
The Training Material on “Transport Operations Management” has been produced under Project Sustainable Human Resource Development in Logistic Services for ASEAN Member States with the support from Japan-ASEAN Integration Fund (JAIF). Copyright Association of Southeast Asian Nations (ASEAN) 2014. All rights reserved.



Japan-ASEAN Cooperation



AFFA

**Sustainable Human Resource Development in logistics services
for ASEAN Member States**

TRANSPORT OPERATIONS MANAGEMENT

AFFA

Bangkok

September 19, 2014

By Abe Asuncion@PISFA, Philippines



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

SYNOPSIS

The transport operations management module deals with the principles, systems, processes, and best-practice methodologies, and tools that will help equip the practitioner or operator with the needed skills and know how to better perform in this highly competitive logistics industry.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

TRAINING OBJECTIVES

- **To understand the principles of transport operations management and its impact on the supply chain.**
- **To appreciate the vital role of the Transport Operator with various stakeholders.**
- **To be able to use the best practices, methodologies, and tools in transport operations.**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

OUTLINE

- Chapter 1: Operations Management in Transportation**
- Chapter 2: Management Principles Applicable in
Transport Operations**
- Chapter 3: Role of Transport Operations in Logistics**
- Chapter 4: Some Practical Methodologies, Tools, and
Techniques**
- Chapter 5: Introducing Transport Management Systems**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

OUTLINE

Chapter 6: Sustainable Transportation

Chapter 7: Guidelines on Outsourcing

Chapter 8: Some Pointers

Chapter 9: Summary

Chapter 10: Case studies



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CHAPTER 1

OPERATIONS MANAGEMENT IN TRANSPORTATION



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Transportation helps shape a nation's economic health and quality of life. Not only does the transportation system provide for the mobility of people and goods, it also influences patterns of growth and economic activity by providing access to land. The performance of the system affects public policy concerns like air quality, environmental resource consumption, social equity, land use, urban growth, economic development, safety, and security.

Sustainable Human Resource Development in logistics services for ASEAN Member States

The Transport Field

- Infrastructure
- Vehicle
- Operations



pixtastock.com - 9806630



Sustainable Human Resource Development in logistics services for ASEAN Member States

What is transport management?

The management of transportation operations is comprised of all types and modes, including tracking and managing every aspect of vehicle maintenance, fuel costing, routing and mapping, warehousing, communications, EDI implementations, cargo handling, carrier selection and management, and even accounting.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

TRANSPORT OPERATIONS

The costs and challenges for those who run transport operations continue to increase. The ability to run a transport operation efficiently and effectively can no longer be left to chance..



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

KEY DRIVERS OF CHANGE IN TRANSPORT MANAGEMENT

- Changes in work practices
- Changes in customer behavior
- Changes in technology
- Increasing or decreasing workloads



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

BACKGROUND AND HISTORY OF OPERATIONS MANAGEMENT



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

INPUTS INTO OUTPUTS

Operations Management is the management of process inputs , manpower, and other resources to produce the desired outputs in meeting customer demands.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Operations Management Products versus Services

Manufacturing products differs from providing services in **seven factors**: degree of customer contact, uniformity of input, labor content of jobs, uniformity of output, measurement of productivity, production and delivery, quality assurance, and amount of inventory



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Background of Operations Management

The global economy is witnessing previously unseen levels of competitiveness, forcing business leaders to contend with unprecedented challenges. No longer can companies seize and hold a customer base by operating adequately. In order to enjoy a competitive advantage, an organization must operate at exemplary levels of performance in every facet of business and maintain that degree of excellence indefinitely.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Operations Management Defined

Operations management is an area of management concerned with **overseeing, designing, and controlling the process** of production and **redesigning business operations** in the production of goods or services. It involves the responsibility of ensuring that business operations are efficient in terms of using as few resources as needed, and effective in terms of meeting customer requirements. It is concerned with managing the process that converts inputs (in the forms of raw materials, labor, and energy) into outputs (in the form of goods and/or services).

Source: Mapua Institute of Technology on subject of Project Management 2013



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Scope of Operations Management

- Operations management textbooks usually cover demand forecasting, even though it is not strictly speaking an operations problem, because demand is related to some production systems variables. For example, a classic approach in dimensioning safety stocks requires calculating standard deviation of forecast errors. Demand forecasting is also a critical part of push systems, since order releases have to be planned ahead of actual clients orders. Also any serious discussion of capacity planning involves adjusting company outputs with market demands.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

OM Processes in Transport

- **Forecasting**
- **Capacity planning**
- **Scheduling**
- **Managing inventory assuring quality**
- **Motivating and training employees**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

System and Processes

This is achieved through careful alignment of operational systems and the use of innovative process management initiatives. “Unless an organization is uniquely qualified to deal with its customers by understanding its own strengths and weakness,” writes internationally renowned operational management expert Christopher K. Ahoy, “it will be unable to understand what is required to move from the current paradigm of doing business.”



Sustainable Human Resource Development in logistics services for ASEAN Member States

CONCLUSION

The management of transport operations encompasses aspects of the logistics chain and is at the heart of the entire service enterprise. The practice may be viewed as a science in itself focused on the process inputs resulting to outputs thereby satisfying customer requirements.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

HISTORICAL BACKGROUND OF OPERATIONS MANAGEMENT



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Since the introduction of containerization and the later development of EDI, international trade has increasingly demanded efficient commercial transactions. To take advantage of the potential offered by the new technologies, the international trading community updated its uniform commercial practices regarding trading terms, letters of credit, and multimodal transport documents .



Sustainable Human Resource Development in logistics services for ASEAN Member States

- In 1973, commercial forces created a set of rules under the ICC banner, while governments had initiated consultations on an international convention in the UNCTAD. In 1980, the MT convention was signed but it has so far received little support. In 1990, this situation forced commercial parties jointly with UNCTAD to replace the 1973 Rules by the UNCTAD/ICC Rules for Multimodal Transport Documents. These new rules have become commercial practices (new FIATA FBL, new BIMCO COMBIDOC).**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Continued...

In Latin America, some governments have recently agreed on a regional legislation for multimodal transport, taking basic elements from the MT Convention and from the UNCTAD/ICC Rules. Other governments (e.g. India) have designed their own law on MT.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Recently, the development of faster and smaller computers, intelligent systems, and the World Wide Web (WWW) has substantially changed the nature of operations, manufacturing, production, and service systems. Based upon this evolutionary history of production, operations, and manufacturing systems, it is clear that each era built upon the ideas of its predecessors.



Sustainable Human Resource Development in logistics services for ASEAN Member States

According to Malakooti (2013)^[3] the history and future of production and operation systems can be divided into five phases as following.

- Empiricism (learning from experience)**
- Analysis (scientific management)**
- Synthesis (development of mathematical problem solving tools)**
- Isolated Systems with Single Objective (use of Integrated and Intelligent Systems, and WWW)**
- Integrated Complex Systems with Multiple Objectives (development of ecologically sound systems, environmentally sustainable systems, considering individual preferences)**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

In 1913 Ford W. Harris published his "How Many parts to make at once" in which he presented the idea of the economic order quantity model. He described the problem as follows:

"Interest on capital tied up in wages, material and overhead sets a maximum limit to the quantity of parts which can be profitably manufactured at one time; "set-up" costs on the job fix the minimum. Experience has shown one manager a way to determine the economical size of lots"[9]



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Up to this point in history, optimization techniques were known for a very long time, from the simple methods employed by F.W.Harris to the more elaborate techniques of the calculus of variations developed by Euler in 1733.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

TODAY'S CHALLENGES TO T.O.M.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

THE CHALLENGES WE FACE....

- Stiff competition
- Changing customer behavior
- External & unforeseen factors
- Local peculiarities
- Trade barriers
- Natural calamities
- Option to Outsource



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

AND MORE ...

- **Human factor**
- **Fuel & related costs**
- **Process automation**
- **Clean Air Act- GO GREEN!**
- **Port congestion**
- **Safety & security issues**
- **QMS initiatives**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

The Philippine Experience shared...

