

Session 13

Staff Training and Development in the Port

PORT DEVELOPMENT AND COMPETITIVENESS

Session 13

Port Training:

The transfer of years of port operations experiences from one generation to the next.

Speaker: Mr. Jeffrey Lim

Outline

- Introduction
 - PSA Mission and Values
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- PSA and Singapore Polytechnic in training tie-up
- PSA experience on transition from conventional cargo handling to containers handling operations.

Introduction

- **PSA Mission and Values**

- **Our Mission**

To be the port operator of choice in the world's gateway hubs, renowned for best-in-class services and successful partnerships.

- **Our Values**

- **Committed to Excellence**

We set new standards by continuously improving results and innovating in every aspect of our business.

- **Dedicated to Customers**

We help our external and internal customers succeed by anticipating and meeting their needs.

- **Focused on People**

We win as a team by respecting, nurturing and supporting one another.

- **Integrated Globally**

We build our strength globally by embracing diversity and optimising operations locally.

Introduction

- In short PSA values its people as assets to be trained and realised to its fullest potential. No one should be ignored or neglected.



Introduction

- **PSA Training Philosophy**
- We provide learning and development opportunities that will help realise our people's full potential, adding value to their career development and complementing their business exposure and experience.
- We encourage continuous learning as it translates into positive results, both for our people and for PSA.
- Our people are developed through various avenues including classroom training and facilitation, challenging projects and international exposure.

Introduction

- **Developing Careers**
- Our people are our assets and we emphasise talent development and retention.
- Our strong performance-driven culture engenders joint corporate and personal ownership for the individual's career growth.
- We provide global mobility and lateral rotations to ensure exposure and opportunities to acquire technical, operational and management depth within the PSA group of companies.

Introduction

- **Attracting Talent**
- We offer programmes tailored to different employee groups, and competitive compensation and benefits for global talent.
- Experienced professionals: Global talent deployment and global management competency development.
- Graduates: management traineeship.
- Students: Internships.

Introduction

- **Training & Development of People**
- PSA has progressed from Human Resource to Human Capital in recognition that People is a human resource that can be count on to contribute to operation optimisation and maximisation and in tandem to modern time.
- People is viewed upon as Human Capital aligned with economics Factors of Production working with Land, Labour, Capital and Entrepreneur for Production and Productivity. And PSA practises Human Capital Development in tandem with Career Development and Progression.

Human Capital

- Human Capital is a measure of the economic value of an employee's skill set. This measure builds on the basic production input of labour measure where all labour is thought to be equal.
- The concept of human capital recognises that not all labour is equal and that the quality of employees can be improved by investing in them, the education, experience and abilities of employees have economic value for employers and for the economy as a whole.

Developmental Training

- The Development Training can be classified under the following categories:
 - Staff training
 - Training for contractors
 - Industry training

Staff Training

- Staff training is provided to all levels of staff from workers to supervisors and to managers. These training are grouped under the following categories:
 - Operatives
 - Operators
 - Supervisors
 - Engineering Specialists
 - Operations Executives/Managers

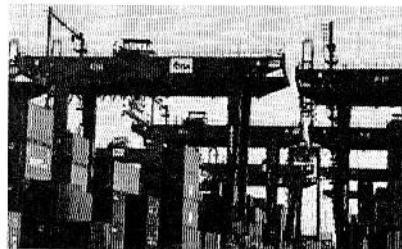
Operatives

- Operatives are Container Handling Specialist (CHS) which include Prime Mover Driving, Container Lashing, Forklift Operation, Mooring of Vessels and Operating PMPC skills.
- Operatives have moved from mono-skilled to multi-skilled where they perform multi-tasking. All operatives are encouraged to move on and take on multi-tasking.



Operators

- Operators are higher skilled than operatives and they are Container Equipment Specialists (CES). They may possess CHS skills and upgraded to RTG, RMG, to QC Specialists. This upgrading displayed the progressive equipment skills. With the upgraded skills operators can be rotated from one job to another.



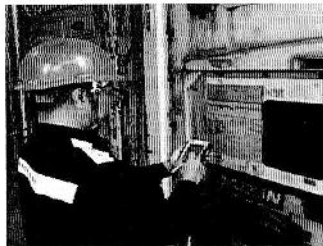
Supervisors

- Supervisors are those performing a higher level jobs such as supervising the operatives and operators in vessel operations. Some of them are performing job planning such as stowage planning, yard planning, berth allocation and logistics activities to ensure plans are well-executed and meeting critical service levels.



