the quality of road, rail, and inland waterway connections are critical factors of port efficiency. Whatever the institutional setting is for management and operations of port facilities, the responsibility for provision of these physical accesses will normally remain with the public authorities, local or national. Beyond immediate access to port areas, integration of the sea-land interface with inland transport modes may also entail setting up of dry terminals inland, like inland container depots (ICD), which will also require appropriate intermediate transport infrastructure, and, may be as if not more importantly, adequate regulatory setting, in particular for customs procedures. Port Authorities, having withdrawn from direct involvement in commercial operations, may well become prominent actors in fostering the development of these inland terminals, which will help in making efficient use of the port facilities themselves by increasing transit traffic through the port area, and transferring clearances and dispatch operations to an inland site usually less expensive to set up and operate, it will reduce the need to expand operational capacity at the sea-land interface itself, which requires in most cases significantly greater investments than an inland location. As a node in the transport system, the Port Authority is also likely the best possible player to investigate the needs for these developments, including inland access connections, and would have to stimulate actions from the public authorities to spearhead appropriate investments programs and corresponding regulatory amendments.

C.6 Strategic Planning

66 Forward looking planning will remain a critical responsibility of Governments in the transport sector in general. To ensure that national economies can achieve optimal competitiveness on external trade markets means implementing and maintaining a cost-effective transport system, with the port interface ranking high in international trade-related issues. The central body described in para 29 would be in charge of taking this long-term view when devising national waterfront development plans. However, following on the physical integration requirements mentioned in para 46, allocation of land not only for prospective development of port facilities, but also for developing electronic data interchange (EDI) and associate facilities, are among the prerequisites for a seamless international freight transport pattern to develop. Updating existing legal frameworks, to give recognized legal status to professions like freight forwarders or multimodal transport operators, is also sometimes required to allow efficient intermodal operations to be implemented. In this respect, port customers and representatives of the transport community should be given the possibility to become members of the Board of public Port Authorities or of the Port Council, as the case may be, which would ensure the availability of a statutory channel to forward to policy makers the views and concerns of the professional community.

65 Performance Standards Information: the public authorities, and in the first place the Port Authorities, must collect and update on a regular basis international operational data on port activities, and establish their own performance standards accordingly. Main reference indicators, which should in particular be used to monitor private concessions, shall include cargo handling productivity by cargo categories, average cargo dwelling time in port—in particular for containers—and as far as efficient use of infrastructure is concerned, congestion rate of berthing facilities, illustrated by ship waiting rates (waiting time/time at berth). All concession contracts must include provisions making mandatory the transmission of comprehensive operational statistics to the Port Authorities on a regular basis, as part of the public information disclosure policy referred to in para 34.
establishment and expansion of transport corridors linking ports to inland transport systems, must be at the forefront of public authorities' agenda when devising future land-use programs. And this will have to include as well the need to reconcile the various stakeholders' interests in the long-term development of coastal areas within the framework of a national Integrated Coastal Zone Management (ICZM) policy.

69 In summary, ports and terminals are facing nowadays quite different challenges than the ones they used to deal with twenty years ago. The new distribution of roles between public and private actors, in particular, calls for an appropriate allocation of duties and responsibilities, of risks and rewards, to make the global transportation system work to its best efficiency.

69 Commercial terminals handle the operational side of the business, attract and serve the traffic, manage commercial risks, relying in doing so on extended transport networks allowing them to market their services within the framework of an increasingly integrated transportation and logistics sector. Operational investments policy, transport chains organization, intermodal combinations, remain under their control, in cooperation with transport operators, which are themselves sometimes their clients and sometimes their shareholders.

70 Public port and marine authorities handle all statutory duties relating to transport operations, in particular traffic safety issues and technical regulatory matters. Furthermore, they have to make it possible for the commercial operators to unfold their activities by providing the basic infrastructure assets required, in terms of access, protection, and connection between networks. In addition, a main public responsibility remains the establishment of transparent and reliable administrative framework to handle official trade documents processing, together with the implementation, when needed, of trade facilitation improvement programs. Against this background, port authorities will also likely become major players in helping develop new logistical multimodal platforms outside the ports boundaries, by playing the catalytic role they are best placed to assume between the various public bodies involved and the private transport operators.

**Antwerp Municipal Port Authority: Public and Private**

**A Combination Which Works**

The port is administered by an autonomous municipal body with a separate corporate identity, called Antwerp Municipal Port Authority. It owns the docks and the sites used by port operators and industry which lie within its territory, and also owns and operates some of the port's superstructure. The Authority is moreover responsible for the management of the port on the Left Bank, located in the Waasland area, thus ensuring the application of uniform policies on both sides of the river.

Until the Second World War all the equipment and installations of the port were provided and operated by the City of Antwerp. The municipal port authorities leased the equipped berths to private enterprise on a short-term basis. These were mainly shipping agents, shipowners and cargo handling companies, who in consequence were able to carry on their business without having to make major investments in port equipment.

After the Second World War port activities were greatly influenced by a growing specialization in transport technology, cargo handling and warehousing. It was this specialisation, and the considerable capital expenditure it entailed, which spurred the port authorities not only to continue modernising and developing infrastructure but also to lease the unequipped "bare" quays and sites on long-term concessions to private enterprise. For its part, private enterprise was prepared to provide the facilities needed for specific trades such as containers, Ro-Ro, cars, fruit, fertilizers, and other neo-bulk cargo such as iron and steel, forest products, and so on. The duration of the concession was made dependent on the size of the investment made by the holder of the concession.