- 1. The Economy ; Socio-political perspective**
- 2. Philippine Map on air/ sea ports**
- 3. Developments in Infrastructure**
- 4. Manila Airport**
- 5. Manila Seaport**
- 6. Luzon Seaport Options: Subic (Hanjin) and Batangas (Sta. Clara and Bauan)**
- 7. Luzon Airport Options: Clark**



Sustainable Human Resource Development in logistics services for ASEAN Member States

Philippines: TRADE BARRIERS AND CHALLENGES

1. Airfreight Forwarders regulated by CAB, DOTC
2. Seafreight Forwarders regulated by PSB-DTI
3. 3PL providers? MTO?
4. Manila Truck Ban and other Traffic Regulations affecting Surface distribution
5. Roll on- Roll off Transport System
6. Feeder Vessel Limitations
7. Cabotage Law on air and sea transport
8. Open Skies Policy
9. Natural calamities



Sustainable Human Resource Development in logistics services for ASEAN Member States

Relevant Philippine Treaties, Conventions and Agreements

- **ACCESSION TO THE RKC**

The occasion made the Philippines the 70th contracting party (and the first among the association of south east asian / asean countries) to the WCO revised Kyoto Convention, which promotes trade facilitation and customs modernization.- June 2010

- **OPEN SKIES POLICY**

- **AEO – C-TPAT COMPLIANCE**

Sustainable Human Resource Development in logistics services for ASEAN Member States

A typical local scene





Sustainable Human Resource Development in logistics services for ASEAN Member States

Philippine Scenario

- Philippine ports are relatively shallow
- Only Feeder vessels dock at our ports
- Limited Freighter operators
- Limited infrastructure
- Relatively weak enforcement and implementation

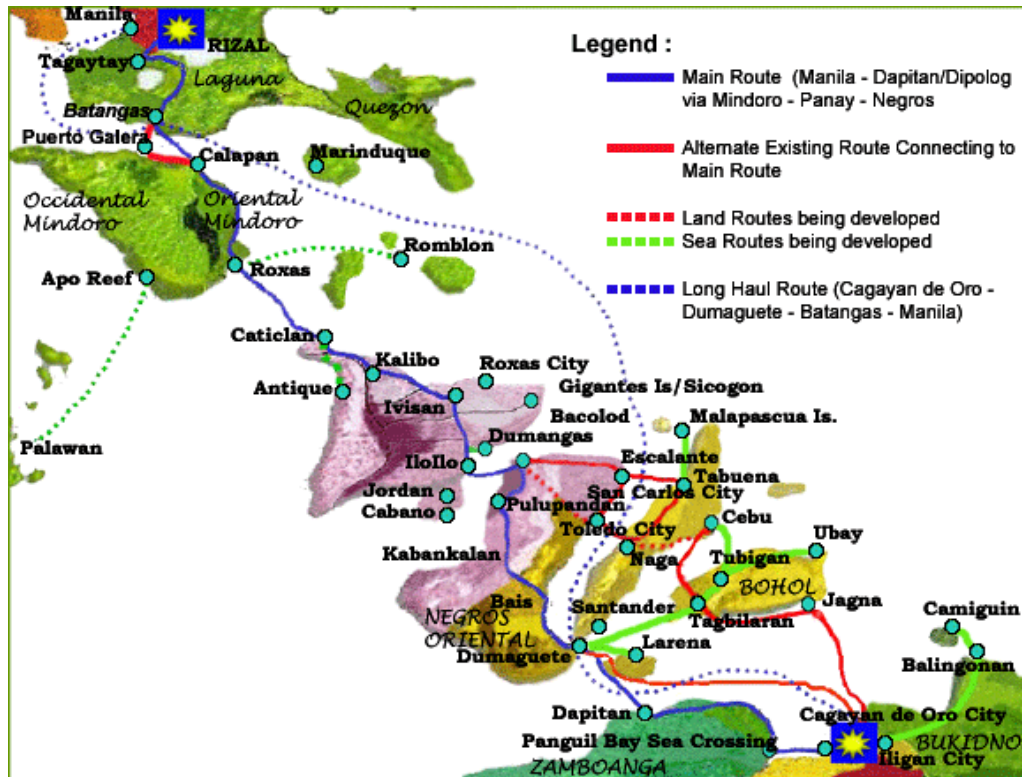
Sustainable Human Resource Development in logistics services for ASEAN Member States

Ro-Ro for the Archipelago



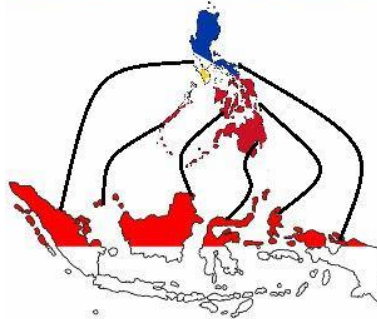
Sustainable Human Resource Development in logistics services for ASEAN Member States

Philippine Nautical Highway



Sustainable Human Resource Development in logistics services for ASEAN Member States

Ro-Ro for the Region



Philippines-Indonesia
Roll on, Roll off (RORO)



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

FAQs

- 1. How do I decide which transport mode to use?**
- 2. Which service provider can best fulfil our requirements?**
- 3. What type of packaging is best for what mode of shipping?**
- 4. How do we measure performance?**
- 5. Who are responsible in operations management?**
- 6. Do we purchase equipment or outsource?**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CONCLUSION

Operations Management is the forebearer of transport operations. The principles used in the manufacturing industry are still relevant and useful in the successful management of transport operations. The growing complexity and scope of transport in logistics pose dynamic challenges to the transport manager.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CHAPTER 2 MANAGEMENT PRINCIPLES APPLICABLE IN TRANSPORT OPERATIONS



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Management, including operations management, is like engineering in that it blends art with applied science. People skills, creativity, rational analysis, and knowledge of technology are all required for success.



Sustainable Human Resource Development in logistics services for ASEAN Member States

SIX SIGMA

SIX SIGMA is a set of techniques and tools for process improvement. It was developed by Motorola in 1986, coinciding with the Japanese asset price bubble which is reflected in its terminology. Jack Welch made it central to his business strategy at General Electric in 1995. Today, it is used in many industrial sectors.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

SIX SIGMA

SIX SIGMA seeks to improve the quality of process outputs by identifying and removing the causes of defects (errors) and minimizing variability in manufacturing and business processes. It uses a set of quality management methods, including statistical methods, and creates a special infrastructure of people within the organization ("Champions", "Black Belts", "Green Belts", "Yellow Belts", etc.) who are experts in these methods.



Sustainable Human Resource Development in logistics services for ASEAN Member States

SIX SIGMA PRINCIPLES OUTLINED

1. Reduce process cycle time
2. Reduce pollution
3. Reduce costs
4. Increase customer satisfaction
5. Increase profits

These are also core to principles of Total Quality Management (TQM) as described by Peter Drucker and Tom Peters (particularly in his book "In Search of Excellence" in which he refers to the Motorola six sigma principles).



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

In 1987 the International Organization for Standardization (ISO), recognizing the growing importance of quality, issued the ISO 9000, a family of standards related to quality management systems. There has been some controversy thought regarding the proper procedures to follow and the amount of paperwork involved



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Recent trends in the field revolve around concepts such as Business Process Re-engineering (launched by Michael Hammer in 1993^[14]), Lean Manufacturing, Six Sigma (an approach to quality developed at Motorola between 1985-1987) and Reconfigurable Manufacturing Systems.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

ISO 9000

ISO 9000 is a series of standards, developed and published by the International Organization for Standardization (ISO), that define, establish, and maintain a quality assurance system for manufacturing and service industries.^{[1][2]} The standards are available through national standards bodies. ISO 9000 deals with the fundamentals of quality management systems,^[3] including the eight management principles upon which the family of standards is based.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

8 Principles of ISO

The International Standard for Quality management (ISO 9001:2008) adopts a number of management principles that can be used by top management to guide their organizations towards improved performance.



Sustainable Human Resource Development in logistics services for ASEAN Member States

8 Principles of ISO

- Customer focus

Since the organizations depend on their customers, they should understand current and future customer needs, should meet customer requirements and should try to exceed the expectations of customers. An organization attains customer focus when all people in the organization know both the internal and external customers and also what customer requirements must be met to ensure that both the internal and external customers are satisfied.



Sustainable Human Resource Development in logistics services for ASEAN Member States

8 Principles of ISO

- Leadership

Leaders of an organization establish unity of purpose and direction. They should go for creation and maintenance of such an internal environment, in which people can become fully involved in achieving the organization's quality objective.

Sustainable Human Resource Development in logistics services for ASEAN Member States

8 Principles of ISO

- **Involvement of people**
People at all levels of an organization are the essence of it. Their complete involvement enables their abilities to be used for the benefit of the organization.
- **Process approach**
The desired result can be achieved when activities and related resources are managed in an organization as a process.



Sustainable Human Resource Development in logistics services for ASEAN Member States

8 Principles of ISO

- System approach to management

An organization's effectiveness and efficiency in achieving its quality objectives are contributed by identifying, understanding and managing all interrelated processes as a system. Quality Control involves checking transforming resources in all stages of production process.

Sustainable Human Resource Development in logistics services for ASEAN Member States

8 Principles of ISO

- Continual improvement

One of the permanent quality objectives of an organization should be the continual improvement of its overall performance, leveraging clear and concise PPMs (Process Performance Measures).

- Factual approach to decision making

Effective decisions are always based on the data analysis and information



Sustainable Human Resource Development in logistics services for ASEAN Member States

8 Principles of ISO

- Mutually beneficial supplier relationships

Since an organization and its suppliers are interdependent, therefore a mutually beneficial relationship between them increases the ability of both to add value.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Advantages of ISO

- **Creates a more efficient, effective operation**
- **Increases customer satisfaction and retention**
- **Reduces audits**
- **Enhances marketing**
- **Improves employee motivation, awareness, and morale**
- **Promotes international trade**
- **Increases profit**
- **Reduces waste and increases productivity**
- **Common tool for standardization**



Sustainable Human Resource Development in logistics services for ASEAN Member States

5S

5S is the name of a workplace **organization method** that uses a list of five Japanese words: *seiri*, *seiton*, *seiso*, *seiketsu*, and *shitsuke*. Transliterated or translated into English, they all start with the letter "S".

The list describes how to organize a work space for **efficiency and effectiveness.**



Sustainable Human Resource Development in logistics services for ASEAN Member States

5S

1. Seiri (整理?, sort)

- ❑ Remove unnecessary items and dispose of them properly
- ❑ Make work easier by eliminating obstacles
- ❑ Reduce chance of being disturbed with unnecessary items
- ❑ Prevent accumulation of unnecessary items
- ❑ Evaluate necessary items with regard to dept/cost/other factors.