Engineering Specialists

- The engineering specialists are to ensure the availability and reliability of the fleet of mega-equipment such as quay cranes, yard cranes and prime movers. The specialists include job positions of technicians, technical officers and engineers. With the training in different tasks, job enlargement is implemented so that the specialists can perform more than one job or can be deployed according to demand in lull and peak periods. With the purchase of more automated cranes in PSA, the specialists are also trained to service and maintenance these high technology equipment.



Operations Executives/Managers

- Operations Executives/Managers are responsible for the planning, execution and monitoring of container handling operations to ensure that PSA delivers seamless service to our customers round the clock. They are also responsible for the quick turnaround of vessels. Newly recruited Operations Executives will go through the basic Operations Executive programme before they are posted and rotated in various job activities such as stowage planning, yard planning, yard operations, logistics and control centres with further On-the-Job (OTJ) training and job attachment .

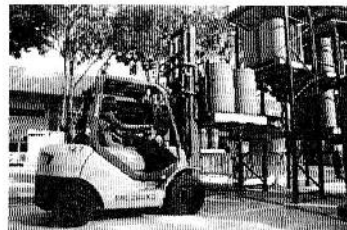
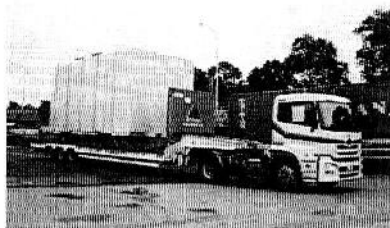
Training for Contractors

- As there are job activities which are out-sourced to contractors, PSA has to ensure that these workers must attain a proper training and competency. These jobs include driving prime movers, lashing/unlashing of containers, conning/deconning of containers, berthing/unberthing of vessels and supervisors on containers handling.



Industry Training

- PSA institutionalises Training & Development from PSA staff and extending to the port-related industry. Realising that by extending training beyond PSA helps to level up skills of the stevedoring and haulier and logistics industry adding productivity and value to the port and port-related logistics supply chain in this shared industry of handling goods, containers and vessels.
- To this end, PSA set up Training Department, evolved through time to PSA Training Institute (SPI) to PSA Institute (PSA Corporate University) at PSA Vista.



Training Courses

- The courses offered can be grouped under the following categories.
 - Cargo Handling Skills
 - Container Handling Operations
 - Equipment Operations
 - Supervision
 - General Management
 - Safety

Examples of Cargo Handling Skills

- Conventional / Break-bulk cargo handling skills
- Stowage of conventional / break-bulk cargo onboard vessels
- Rigging of conventional / break-bulk cargo onwharf side
- Storage of conventional / break-bulk cargo in warehouse and open storage area
- Cargo handling operations onboard RoRo vessels
- Cargo handling skills on bulk cargo
- Signalman
- Operating vessel winches and cranes
- Operating forklift trucks on wharfside and onboard vessels
- Driving different types of trailer trucks
- Lashing and unlashng of containers onboard vessels
- Conning and unconning of containers at wharfside
- Operating heavy duty forklift trucks on wharfside and storage yards
- Berthing and unberthing of vessels
- Safety and proper housekeeping

Examples of Containers Handling Operations

- Operating shore crane / gantry crane
- Operating different types of container storage yard cranes
- Planning stowage of containers onboard vessels
- Planning storage of containers in the yards
- Lashing and unlashng of containers onboard vessels
- Conning and unconning of containers at wharfside
- Operating cranes on multi-purpose container vessels
- Operating heavy duty forklift trucks on wharfside and storage yards
- Supervision of containers handling operations onboard vessels
- Supervision of transferring of containers from vessels to storage yards
- Handling of specialised containers – Reefer, DG, OOG, etc.
- Berthing and unberthing of vessels
- Safety and proper housekeeping

Examples of Supervision Course

- Effective supervision of workers
- Transition from worker to supervisor
- Planning and organising of work
- Managing of people
- Coaching skills
- Mentoring of staff
- Supervision of cargo and handling operations
- VHF radio communication
- Team building
- Work safety and WSH Act
- Accident report

Examples of General Management Course

- Managing conflicts and difficult staff
- Setting goals and targets
- Staff motivation
- Leadership workshop
- Creative thinking
- Managing change and conflicts
- Performance management
- Problem solving and decision making
- Shipping law
- Maritime transport
- Maritime economics
- Maritime trade
- Port operations and logistics

Organisation Development (OD) Training

- OD Section is set-up to organise special training programme especially in leadership and management skills development for OEs/Managers. One of the corporate course is the **FISH! Philosophy** Workshop is a customized, high energy, motivational workshop that will help unleash creativity, improve working relationships and model a team approach that focuses on personal accountability to ensure team and organizational success.
- Originating from the Pike Place Fish Market in Seattle, USA, the four principles of the FISH! philosophy continue to transform PSA from within. Using these simple yet powerful principles, work can be fun.

