

Case Study 4 – PSA Cruising with Information System.

4-9:

PSA is taking help of information systems in order to manage the containers at the Port of Singapore through: 24-Hour technical support to ensure smooth operation of refrigerated containers (Reefer Care), professional care, handling of (DG) and on-dock facilities through (Box Care.) These terminals and facilities are integrated into a technical information system to ensure smooth transitions of freight in and out of Port of Singapore Authority.

PSA has implemented the information system (Computer Integrated Terminal Operation System) aka. CITOS, which allocated berth to the ship at specific times. CITOS is divided into various subsystems which make the complete information system for the multitude of task that occur at the port. Utilising a subset of cameras for the container recognition system, and Artificial Intelligence which mimics human learning. There is also the Ship Planning Subsystem which manages the loading and unloading of containers, allocating for unloading and loading.

PSA is taking advantage of these information systems and its multitude of subsystems to manage the containers at Port of Singapore.

PSA has now implemented CIMOS, Computer Integrated Marine Operation System: to track the movement of ships in Singapore Straits and port waters to notify if ships are on a collision course. This can then be signalled to captains of the Ships and danger can be averted. CIMOS has a Vessel Traffic Information subsystem that monitors the straits and ports using remote radars. This information is stored in a database linked to PORTNET and sequentially CITOS through which shippers can locate other information about specific ships.

4-10:

The application of information systems to reduce the turnaround time of ships at the Port of Singapore is extremely important. PSA has implemented an information system to manage turnaround time through a subsystem of CITOS, (The Yard Planning Expert Subsystem), for optimum utilisation of the Yard to help save time during unloading and loading. The Resource Allocation subsystem provides exact requirements to operational staff for the exact requirements needed. This information system also produces a deployment plan for operations to be executed, changes occur instantaneously and adjust accordingly during the process.

4-11:

Information systems are being applied to maintain coordination between PSA and Shipping

companies at the Port of Singapore through PORTNET, an EDI facility that is tailored for effective coordination between PSA and Shipping companies. The company will indicate time and date of arrival of their ships arriving in Singapore, which is then electronically applied for required berth places. This 24/7 electronic data interchange which works in conjunction with CITOS information systems and subsystems. The application received from PORTNET is sent to CITOS and the whole information network handles the scheduling of unloading and loading containers dependant on entrance and leave times of ships from the Yard.