Sustainable Human Resource Development in logistics services for ASEAN Member States

5S

2. Seiton (整頓?, straighten or streamline)

- ❑ Arrange all necessary items in order so they can be easily picked for use
- ❑ Prevent loss and waste of time
- ❑ Make it easy to find and pick up necessary items
- ❑ Ensure first-come-first-serve basis
- ❑ Make work flow smooth and easy
- ❑ Can also be translated as "set in order"



Sustainable Human Resource Development in logistics services for ASEAN Member States

5S

3. Seiso (清掃?, shine)[edit]

- ❑ Clean your workplace completely
- ❑ Use cleaning as inspection
- ❑ Prevent machinery and equipment deterioration
- ❑ Keep workplace safe and easy to work
- ❑ Can also be translated as "sweep"



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

4. Seiketsu (清潔?, standardize)[edit]

- ❑ Maintain high standards of housekeeping and workplace organization at all times
- ❑ Maintain cleanliness and orderliness
- ❑ Maintain everything in order and according to its standard.



Sustainable Human Resource Development in logistics services for ASEAN Member States

5S

5. Shitsuke (躰?, sustain)[edit]

- To keep in working order
- Also translates to "Self-Discipline" meaning to do without being told



Sustainable Human Resource Development in logistics services for ASEAN Member States

5S Additional S's

Other phases are sometimes included e.g. safety, security, and satisfaction. These however do not form a traditional set of "phases" as the additions of these extra steps are simply to clarify the benefits of 5S and not a different or more inclusive methodology.



Sustainable Human Resource Development in logistics services for ASEAN Member States

5S Additional S's

Safety[edit]

The phase, "Safety", is sometimes added.^[3] There is debate over whether including this sixth "S" promotes safety by stating this value explicitly, or if a comprehensive safety program is undermined when it is relegated to a single item in an efficiency-focused business methodology.



Sustainable Human Resource Development in logistics services for ASEAN Member States

5S Additional S's

Security

The phase, "Security", can also be added. To leverage security as an investment rather than an expense, the seventh "S" identifies and addresses risks to key business categories including fixed assets (PP&E), material, human capital, brand equity, intellectual property, information technology, assets-in-transit and the extended supply chain.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

ERGONOMICS IN T.O.M.

The International Ergonomics Association defines ergonomics or human factors as follows:[5]

“Ergonomics (or human factors)” is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance.”

—International Ergonomics Association

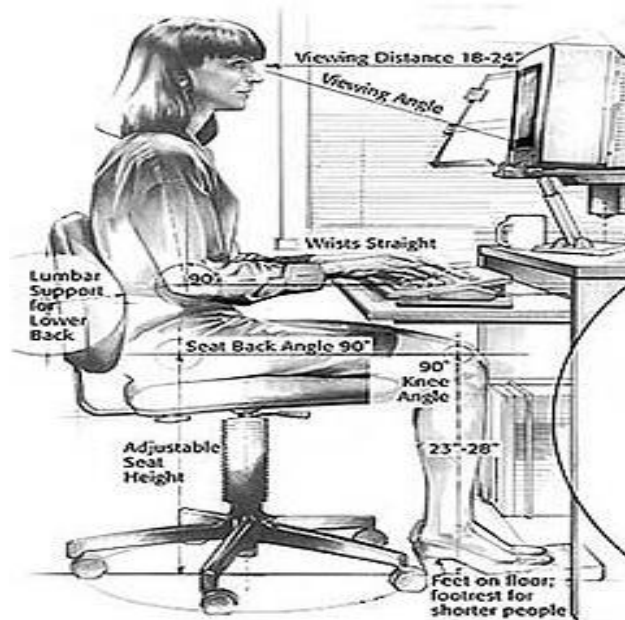
Sustainable Human Resource Development in logistics services for ASEAN Member States

ERGONOMICS

Work system

Environment

Man



Equipment



Sustainable Human Resource Development in logistics services for ASEAN Member States

CONCLUSION

The principles in the successful management of the enterprise applies to Transport Operations just the same. In context, transport operations would use micro processes focused on the execution of pick-up, delivery, monitoring, and servicing in general.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CHAPTER 3 ROLE OF TRANSPORT OPERATIONS IN LOGISTICS



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

The Role of Transport

The role of transport is to facilitate the movement of goods. This may be from points of manufacture, storage or pre-positioning, to points of use; or between hubs and distribution points; or hubs to end use; or distribution points to end use; or return from end use back to hub and pre-positioning points or manufacturers. The source and destination may be in the same country, or one may be in a different country requiring international movement.



Sustainable Human Resource Development in logistics services for ASEAN Member States

LOGISTICS

- According to the Council of Logistics Management,^[3] Logistics includes the integrated planning, control, realization, and monitoring of all internal and network-wide material, part, and product flow, including the necessary information flow, industrial and trading companies along the complete value-added chain (and product life cycle) for the purpose of conforming to customer requirements.



Sustainable Human Resource Development in logistics services for ASEAN Member States

LOGISTICS

- Logistics is the process of **planning, implementing,** and **controlling** the effective and efficient flow of goods and services from the point of origin to the point of consumption.

***TRANSPORT OPERATIONS IS PRESENT IN ALL
THESE!!***



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Inbound logistics

Inbound logistics is one of the primary processes of logistics, concentrating on purchasing and arranging the inbound movement of materials, parts, and/or finished inventory from suppliers to manufacturing or assembly plants, warehouses, or retail stores.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Outbound logistics

Outbound logistics is the process related to the storage and movement of the final product and the related information flows from the end of the production line to the end user.



Sustainable Human Resource Development in logistics services for ASEAN Member States

The Operating Plan

An operating plan explains how a company will manage its corporate activities in order to meet consumer expectations. This is slightly different from an operational plan, which explains specific department objectives within an active organization. Organizations write an operating plan to reduce risk, enhance productivity, create efficient systems and establish protocols. Effective planning considers the integration of internal and external support functions.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

The Operating Plan

Master Operating Plan Example

Customer:

Service or handling procedure:

Operational work flow by departments:

(includes elements of the service contract)

Other specific handling instructions:

Commencement / Validity dates:

Conforme:



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

FUNCTIONS OF T.O.M.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

ROUTINE FUNCTIONS OF T.O.M.

- **Booking, Job Ordering**
- **Fleet Management & Dispatch**
- **Multi-legging or multiple drop
Manifesting**
- **Track and Trace**
- **Consolidation, deconsolidation, pooling**
- **Invoicing**
- **Sub-contracting/ Outsourcing**
- **Fulfillment / POD**
- **Reverse logistics**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Transportation planning recognizes the critical links between transportation and other societal goals. The planning process is more than merely listing highway and transit capital projects. It requires developing strategies for operating, managing, maintaining, and financing the area's transportation system in such a way as to advance the area's long-term goals.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Transport planning allows for high utilization and less impact regarding new infrastructure. Using models of [transport forecasting](#), planners are able to predict future transport patterns. On the operative level, logistics allows owners of cargo to plan transport as part of the [supply chain](#). Transport as a field is studied through [transport economics](#), the backbone for the creation of regulation policy by authorities. [Transport engineering](#), a sub-discipline of [civil engineering](#), must take into account [trip generation](#), [trip distribution](#), [mode choice](#) and [route assignment](#), while the operative level is handled through [traffic engineering](#).



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Route Planning and Scheduling

Vehicle routing and scheduling process needs to fulfil the following objectives:

- maximising vehicle payload (by maximising vehicle fill out and back) and maximising vehicle utilisation (by maximising number of loaded journeys per vehicle);
- minimising distance (e.g. by minimising overlapping deliveries) and minimising time (e.g. by minimising non moving time); and
- meeting customer requirements, in terms of cost, service and time and meeting legal requirements, in terms of vehicle capacity and driver's hours.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Planning sea movement

1. the number, type and size of ships that can be handled at one time; typical vessel waiting and discharge times;
2. availability of equipment to handle different types of cargo;
3. availability of labour, working hours and typical discharge rates
4. unloaded cargo and containers;
5. operational factors that may constrain activity such as the risk of congestion or the impact of the weather at certain times;
6. port documentation requirements and procedures for clearing cargo; and
7. storage facilities and infrastructure such as railways, roads.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

RISK MANAGEMENT: QUANTITATIVE AND QUALITATIVE ASPECTS

- **IDENTIFY**
- **ASSESS COST AND IMPACT; thresholds maybe low, moderate or high risks**
- **AVOID**
- **MITIGATE**
- **TRANSFER, SHARE RISK AND INSURE**
- **ACCEPT**
- **Security and control**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Risk Management Plan

Fleet Services as part of the Risk Management review identified a number of risk sources for the company and these risk sources are:

- 1. Business practices**
- 2. Economic conditions**
- 3. Environmental management**
- 4. Financial operations**
- 5. Natural hazards and disasters**



Sustainable Human Resource Development in logistics services for ASEAN Member States

Risk Management Plan

- 6. OHS related risks**
- 7. Corporate indemnity**
- 8. Property loss**
- 9. Public liability**
- 10. Statutory compliance**