Organisation Development (OD) Training

- FISH! Philosophy Workshop

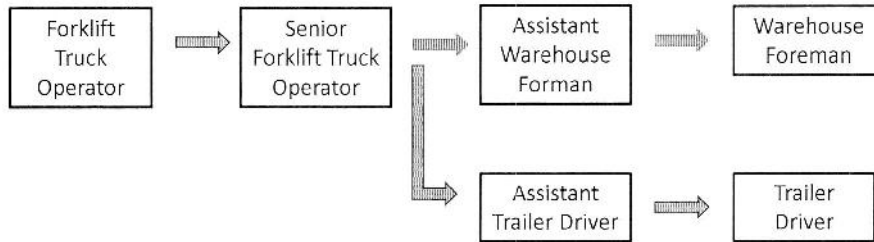
- FISH! Philosophy evolving from knowledge-based cognitive training to psycho-motor skills to attitudinal training to holistic training for an organisation engaging staff with a single philosophy to give off its best in work place imbued with a shared thinking CMPB:
 - Choose Your Attitude (Positive attitude as you come to work)
 - Make Their Day (Contribute to the workplace and shoulder with colleagues the work assigned or at hand)
 - Play (Unleash the energy in the workplace as that energy level in a playground as we play)
 - Be There (Giving the presence as a team-mate all the time working together as a Team)



Staff participating in FISH! Philosophy Workshop

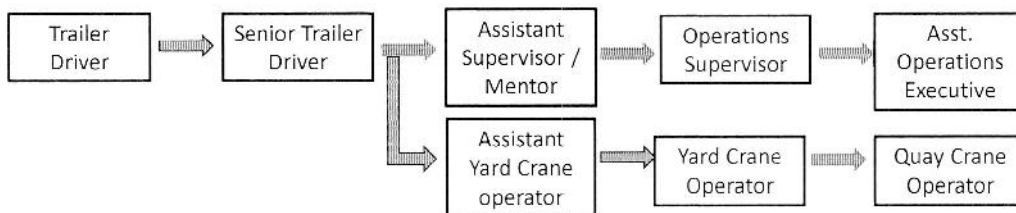
Career progression

Operatives in Cargo Handling



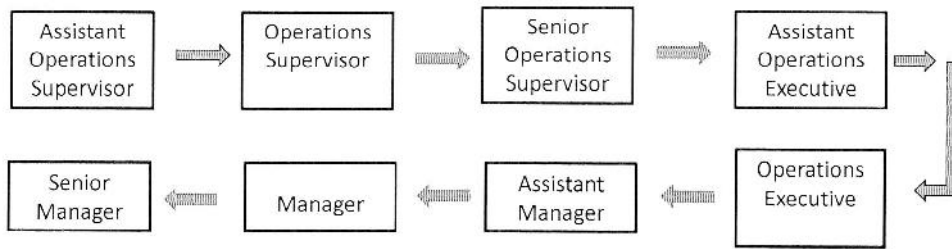
Career progression

Operators in Container Handling



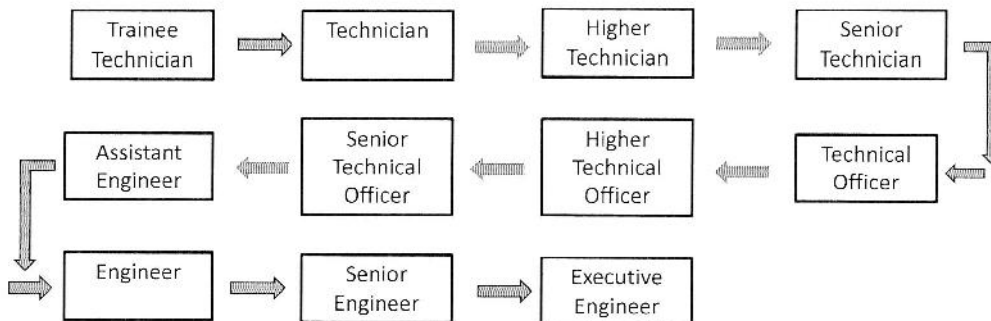
Career progression

Supervisors in Container Handling



Career progression

Engineering Specialists



PSA and SIT in training tie-up for smart port technologies

PSA Corp is linking with the Singapore Institute of Technology (SIT) to train and groom a talent pool that will possess the skill sets required for a new generation of smart and automated port technologies.