So as not to put smaller companies unable to invest major sums in port equipment at a disadvantage, the port authorities decided that the port equipment renting service had to be continued for the existing, largely conventional berths.

This co-operation between the port authorities, private enterprise, and local authorities is further facilitated by an ongoing dialogue between the parties concerned in bodies such as the Consultative Council.

The private sector: diversity and co-operation

The organisation of the private sector is largely dependent on the activities of the various professional associations. These organisations act as spokesmen vis-à-vis the various authorities and with other industries. A brief description of the various professions active in the port and their federations is given in the following.

Antwerp's shipping agents watch over the interests of the 300 or so shipowners whose ships make use of the port. Their tasks include booking a berth, clearing the ship inwards and outwards through customs, arranging for pilots, tugs, and settling bills. They also deal with all the paperwork and pay the harbour dues, make the necessary arrangements with the stevedores, and keep an eye on all cargo handling operations in order to ensure that the ship is not unduly delayed. The agent furthermore takes cargo bookings and maintains commercial contacts with customers, attends to any intermodal transport requirements before and after the sea voyage on behalf of the shipping company. He prepares the documents relating to the goods to be loaded or discharged, as well as checking, signing and/or initialing cargo documents (such as delivery orders, invoices for reimbursement, etc.), collects freight charges and related costs, booking notes, shipping permits, bills of lading, manifests, letters of indemnity, applications for hazardous goods permits, etc.) and collects invoices. Finally, the agent takes a part in settling any disputes or claims and obtains a final settlement of the costs of calling in the port from the shipping company.

Working alongside the agents are the shipbrokers and ship operators. The shipbroker is the middleman who charters vessels and acts as ship's consignee for the many tramp ships calling at Antwerp.
Left Bank

On the Left Bank, the Antwerp Municipal Port Authority's powers are restricted to the port area as such. General land development and industrialisation policy on the Left Bank is in the hands of an intermunicipal corporation. This company for the Management of Land and Industrialisation on the Left Bank of the River Scheldt acquires the land, prepares it for development, and makes it available to industrial investors, or to the Municipal Port Authority when it needs land for the management and operation of the port.

In order to ensure coherent and efficient administration, the board of this development corporation includes representatives from the Waasland area, as well as from the municipalities of Beveren and Zijndrecht, the Flemish Region, and the City of Antwerp.

Together with the other services and bodies involved in the development of the Left Bank, the corporation plays an important role in developing new infrastructure and industry, and providing broadly based and effective promotion.

Depending on the situation in the freight markets, the operator will act as a shipowner, with the difference that he charters ships rather than owns them in many cases. This actually generates more traffic for the port. There are about 150 shipping agents, shipbrokers, and ship operators active in Antwerp. They are represented by the Antwerp Shipping Federation (AVS).

A second large group is made up of the close to 300 forwarders and freight agents in Antwerp.

The forwarder acts either on his own behalf or for a third party. He ensures that the goods are sent from the place of departure to the destination. Depending on price, voyage time and reliability, he may make use of one or more modes of transport. He will also book cargo space on the selected means of transport, attend to the details of the journey prior to and after transport, and prepare the required transport documents. He is responsible for ensuring that all the customs regulations are complied with and that import and export rules are not breached, as well as seeing that the customs formalities are properly handled. The forwarder will also make sure that the conditions of the documentary credit and insurers are strictly observed. He will moreover arrange for warehousing, if necessary, and carry out any consular formalities.

Furthermore, it is the forwarder who pays the freight charges of the carrier and any supplementary charges on behalf of his principal. In other words, he finances the entire transport operation. The forwarder is thus in control of the entire transport chain and for this reason is often called the architect or organiser of the transport operation.

Consultative Council

The port has every interest in promoting mutual understanding and a healthy social climate. The Consultative Council therefore fosters cooperation between all parties involved in the work of the port. On the Council sit representatives of trade unions, trade and industry, the Port Authority, the City Council, and the Company for the Management of Land and Industrialisation of the Left Bank. It meets at regular intervals to discuss matters of interest relating to the policy, management and the running of the port.

The Consultative Council has advisory powers. May also act as a combined transport operator or as a multimodal transport operator. Antwerp's forwarders are represented by the Antwerp Freight Forwarding and Logistic Association (VEA).

Factory agents differ from forwarders in that their primary function is to act as the permanent representatives of both foreign and local industrial companies. They are represented by GAMU (Association of Shipping Agents for Industry).

The cargo-handling companies are responsible for loading and unloading ships. This work proceeds on the basis of the stowage plan and calls for considerable expertise, loading in particular.

Organisation of the private sector

Economic policy
Antwerp Port Federation (AGHA)
Promotion and P.R. (ASSIPORT)

Social policy
CEPA

General Services
Arbitrage
Arbitration Centre for the Port of Antwerp
Institute for the Vocational Training of Port Employees
Dangerous goods
INPRO
EDI
SEAGHA

Factory agents
Association of Shipping Agents for Industry
Freight Forwarders
Antwerp Freight Forwarding and Logistic Association
Shippers
Belgian Shippers' Association
Shippers
Antwerp Shipping Federation

Cargo handlers
Royal Association of Traffic Flow Controllers
Professional Association of Antwerp Master Stevedores and Port Operators

Various Companies
Antwerp Chamber of Commerce and Industry

Forwarding group
Shipping group
Cargo handling group

28 PORTS AND HARBORS March, 1999