The risk assessment process identifies credible risks, the likelihood of the risks occurring and the consequences should the risk eventuate.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Safety, Risk and Maintenance

Other important management problems involve maintenance policies (see also reliability engineering and maintenance philosophy), safety management systems (see also safety engineering and Risk management), facility management and supply chain integration.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

MULTIMODAL TRANSPORT IN PERSPECTIVE



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

**A mode of transport is a solution that makes
use of a particular type of vehicle,
infrastructure and operation.**



Sustainable Human Resource Development in logistics services for ASEAN Member States

MODE SELECTION CRITERIA

- ❖ speed
- ❖ reliability
- ❖ flexibility that the mode exhibits
- ❖ comparative unit costs, which the modes incur



Sustainable Human Resource Development in logistics services for ASEAN Member States

Other considerations in the selection of a transport mode are:

- required delivery date;
- cost of transport service;
- reliability and service quality;
- shipment size;
- transit time;
- number of transshipment points;
- item type;
- possibility of damage;



Sustainable Human Resource Development in logistics services for ASEAN Member States

Matching Operational Factors to the Selection Criteria

It is important to use a structured approach to mode selection. It is important to understand the following points :

opportunities and constraints in the choice of mode will be identified from careful analysis of all relevant operational factors; modes that realistically cannot be considered should be ruled out of the decision process immediately;

geographical factors should be considered, as they may remove the opportunity to use a particular mode; and

lack of appropriate infrastructure may also remove the opportunity to use a particular mode.

Sustainable Human Resource Development in logistics services for ASEAN Member States

CRITERIA	MODE			
	ROAD	RAIL	SEA	AIR
Relative speed	Moderate	Moderate	Slow	Very high
Reliability	Good	Good	Limited	Very good
Cost per tonne/km	Medium	Low/medium	Low/very low	High
Flexibility	High	Low	Low	Medium
Other considerations	Extensive network	Limited and fixed infrastructure	Restricted network	Limited network
	Short and medium distances e.g. Europe/Middle East. From a neighbouring country to operation site Internal transport; Short/medium distance	Large consignments. From port of discharge to inland operation site (warehouse). Ecological.	Large quantities; Less urgent; Pre positioning phase; Second phase; Long distance with no time constraint.	Emergency phase; Expensive goods; Fragile or perishable goods; Cold chain; No alternative option; Small shipments; e.g. diplomatic pouch; Long distance with time constraint.
Advantages	Relatively fast; No transshipment; Direct delivery; Flexible; Cost.	Economical; Large loading capacity; Range and speed (in most countries).	Economical; Large loading capacity; No restriction on loading capacity; Cheap.	Fast; Reliable; Limited losses; Direct; Easy tracking and tracing.
Disadvantages	Roads may be dangerous (land mines) or blocked (rainy season); Sometimes, driver's nationality or vehicle registration not acceptable	Difficulty finding freight cars; Delays; Transshipment; Inflexible; Tracking.	Slow; Transshipments at ports; Use as a second means of transport for large volumes; Higher theft risk in the port; Not flexible.	Expensive; Restricted to journeys between airports; Restricted loading capacity (dangerous goods, size of shipment, weight, fuel, size of packages, etc.).



Sustainable Human Resource Development in logistics services for ASEAN Member States

Conclusion

The essential role of transport operations management can not be overemphasized in the multimodal carriage of goods across boundaries. Careful planning and proper execution are key elements in every facet of its operations.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CHAPTER 4 SOME PRACTICAL METHODOLOGIES, TOOLS, AND TECHNIQUES



Sustainable Human Resource Development in logistics services for ASEAN Member States

7 Basic Tools for Quality Management

- Cause-and-effect diagram (also known as the "fishbone" or Ishikawa diagram)
- Check sheet
- Control chart
- Histogram
- Pareto chart
- Scatter diagram
- Stratification (alternately, flow chart or run chart)



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

ISO TOOLS AND TECHNIQUES

- Documentation of what you do.... Establishes a standard for doing things....
- Review and audit allows for finding inefficiencies and obsolences for revision and improvement
- Prevention and correction
- Continuous improvement



Sustainable Human Resource Development in logistics services for ASEAN Member States

SIX SIGMA

THE PLAN- DO- CHECK-ACT CYCLE OR

- DEFINE
- MEASURE
- ANALYZE
- IMPROVE
- CONTROL



Sustainable Human Resource Development in logistics services for ASEAN Member States

SIX SIGMA

The DMAIC project methodology has five phases:

1. **DEFINE** the system, the voice of the customer and their requirements, and the project goals, specifically.
2. **MEASURE** key aspects of the current process and collect relevant data.
3. **ANALYZE** the data to investigate and verify cause-and-effect relationships. Seek out root cause of the defect under investigation.



Sustainable Human Resource Development in logistics services for ASEAN Member States

SIX SIGMA

The DMAIC project methodology has five phases:

4. **IMPROVE** or optimize the current process based upon data analysis using techniques such as design of experiments, poka yoke or mistake proofing, and standard work to create a new, future state process. Set up pilot runs to establish process capability.



Sustainable Human Resource Development in logistics services for ASEAN Member States

SIX SIGMA

The DMAIC project methodology has five phases:

5. CONTROL the future state process to ensure that any deviations from the target are corrected before they result in defects. Implement control systems such as statistical process control, production boards, visual workplaces, and continuously monitor the process.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Some ergonomic methods

- **Methods Analysis** is the process of studying the tasks a worker completes using a step-by-step investigation. Each task is broken down into smaller steps until each motion the worker performs is described. Doing so enables you to see exactly where repetitive or straining tasks occur.
- **Time studies** determine the time required for a worker to complete each task. Time studies are often used to analyze cyclical jobs. They are considered “event based” studies because time measurements are triggered by the occurrence of predetermined events



Sustainable Human Resource Development in logistics services for ASEAN Member States

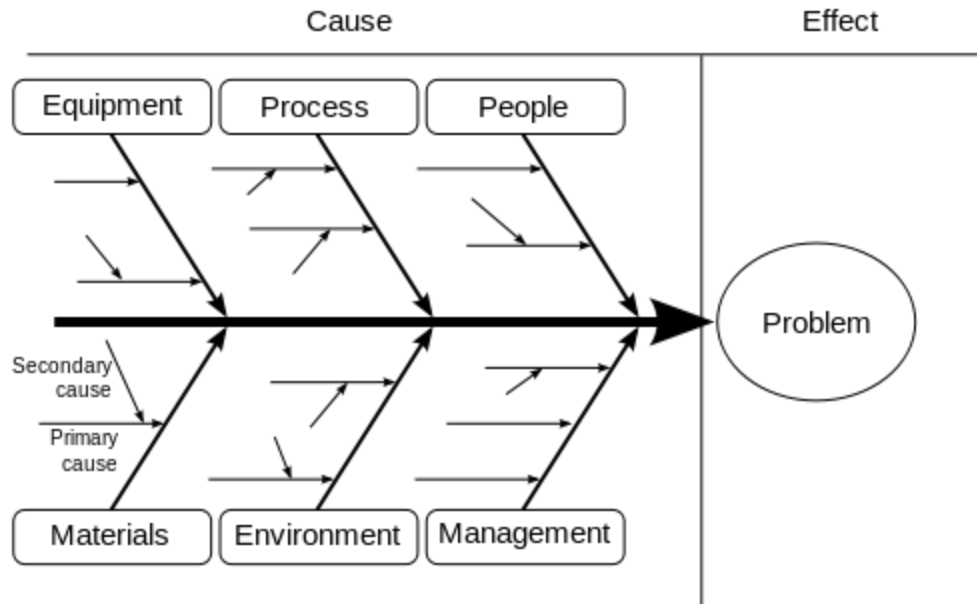
Ishikawa diagrams were popularized by Kaoru Ishikawa^[3] in the 1960s, who pioneered quality management processes in the Kawasaki shipyards, and in the process became one of the founding fathers of modern management.

The basic concept was first used in the 1920s, and is considered one of the seven basic tools of quality control.^[4] It is known as a fishbone diagram because of its shape, similar to the side view of a fish skeleton.

Sustainable Human Resource Development in logistics services for ASEAN Member States

The 5 Ss (used in service industry) in using the Ishikawa method

Surroundings
Suppliers
Systems
Skills
Safety





Sustainable Human Resource Development in logistics services for ASEAN Member States

KEY POINTS

Continued ...