The two parties signed a memorandum of understanding (MOU) detailing collaboration on several fronts.

Through its continuing education unit, SIT will develop and deliver a 16-month part-time systems engineering training programme to equip PSA engineers and infocommunication technology (ICT) professionals with the competencies to design, develop and maintain complex integrated systems which are vital for PSA's new generation of ultra-modern and intelligent container terminals.

PSA and SIT in training tie-up for smart port technologies (cont'd)

In exchange, specialists from PSA will deliver guest lectures on port technology and operations that will extend students and faculty from SIT exposure to PSA's inner workings.

PSA and SIT will also collaborate on applied research projects to explore solutions to business problems.



PSA and SIT in training tie-up for smart port technologies (cont'd)

In addition, PSA will offer promising SIT students scholarships and integrated work study programme positions in selected engineering and ICT Bachelor's programmes.

Students will also have the opportunity to embark on capstone projects, which will allow them to delve deeper into and offer solutions to various port business and technology problems.

PSA and Singapore Polytechnic in training tie-up

1 December 2015

PSA and Singapore Polytechnic collaborate to enhance professional education and training for port industry

PSA Corporation Limited (PSA) and Singapore Polytechnic (SP) are working together to develop a Specialist Diploma in Port Management and Operations, a 12-month work-study Earn and Learn Programme (ELP) under the national Skills Future initiative. The ELP is the first of its kind specifically designed for the Singapore port industry.

The ELP will provide fresh polytechnic graduates with a head-start in maritime careers relevant to their course of study. They will benefit from full-time employment, a structured learning framework and career advancement pathways. Eligible PSA staff can also enrol in the ELP to deepen their skills and attain industry-recognised certification.

PSA and Singapore Polytechnic in training tie-up (cont'd)

The ELP collaboration is a key component of a five-year memorandum of understanding (MOU) signed today by PSA and SP worth more than S\$1.5 million. Both organisations will enhance cooperation in the disciplines of Engineering, Information Technology, and Maritime Business which aims to equip future port professionals with work-ready knowledge and skills through comprehensive, hands-on training.



PSA and Singapore Polytechnic in training tie-up (cont'd)

“PSA aims to enhance Singapore’s status as a global hub port with the expansion of Pasir Panjang Terminals and eventually the development of Tuas megaport. The use of more automated, intelligent and sustainable technologies at these terminals requires a core of specialists with industry-relevant competencies. This collaboration with Singapore Polytechnic will help their staff and students bridge what is taught in the classroom and how it can be applied in the workplace, and strengthen our pipeline of potential future talent for PSA’s business expansion,” said Mr Ong Kim Pong, Regional CEO Southeast Asia, PSA International.

Another key thrust in joint curriculum development is to design a Port Equipment elective in SP’s Diploma in Engineering (Mechanical Technology). This will be particularly useful as the port introduces more intelligent and automated systems.

Future Trends That Will Affect Training

- The increased use of technology for training delivery.
- Increased demand for virtual work arrangement.
- Companies will rely on learning management system, integration with business processes and real-time learning.
- Training will focus on business needs and performance.
- Port training department will develop partnership and will outsource.
- Training and development will be viewed more for the change model perspective.

Just A Note

- In training – “One size fits all” does not suit anyone.
- Training packages purchased “off the shelf” must be adapted to the port’s standard operating procedures eg VHF radio communication.
- Chinese proverb : “Tell me and I will forget. Show me and I will remember. Involve me and I will understand.”

Exercise

Form into groups and team leader to make presentation.