- Work out the major factors involved.
- Identify possible causes.
- Analyze your diagram.
- Try using Cause and Effect Analysis – you'll find that they are particularly useful when you're trying to solve complicated problems.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

EXERCISES



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Iterative Design

Also known as prototyping, the iterative design process seeks to involve users at several stages of design, in order to correct problems as they emerge. As prototypes emerge from the design process, these are subjected to other forms of analysis as outlined in this article, and the results are then taken and incorporated into the new design. Trends amongst users are analyzed, and products redesigned. This can become a costly process, and needs to be done as soon as possible in the design process before designs become too concrete.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Meta- analysis Tool

A supplementary technique used to examine a wide body of already existing data or literature in order to derive trends or form hypotheses in order to aid design decisions. As part of a literature survey, a meta-analysis can be performed in order to discern a collective trend from individual variables.^[24]



Sustainable Human Resource Development in logistics services for ASEAN Member States

Systems Analysis Tool

This is a method to conduct systematic trade-off evaluations of work-system intervention alternatives.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

TIME AND MOTION STUDY

- A time and motion study (or time-motion study) is a business efficiency technique combining the Time Study work of Frederick Winslow Taylor with the Motion Study work of Frank and Lillian Gilbreth in the 1950's.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

TIME AND MOTION STUDY

The two techniques became integrated and refined into a widely accepted method applicable to the improvement and upgrading of work systems. This integrated approach to work system improvement is known as methods engineering^[1] and it is applied today to industrial as well as service organizations, including banks, schools and hospitals.^[2]



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

MEASURING EFFICIENCY AND EFFECTIVENESS



Sustainable Human Resource Development in logistics services for ASEAN Member States

Management Effectiveness

Management effectiveness can be measured by results. Goals such as increasing market share, improving customer satisfaction ratings and achieving desired revenue levels come under the heading of management effectiveness.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Management Efficiency

Strategic management decisions that promote efficiency tend to be aimed at reducing the use of resources through maximizing return. Any action taken to reduce inventory waste, for example, would be a strategic management decision aimed at greater efficiency.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

EFFICIENCY AND EFFECTIVENESS

Operations strategy concerns policies and plans of use of the firm productive resources with the aim of supporting long term competitive strategy. Metrics in operations management can be broadly classified into efficiency metrics and effectiveness metrics.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Metrics: EFFICIENCY AND EFFECTIVENESS

Effectiveness metrics involve:

- Price (actually fixed by marketing, but lower bounded by production cost): purchase price, use costs, maintenance costs, upgrade costs, disposal costs
- Quality: specification and compliance
- Time: productive lead time, information lead time, punctuality



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

EFFICIENCY AND EFFECTIVENESS

- Flexibility: mix, volume, cost
- Stock availability
- **Ecological Soundness: biological and environmental impacts of the system under study.**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

This leads to the problem of how to define capacity measures, that is an estimation of the maximum output of a given production system, and capacity utilization.

Overall Equipment Effectiveness (OEE) is defined as the product between system availability, cycle time efficiency and quality rate. OEE is typically used as key performance indicator (KPI) in conjunction with the lean manufacturing approach.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Efficiency versus Effectiveness

There is a handy phrase coined by Drucker that 'efficiency is about doing things right and effectiveness is about doing the right things' (cf. Mace, 1996). Doing things right means achieving the optimal relation of inputs and outputs (or outcomes). In this sense a procedure is efficient if it maximizes the output/input ratio. We can distinguish two types of efficiency: **production efficiency** and **economic efficiency** (or **cost-efficiency**). An increase in production efficiency means achieving more output for a given input, while an increase in cost efficiency means reducing the costs of inputs for a given output.

Sustainable Human Resource Development in logistics services for ASEAN Member States

EFFICIENCY FORMULA

$$\eta = \frac{\text{Work Output}}{\text{Work input}} \times 100\%$$

Example: Fuel efficiency

You may use a standard for output like 10 kilometers/ liter as output divided over the input of 10 kilometers/ 2 liters. This will give you an efficiency ratio of 50%.

Sustainable Human Resource Development in logistics services for ASEAN Member States

Effectiveness : COST VS. SPEED

➤ FREIGHT COST

➤ TRANSPORT MODE

X

Y

SPEED & QUALITY



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

FOCUS ON THE PROCESS AND PEOPLE



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Steps to Creating a World-class Organization

- **Mapping your company's processes to target weak points**
- **Realigning management systems from functional to process-focused**
- **Setting benchmarks throughout the process to help quantify levels of success**
- **Establish a system of knowledge management for the seamless alignment of teams and departments**



Japan-ASEAN Cooperation



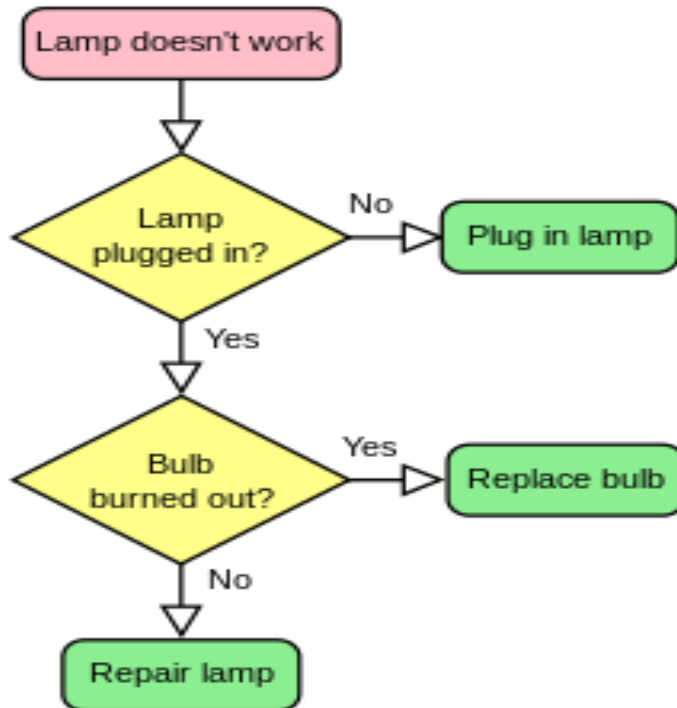
Sustainable Human Resource Development in logistics services for ASEAN Member States

Focus on the Process

A **flowchart** is a type of diagram that represents an algorithm, workflow or process, showing the steps as boxes of various kinds, and their order by connecting them with arrows. This diagrammatic representation illustrates a solution model to a given problem. Flowcharts are used in analyzing, designing, documenting or managing a process or program in various fields.

Sustainable Human Resource Development in logistics services for ASEAN Member States

Simple Flowchart

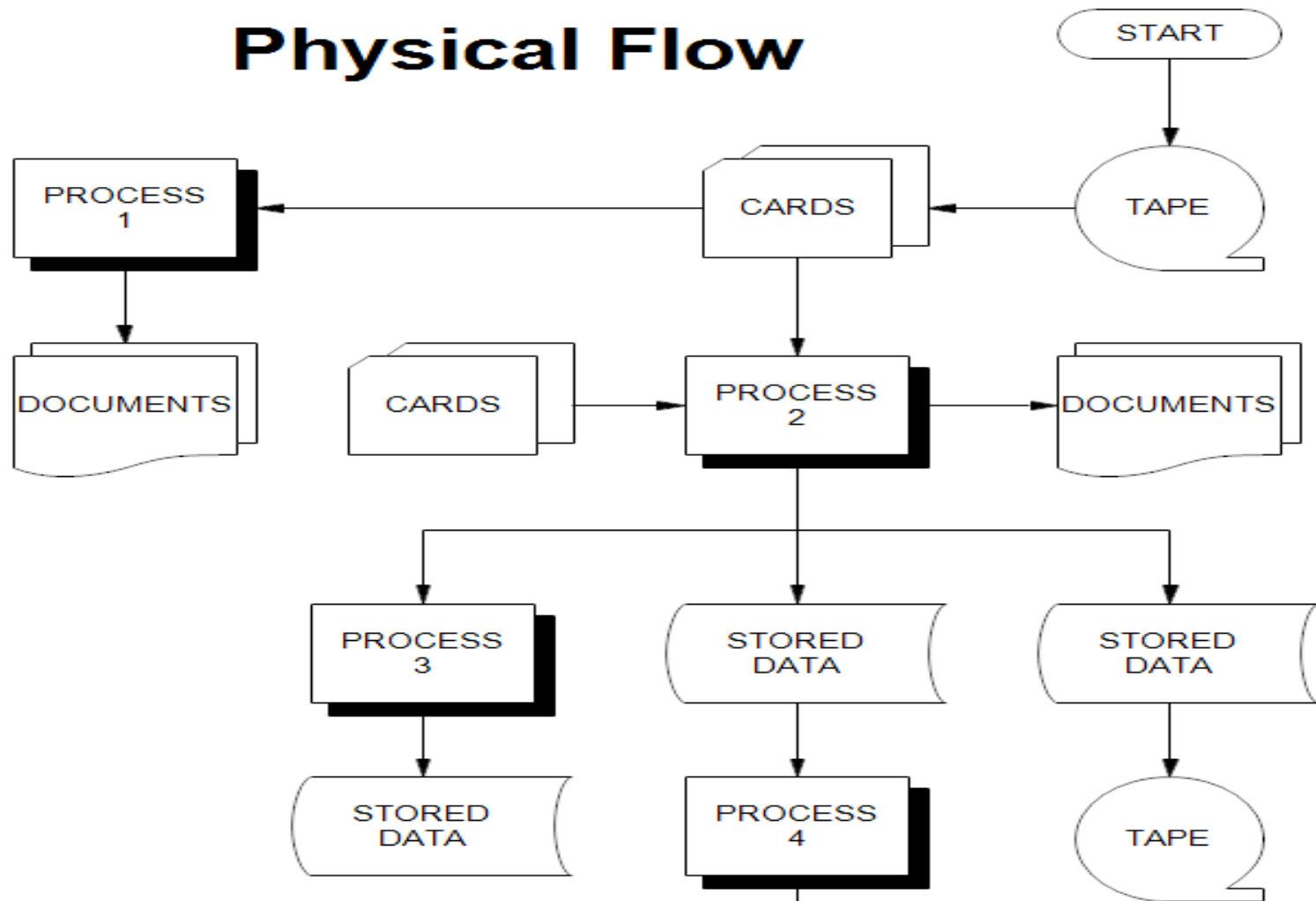


Process step

Decision

Sustainable Human Resource Development in logistics services for ASEAN Member States