How Would You Handle This Case Of An Employee

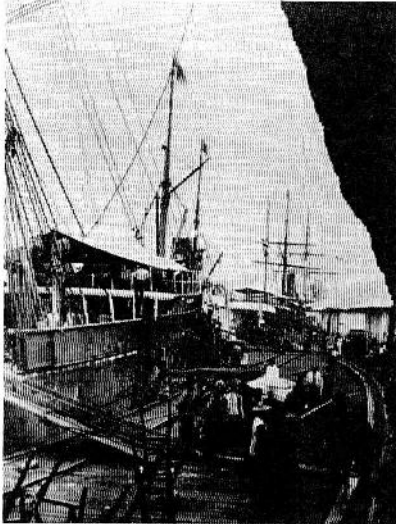
Michael worked as a haulier in a freight forwarding company for 5 years. He joined the Port as a trailer driver and has been working for 2 years. His job appraisal is good and is a hard working staff.

Recently he is asked to attend the driving defensive course. However, he does not want to attend the training as he said *"I have been working for a total of 7 years as a truck driver. I do not have any accident case. It is a waste of time to attend the course as I know all the safety rules"*.

How would you handling this case?

Singapore experience on transition from conventional cargo handling to containers handling operations

- Singapore was founded in 1819 by Sir Stamford Raffles. He proclaimed Singapore be a FREE port allowing movement of goods through Singapore River.
- With trade flourished Singapore River was congested with lighters in transferring loose cargo from ocean-going ships anchored in Anchorages . To cope with demand, Keppel Harbour provided the wharves for ships to berth alongside.
- In 1912 the Singapore Harbour Board was constituted when it took over the Tanjong Pagar Dock Company. The migrants mainly Chinese and Indians came to Singapore as manual workers and was hired to work long hours loading and unloading cargo or coal in the port. They survived in harsh conditions.

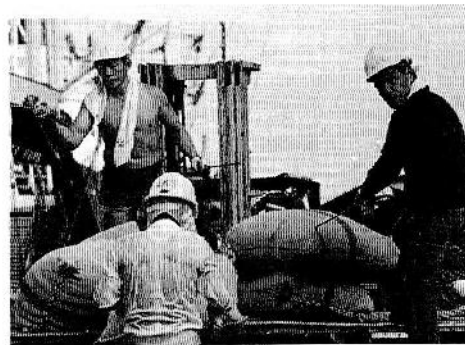
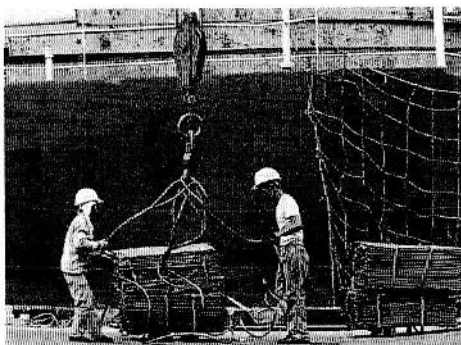


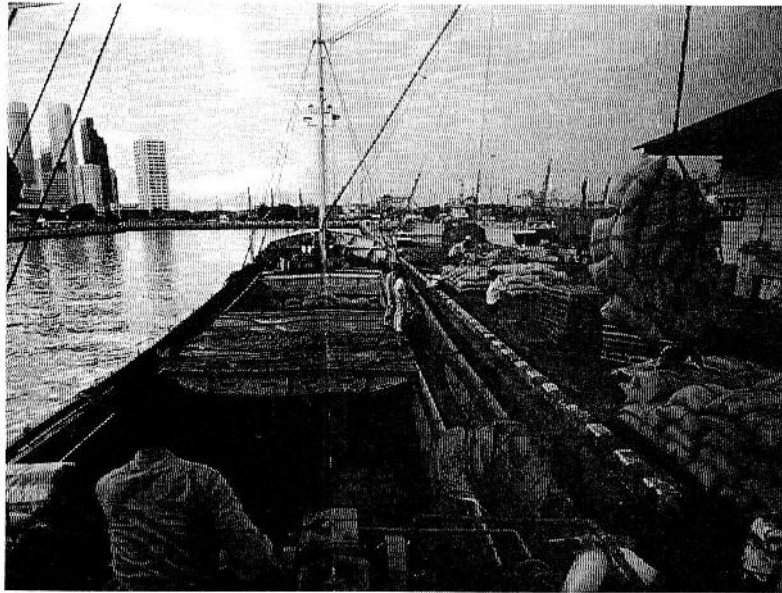
Singapore experience on transition from conventional cargo handling to containers handling operations (cont'd)

- Worker training and advancement prospects were non-existent with senior supervisory posts held by expatriate officers. Uncommitted and poorly organised, the workers had little discipline, and pilferage and theft posed a major problem.
- With some improved conditions with Singapore Harbour Board, the Singapore Harbour Board Staff Association (SHBSA) was formed in 1946. It was Singapore's first labour union. However, with some political influence, the portworkers union staged numerous work disruptions including a 67-day strike in 1954 and a go-slow work strike in 1957.

Singapore experience on transition from conventional cargo handling to containers handling operations (cont'd)

- In 1960 all unions were steamlined and SHBSA became Singapore Portworker Union (SPWU). In 1964 Port of Singapore Authority (PSA) took over the port's management and introduced a host of staff benefits such as medical coverage, free meals, incentive bonus and 25-day minimum wage. Better cargo handling equipment such as forklifts and cargo gears were introduced.
- Efforts was made by both management and union to maintain good relations. Collective Agreements covering wages and schemes of service are amicably negotiated to ensure that the port remains free of labour disputes.
- In Sept 1964 PSA introduced a 2-shift system to ensure vessels arriving at the port would be served. Again there were some resistance from the workers as their overtime work payment was adversely affected.





Singapore experience on transition from conventional cargo handling to containers handling operations (cont'd)

- In the cargo handling operations, the port workers were divided into 4 main groups.
 - Stevedores
 - Wharf labourers
 - Winchmen and signalmen
 - Forklift truck drivers
- In the 1970s the workers were no longer distinctly divided into four groups. They worked as a team where members are rotated to take upon any job position and they are known as Integrated Gang (IG). From a performance of 0.5 tons per man hour with a 27-man gang, productivity shot up to 1.4 tons per man hour with 12-man gangs. There were resentment from the stevedores and fear from the wharf workers.

Singapore experience on transition from conventional cargo handling to containers handling operations (cont'd)

- This progressive change of the port workers enable they to enjoy better service conditions and earnings. Port workers had a better understanding in their work.
- In the 1980s productivity further improved to 4 tons per man hour with 9-man gangs. This has been resulted from better skills and rigorously trained together with the new staff who are better education especially those equipped with technical and vocational skills to operate new equipment. To harness the productive output of a quality workforce, PSA is not neglecting the basics. Salaries, allowances and incentive payments were constantly reviewed.

Singapore experience on transition from conventional cargo handling to containers handling operations (cont'd)

- More important, training brings concrete rewards on the job and career advancement. Mastering a new skill, like operating a forklift or a winch, means bigger pay packet. Together with incentive and shift allowances, an IG stevedore could easily earned more than S\$1,000 a month, ranking among the highest paid blue collar workers in Singapore.

Singapore experience on transition from conventional cargo handling to containers handling operations (cont'd)

- The financial payment was fair as the cargoes were categorised under different packaging and cargo types. The standard work values were worked out for each category of cargo using the work study (time study) techniques. The PSA management believed in *“A Fair Day’s Pay For A Fair’s Day Work”*.
- There were some resistance along the way, but PSA Management and the Singapore PortWorkers’ Union worked together co-operatively. PSA also set up the Training Department to upgrade the skills of the workers to enable them to work in different roles so that it was more flexible in job deployment.

Singapore experience on transition from conventional cargo handling to containers handling operations (cont'd)

Singapore’s 1st Container Terminal

- Seeing there was a need to have container facilities, the then Minister of Finance, Dr Goh Keng Swee, sanctioned to build Singapore first container terminal in spite the World Bank concerned that the facilities was ahead of their time.
- In 1972, three container berths were converted from the conventional cargo wharves to container wharves at Tanjong Pagar Terminal. Initially there were some concern over the retraining of the existing conventional cargo staff to handle the containers. PSA worked closely with the workers with promise that there would not have staff retrenchment and the management would put in much effort in training the staff in transition. Higher wage was promised for example, a forklift truck operator upgraded to be a prime mover driver, cargo supervisor upgraded to become a quay crane operator, etc.