Physical Flow





Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Competencies of the Transport Operations Manager

- ❖ **JOB KNOWLEDGE**
- ❖ **PERFORMANCE: SKILLS**
- ❖ **PERSONAL: ATTITUDE, LEADERSHIP**



Sustainable Human Resource Development in logistics services for ASEAN Member States

Duties of a Transport Manager, Freight Coordinator, or Fleet Manager

- ❖ Oversee transport functions according to program or plan
- ❖ Route planning
- ❖ Maintain records
- ❖ Solving problems
- ❖ Ensure safety and security
- ❖ Ensure fleet maintenance



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

SKILLS NEEDED:

- **Leadership**
- **Communication (written/ oral...meetings, conference, etc.)**
- **Decision-making**
- **Political & cultural awareness**
- **Negotiation**
- **Conflict management**
- **Problem solving**
- **Budgeting**
- **Other organizational skills....**



Sustainable Human Resource Development in logistics services for ASEAN Member States

LEADERSHIP SKILLS

- **Goal setting: vision, goals, and objectives**
- **Analytical skills**
- **Establishing limits and priorities**
- **Guiding, directing, teaching, delegating**
- **Motivating and encouraging**
- **Bringing out the best in others**
- **Getting people to work together**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

“Leadership is like a piece of string: pull it and it will follow wherever you wish, push it and it will go nowhere..”

– Dwight Eisenhower:

Sustainable Human Resource Development in logistics services for ASEAN Member States

PROBLEM-SOLVING SKILLS

- Define the problem
- Identify the root cause
- Involve all concerned
- Shortlist your options
- Decide
- Evaluate



pixtastock.com - 7587573



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

DECISION-MAKING

- 1. Never decide under extreme emotions**
- 2. When unsure, no decision is the best decision**
- 3. When things go wild, go back to the basics**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

COMMUNICATION

- **Prepare your message in advance**
- **Encode your message in terms the receiver can translate easily or understand**
- **Time your message carefully**
- **Consider your receiver's feelings, values, and personality**
- **Choose appropriate mode of transmission**
- **Listen carefully for feedback from receiver**
- **Test to make sure your message is understood, accepted, and being acted on**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

BUDGETING SKILLS

- Know your budget
- Find the right suppliers in the right quantities and right qualities
- **DO NOT SPEND WHAT YOU DONT HAVE!**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CRITERIA FOR A SUCCESSFUL TEAM

- 1. Leadership and decision-making**
- 2. Teamwork**
- 3. Gathering and analyzing relevant data through technology and other reports**
- 4. Control**
- 5. Implementation (“Plan your work, work your plan!”)**
- 6. Measurement**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

THE RIGHT TEAM FOR SUCCESSFUL OPERATIONS MANAGEMENT

- **Speed**
- **Complexity (Technical Skills)**
- **Creativity**
- **Organizational Learning**
- **Single Point of Contact To Promote Order and Follow Through**



Sustainable Human Resource Development in logistics services for ASEAN Member States

FOCUS ON PEOPLE

- **The Organization... And the DRIVER!!... And one of the most neglected party in the transport chain. We talk about how to improve processes, complying with statutory regulations and permits, maintain and inspect our vehicles, but....we forget or neglect to educate and motivate our workforce!**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

FOCUS ON THE PROCESS...AND THE PEOPLE

- **Driver education/ training...forgot to apply the handbrake, got sleepy but still continued driving, slippery roads, handling when loaded, and reporting to HO.**



Sustainable Human Resource Development in logistics services for ASEAN Member States

CONCLUSION

FEDEX once embraced the slogan: People, Service, Profit. We cannot overemphasize the critical role of people in any business or activity even in view of overwhelming developments in automation and industry. On the other hand, work processes have to be improved internally and aligned to customer expectations.

With the right tools and techniques, the transport operations team should be able to deliver efficiently and effectively.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CHAPTER 5 INTRODUCING TRANSPORT MANAGEMENT SYSTEMS



Sustainable Human Resource Development in logistics services for ASEAN Member States

TMS Defined

- A transportation management system (TMS) is a subset of supply chain management concerning transportation operations and may be part of an enterprise resource planning system.
- A TMS usually "sits" between an ERP or legacy order processing and warehouse/distribution module. A typical scenario would include both inbound (procurement) and outbound (shipping) orders to be evaluated by the TMS Planning Module offering the user various suggested routing solutions.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

FLEET MANAGEMENT

Fleet Management is a function which allows companies which rely on transportation in business to remove or minimize the risks associated with vehicle investment, improving efficiency, productivity and reducing their overall transportation and staff costs, providing 100% compliance with government legislation and many more. These functions can be dealt with by either an in-house fleet-management department or an outsourced provider.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

FLEET MANAGEMENT

Fleet management includes commercial motor vehicles such as cars, aircraft, ships, vans and trucks, as well as rail cars. Fleet or vehicle management can include a range of functions, such as vehicle financing, maintenance, telematics (tracking and diagnostics), driver management, speed management, fuel management and health and safety management.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Operating Maintenance Strategy Table

Strategy / Objective

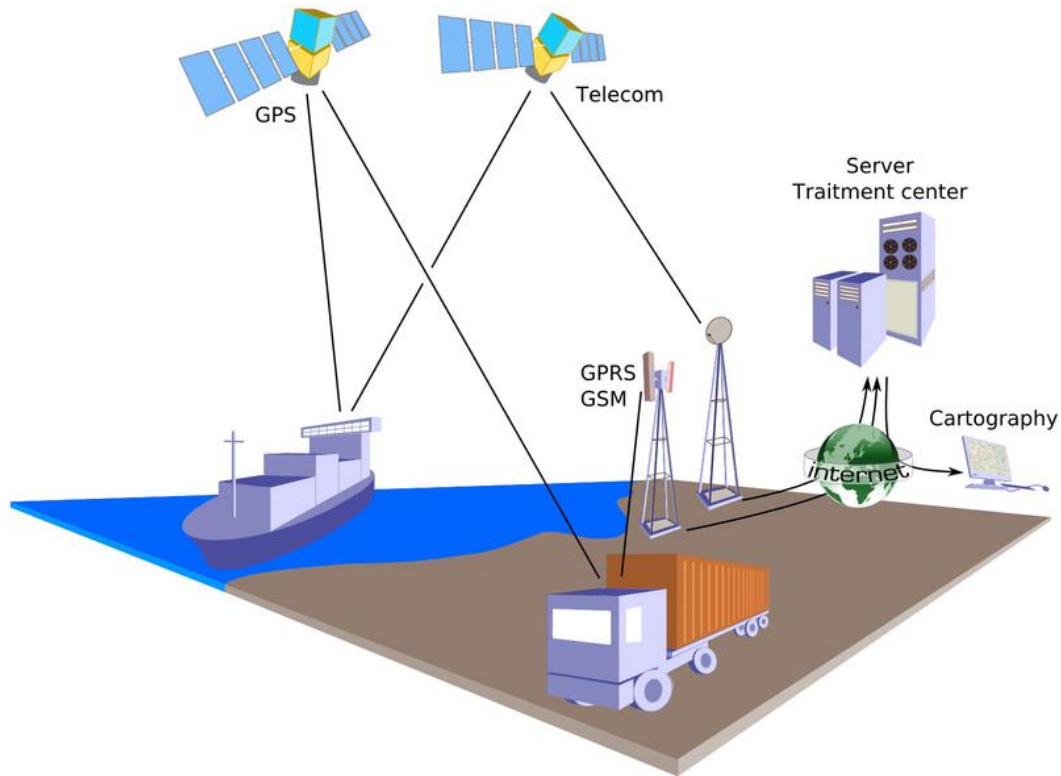
To maintain all fleet assets in a safe and operational condition

Activity / Plan

- Daily and weekly inspections by drivers / operators**
- Reporting and documenting defects to Fleet Services**
- Prioritisation of works**

Sustainable Human Resource Development in logistics services for ASEAN Member States

A vital Technology: GPS



Sustainable Human Resource Development in logistics services for ASEAN Member States

Functionalities of TMS

1. PLANNING AND DECISION- MAKING

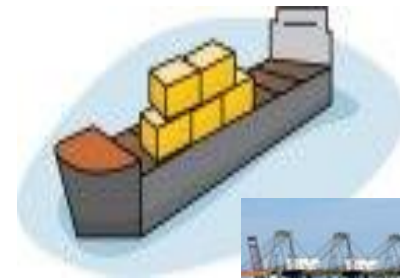
-prevention, control, fall back or contingencies, proactive,....