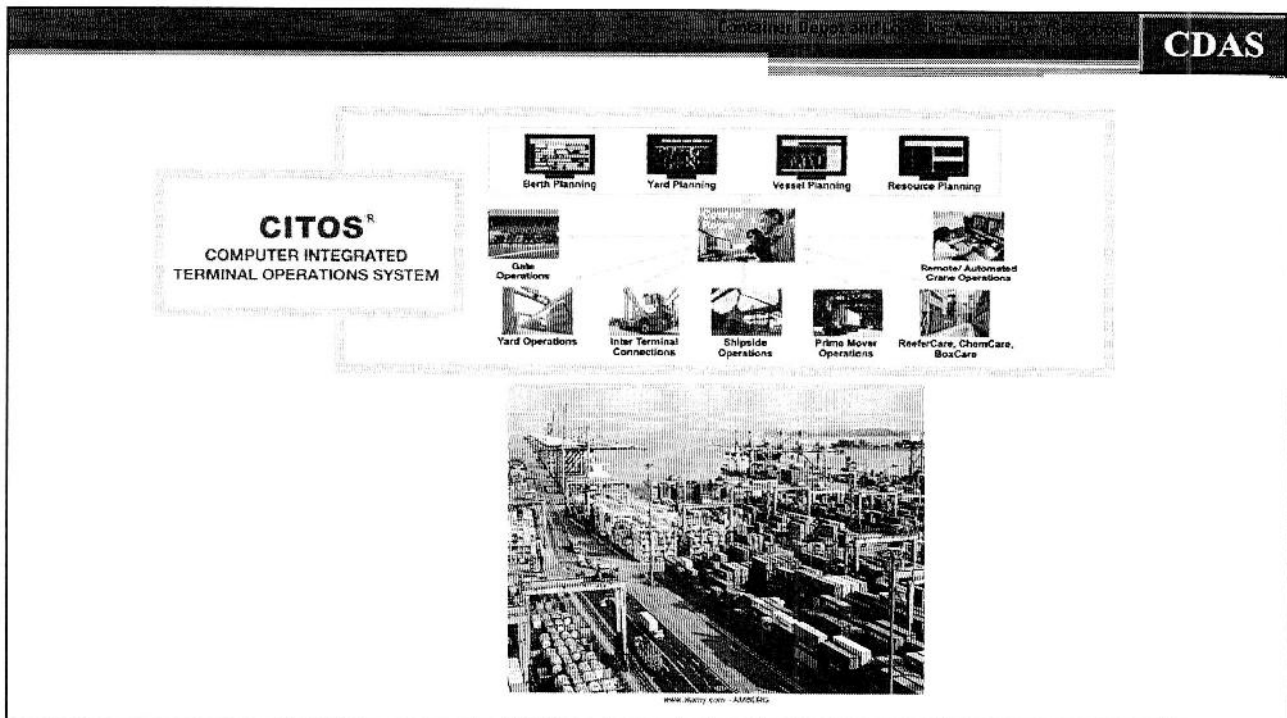
Singapore experience on transition from conventional cargo handling to containers handling operations (cont'd)

Computerisation

- In 1967 PSA introduced computerisation with the setting up a Electronic Data Processing Department (EDP) to computerise operations in cargo handling billing and payroll system. Cash register machines were also introduced on the receipting of cash payment instead of writing manual receipts. Again there were no retrenchment and the staff were retrained in the new work methods.
- In 1973 PSA introduced the first on-line system for handling containers at Tanjong Pagar Terminal.

Singapore experience on transition from conventional cargo handling to containers handling operations (cont'd)

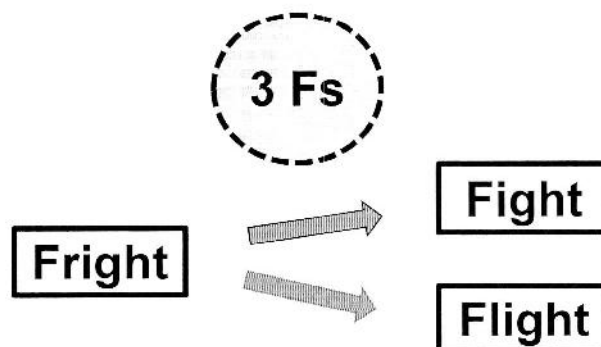
- In 1984 PSA introduced the first version of Portnet – a one stop 23-hour paperless electronic system linking PSA ports and the shipping community.
- In 1989 the Computer Integrated Terminal Operations System (CITOS) was implemented and which plan and direct all container handling operations such as use of berths, yard, equipment and manpower. Shipping lines and freight forwarding companies could obtain real-time information on container directly from PSA's computer system.
- In 1 Oct 1997 PSA was corporatised and known as PSA Corporation Ltd.