2. TRANSPORT EXECUTION

3. FOLLOW-UP

4. MEASUREMENT AND FOLLOW THROUGH

5. COORDINATION AND COMMUNICATION: external and internal





Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

- **Planning and decision making – TMS will define the most efficient transport schemes according to given parameters, which have a lower or higher importance according to the user policy: transport cost, shorter lead-time, fewer stops possible to ensure quality, flows regrouping coefficient, etc.**
- **Transportation Execution – TMS will allow for the execution of the transportation plan such as carrier rate acceptance, carrier dispatching, EDI etc..**



Sustainable Human Resource Development in logistics services for ASEAN Member States

Various functions of a TMS

- **Planning and optimizing of terrestrial transport rounds**
- **Inbound and outbound transportation mode**
- **Transportation provider selection**
- **Management of motor carrier, rail, air, sea transport**
- **Real time transportation tracking**
- **Service quality and cost control in the form of KPI's**
- **Vehicle Load and Route optimization**
- **Shipment batching of orders**
- **Reporting and record keeping/ statistics**



Sustainable Human Resource Development in logistics services for ASEAN Member States

Key Performance Indicators

- % of On Time Pick Up or Delivery Performance**
- Cost Per Metric - mile; km; Weight; Cube; Pallet**
- Productivity in monetary terms, e.g. cost per unit weight or shipping unit**
- Productivity in operational terms, e.g. shipping units/order or weight/load**
- Zero-Incident**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Function of Fleet Management

The function of Fleet Services is to ensure that an appropriate fleet network is maintained in partnership with relevant stakeholders to ensure that each asset matches the needs of the users and is of design and standard that is fit for the purpose of intended use.

Fleet attributes will be maintained at consistently safe levels and required storage will be provided for fleet equipment to ensure public safety.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Continued...

Key functional objectives are:

- Develop safety conscious, cost effective management strategies for the long term**
- Provide a defined level of service and monitor performance**
- Effectively manage risks associated with fleet assets and possible asset failures and**
- Continuous improvement in fleet asset management practices**



Sustainable Human Resource Development in logistics services for ASEAN Member States

TMS Guiding Principles

The issues covered by green fleet management change over time, but will always include:

- Managing fuel consumption.**
- Reducing mileage.**
- Driver education.**
- Promotion of energy efficient vehicles.**
- Use of cleaner fuels.**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Sample TMS Framework for Planning

1. Service levels

How to meet customer's needs at the lowest cost

2. Future demand issues

How future demand will impact on service delivery

3. Life-cycle management

**How Fleet Services will manage existing and future
assets and liabilities**

4. Operational management

5. Risk management



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

A sample TMS framework. Continued...

6. Financial summary

Describes what funds are required to deliver cost-conscious levels of service

7. Performance measures

8. Fleet Improvement Plan

9. Constant improvement processes to ensure best practice and excellence in the delivery of fleet assets and related services



Sustainable Human Resource Development in logistics services for ASEAN Member States

Route Planning

- The number of calls to a particular delivery point in any single day is limited.
- The total vehicle travel in any day is limited and the driver's time is limited.
- Vehicles have a fixed carrying capacity.
- Volume of goods for each delivery point is known and each drop has a location for which there is an established driving time to and from the warehouse or to the next delivery point.
- The quantity of goods delivered to any drop is smaller than the vehicle's carrying capacity and there is an established time to deliver/collect at the drop point.



Sustainable Human Resource Development in logistics services for ASEAN Member States

EXPAND.....

- Distance (mls) / Volume (in gallons) consumption (mpg)
- Cost (£ x 100) / Volume (in litres) pump price (p/l)
- Cost (£ x 100) / Distance (mls) cost per mile (ppm)
- Driver education.
- Ensuring that the vehicles are fuel efficient, suitable for their intended task, have the lowest acceptable emissions are all key elements. However driver behaviour is also fundamental to attaining high levels of fleet efficiency.
- The fourth ingredient is the management will to bring and keep the costs under control. At heart, the calculations are simple:
- Distance (mls) / Volume (in gallons) consumption (mpg)
- Cost (£ x 100) / Volume (in litres) pump price (p/l)
- Cost (£ x 100) / Distance (mls) cost per mile (ppm)



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CONCLUSION

TMS is the core of any transport enterprise regardless whether you operate your own fleet or not. TMS technologies and practice provides traceability and visibility of cargo being shipped by any mode.

Sustainable Human Resource Development in logistics services for ASEAN Member States

CHAPTER 6 SUSTAINABLE TRANSPORTATION

THE “GREEN” ALTERNATIVE



www.shutterstock.com · 55243129



Sustainable Human Resource Development in logistics services for ASEAN Member States

Transport Sustainability

Sustainable transport refers to the broad subject of transport that is or approaches being sustainable. It includes vehicles, energy, infrastructure, roads, railways, airways, waterways, canals, pipelines, and terminals. Transport operations and logistics as well as transit-oriented development are involved. Transportation sustainability is largely being measured by transportation system effectiveness and efficiency as well as the environmental impacts of the system.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Transport is a key necessity for [specialization](#)—allowing production and consumption of products to occur at different locations. Transport has throughout history been a spur to expansion; better transport allows more [trade](#) and a greater spread of people. [Economic growth](#) has always been dependent on increasing the capacity and rationality of transport.^[27] But the infrastructure and operation of transport has a great impact on the land and is the largest drainer of energy, making [transport sustainability](#) a major issue.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Green Fleet Management

What is it?

Green fleet management goes far beyond just glancing at the fuel bills: it has to be a part of the corporate culture to run cars and vans efficiently and cost-effectively.

- A green fleet is one that does its best to minimize fuel consumption and exhaust emissions. It will also seek to minimize the amount of traffic it generates, by utilizing vehicles efficiently, by using alternatives to the car wherever possible and by conducting its business so as to minimize the need for travel.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Green Fleet Management

Finally, a green fleet will also be a safe fleet; its drivers will be trained, encouraged to drive safely and efficiently and not put under pressure to do excessive hours behind the wheel. It will choose vehicles with safety in mind – not just that of the occupant but also of other road users.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Transport is a major use of [energy](#) and burns most of the world's [petroleum](#). This creates air pollution, including [nitrous oxides](#) and [particulates](#), and is a significant contributor to [global warming](#) through emission of [carbon dioxide](#),^[28] for which transport is the fastest-growing emission sector.^[29] By subsector, road transport is the largest contributor to global warming.^[30] [Environmental regulations](#) in developed countries have reduced individual vehicles' emissions. Energy use and emissions vary largely between modes, causing [environmentalists](#) to call for a transition from air and road to rail and human-powered transport, as well as increased [transport electrification](#) and energy efficiency.

Sustainable Human Resource Development in logistics services for ASEAN Member States

Going Back to Basics??



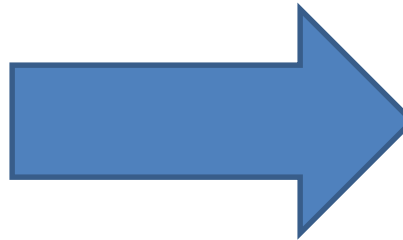
www.shutterstock.com · 120984577



www.shutterstock.com · 78502183

Sustainable Human Resource Development in logistics services for ASEAN Member States

From smoke to magnets?



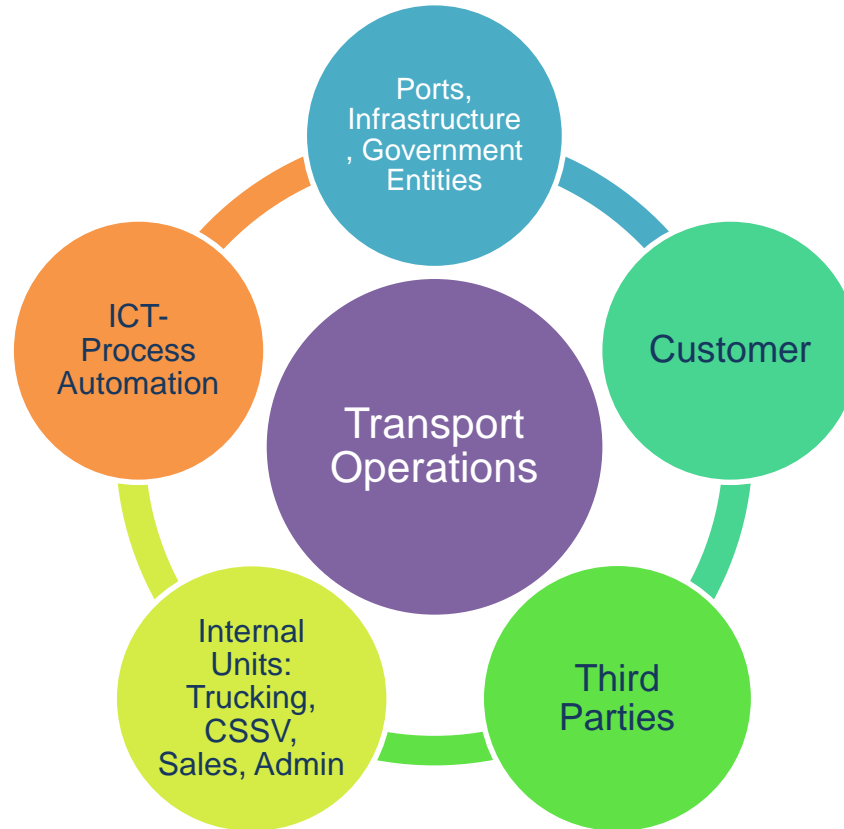


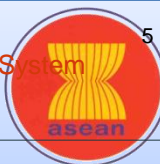
Sustainable Human Resource Development in logistics services for ASEAN Member States

STAKEHOLDERS IN T.O.M.

- **Company and its shareholders**
- **Shippers and consignees**
- **Third party service providers**
- **Government agencies**
- **Environment**
- **Community or society in general**
- **Port authorities and handlers**

Sustainable Human Resource Development in logistics services for ASEAN Member States





Sustainable Human Resource Development in logistics services for ASEAN Member States

Conceptual Framework of Sustainable Transport

Dimension of Sustainability	Definition of a Sustainable Transport System			
	Accessible	Safe	Environment-Friendly	Affordable
Economic and financial	•			•
Asset condition	•	•	•	•
Social equity	•	•	•	•
Health		•	•	
Ecology			•	
Physical environment		•	•	
Air quality and noise		•	•	
Climate		•	•	



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CONCLUSION

There was no need to worry about the environment before the introduction of machines running on different types of fuel. And yet population explosion and the detrimental effect of human behavior not to mention harmful emissions from mobile and stationary industry sources have constrained us to do something decisive and fast for the next generations.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CHAPTER 7

GUIDELINES ON OUTSOURCING



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

OUTSOURCING DEFINED

Outsourcing is the contracting out of a business process to a third-party



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Some factors that may influence the selection of transport service providers are:

- organisation (if previously contracted); carrier characteristics and capacity;
- proven efficiency;
- timely delivery;
- known integrity, reputation and reliability;
- good relationships with others carriers;
- responsiveness to urgent needs of the



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Some factors that may influence the selection of transport service providers are:

- financial viability to cover costs of providing the service;
- adequate communication systems to facilitate tracking to the vehicle;
- assets to safeguard cargo;
- ability to provide a multi-modal service, if need be; and
- presentation of timely reports and correct invoices
- necessary technology for tracking , visibility, and reporting



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Use of organisation's own vehicles (own account)

If an organisation decides to acquire its own vehicles, there are a number of areas to be considered. The type of vehicle, in terms of the chassis-cab and the body type, needs to be determined. The nature of the operation may also require that mechanical handling aids need to be incorporated into the overall vehicle specification



Sustainable Human Resource Development in logistics services for ASEAN Member States

Advantages

The advantages of owning vehicles include:
vehicles can be built specifically to carry a particular product.
Special equipment for materials handling can be attached;
the driver can be specially trained and will fulfil the
'ambassador' role for the organisation; and management
retains total control over the vehicle and its operation.



Sustainable Human Resource Development in logistics services for ASEAN Member States

Third party advantages and disadvantages

Even if an organisation owns its vehicles, there may well be occasions when a need arises for additional capacity, to meet peak activity or other short term needs. This can be met by the use of vehicles supplied by a commercial transport provider (third party).

The advantages of using third party transport include:

organisations can use commercial providers to meet fluctuating demand requirements;

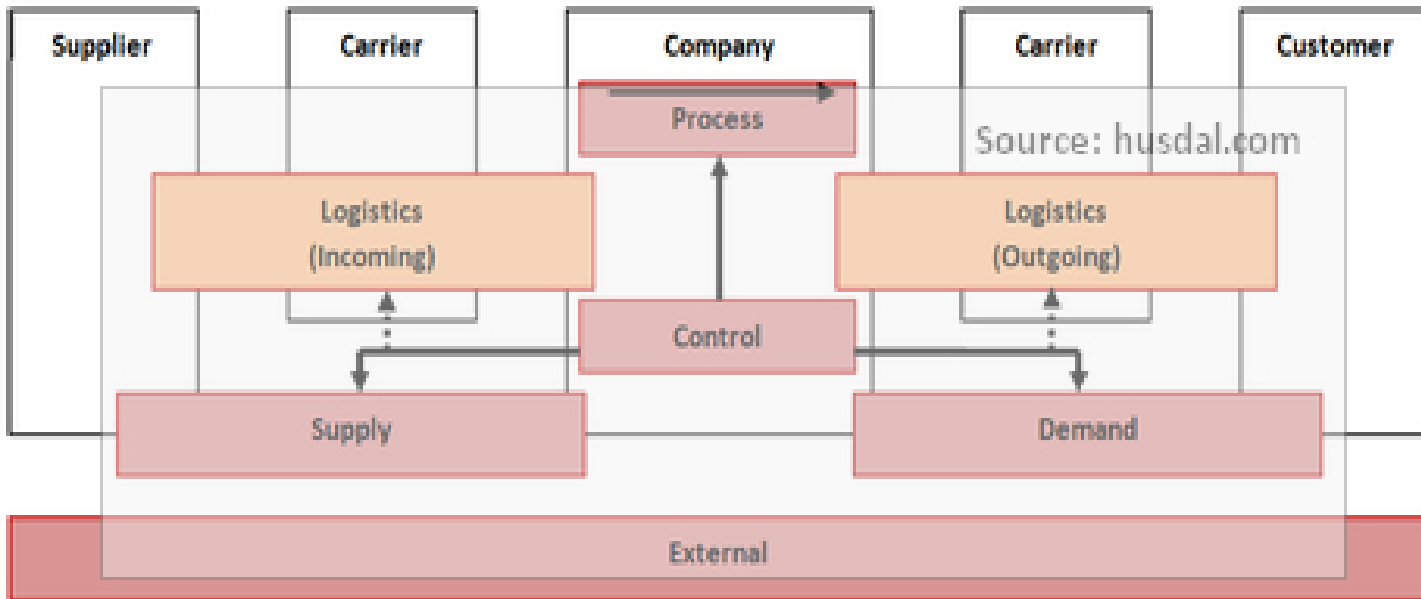
variable loads and journeys can be catered for;

the haulier may be able to offer a more cost-effective and a more efficient service; and

responsibility for administration of vehicles and drivers is no longer the responsibility of the organisation, allowing staff to concentrate on more productive areas. There is no requirement for capital to be invested in transport.

Sustainable Human Resource Development in logistics services for ASEAN Member States

Challenge of Outsourcing Logistics





Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CHAPTER 8

SOME POINTERS



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

SOLUTIONS, NOT EXCUSES

COLLABORATION, NOT DIVISION

Teamwork is key!



Sustainable Human Resource Development in logistics services for ASEAN Member States

PROACTIVE, NOT REACTIVE

BETTER SAFE THAN SORRY

**IF YOU THINK SAFETY IS EXPENSIVE,
TRY ACCIDENT**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

**“Be better today than you were yesterday
and better tomorrow than you are today –
this is a requirement, not a nicety.”**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

The Five Pillars of Organizational Excellence

- **Process management**

“If you don’t have your process controlled, its output is a matter of luck.”

- **Change management**

“Handling change is the biggest problem that most organizations face.”

Sustainable Human Resource Development in logistics services for ASEAN Member States

The Five Pillars of Organizational Excellence





Sustainable Human Resource Development in logistics services for ASEAN Member States

The Five Pillars of Organizational Excellence

- **Project management**

“Processes define how we operate. Projects are the way we improve our processes.”

- **Knowledge management**

“When a person dies, a library is lost. Knowledge takes us from chance to choice.”

- **Resource management**

“Even the best ideas need resources to transform them into profit.”



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CONCLUSION

Transport operations management revolves around best practices solutions on efficiency and effectiveness which should result in both the acquisition of new customers and retention of existing customers.



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CHAPTER 9 SUMMARY



Sustainable Human Resource Development in logistics services for ASEAN Member States

SUMMARY

- 1. The efficient and effective management of transport operations is the key to success for any service provider or customer-enterprise in the distribution or delivery of goods.**
- 2. Transport operations management is a complex combination of work skills and job knowledge plus the right attitude to ensure consistency in the routine delivery of services.**



Sustainable Human Resource Development in logistics services for ASEAN Member States

- 3. Transport operations management hinges on the basic principles of how to manage the enterprise.**
- 4. TMS and various technologies are now available to improve and support transport operations.**
- 5. Sustainable transport is the corporate responsibility of the operator to the environment and generations to come.**



Sustainable Human Resource Development in logistics services for ASEAN Member States

- 6. Transport solutions should be designed to maximize operational efficiencies and minimize costs, streamline processes and provide a competitive advantage to help your business grow.**
- 7. Good is no longer good enough. To survive in today's competitive environment, you need to excel.**



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

CHAPTER 10 CASE STUDIES



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Case Studies

- A freight forwarder arranges for pick up of a shipment of fresh cut flowers from an exporter for transfer to the airline within the same day. Upon arrival at destination, consignee claims cargo was damaged. How would you have handled it better?
- Transport manager instructs truck driver to use Route 1 from Point A to Point B. On the way, there was heavy rainfall causing floods enroute. While truck was stalled in traffic, driver calls the office for further instructions. How will the transport manager handle the situation?



Japan-ASEAN Cooperation



Sustainable Human Resource Development in logistics services for ASEAN Member States

Case Studies

- Company produces wooden and plastic furniture in Cebu, Philippines. There is high demand for wooden furniture i.e. decorative dining tables, chairs. Company depends on hired fleet of road transport and they are not efficient regarding meeting delivery schedules on time, which results in massive loss of sales. Company also have to face competition from wood mall, wood-land, etc.

CENTRAL PROBLEM: The central problem of the case is whether to perform distribution functions using same hired fleet of road transport or to create own transportation system for effective supply chain management functions?

Sustainable Human Resource Development in logistics services for ASEAN Member States

THANK YOU !!!!



pixtastock.com - 7587437