Singapore experience on transition from conventional cargo handling to containers handling operations (cont'd)

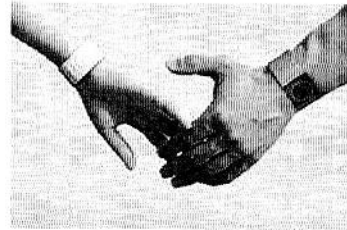
- In 2000 Remote Crane Operations and Control (RCOC) was introduced in Pasir Panjang Terminal. A supervisor in the RCOC is able to control the handling operations of few yard cranes at the same time.
- Container throughput crossed 1 million TEUs in 1981, increased to 5 million TEUs in 1990, and increased further to 23.3 million in 2005. In 2016 PSA Singapore Terminal handled 30.5 million TEUs.
- In 2017 the new terminal at Pasir Panjang installed with automated Rail Mounted Gantry Crane (aRMG) where there is no need for crane operators. The prime movers will align their vehicles accordingly under the aRMG crane and the computer will direct the mounting and offloading the containers on the vehicles. The truck drivers were retrained and adapted to the new technology.

Any Work Changes Evoke Resistance



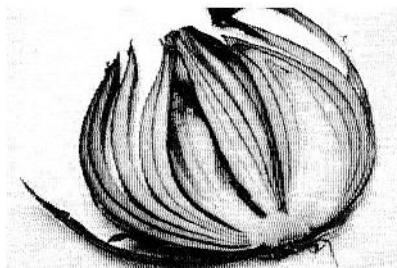
Don't take resistance as a negative thing:

- Accept it as a part of the process
- Welcome it
- Embrace it
- Engage with it positively

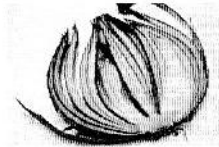


Resistance is like an onion

- Whenever you have handled one layer of resistance, there always seems to be another layer beneath it. And the next layer seem hotter and harder to handle than the last layer.



Resistance is like an onion



What will you do?

5 Silver Rules for Handling Resistance

1. Get the resistance out in the open.
2. Assume that the resistance is motivated by positive intentions.
3. Find out what the resistance really is.
4. Build rapport with the resisters.
5. Seek their insights.

Multi-skilled workforce critical to Singapore's maritime competitiveness

SINGAPORE - A multi-skilled workforce is a "critical factor" in sustaining the Republic's competitiveness in the maritime industry, said a committee set up to chart the future development of Singapore's port and maritime sector.

In its International Maritime Centre (IMC) 2030 Strategic Review released on Friday, the 23-member committee highlighted the need to improve the quality of maritime education and training, and enhance the standards of professionalism of the workforce. It also said the profile of the maritime industry has to be raised in order to attract talent.

The review pointed to a recent study commissioned by the Maritime and Port Authority of Singapore as part of its efforts to better understand the drivers of manpower growth in the industry and develop policies to address future manpower challenges. The study, Singapore Maritime Cluster Manpower Demand and Supply Study, identified digital literacy and data analytics, environmental engineering and green technologies, and soft skills such as communication and resource management as important core skills for the industry in the future.

With increased digitalization, it is time to design a future-ready maritime talent curriculum, said Ms Annie Koh, Finance Professor at the Singapore Management University and the academic director of the International Trading Institute that runs the Maritime Economic Track.

“The future maritime human talent will need to go beyond having core skills, knowledge and competencies in the maritime industry to acquire digital skills that will help in much-needed maritime business transformation in the digital era,” Prof Koh said.

They should be empowered to apply their digital skills in tailoring solutions to customers’ needs, she said. “This new young blood serves to inspire and propel a traditionally change-resistant maritime industry into the digital era.”

She added that it is also important to have a pool of dedicated teachers and educators.

“You need teachers and educators to interest the younger generation in the maritime industry. These educators need to be inspirational to the next generation, gaining their curiosity to find out more about the industry.”

“The difficulty is always in attracting people to join the shipping industry,” said CIMB economist Song Seng Wun. Although the port and maritime industry is a critical part of the Singapore economy, it is hardly featured prominently, he noted.

Mr Song said there could be an “image problem”.

“People may feel that it’s a dirty job. Just like engineering, which requires going into tunnels.” However, as technology plays a larger role in the industry, the image is likely to improve in the future, he added.

TODAY

TODAY newspaper – 22 September 2017

Question?