

**LOGISTICS SUPPORT SYSTEM AND ITS EFFECTIVENESS
IN SUPPORTING AND MAINTAINING A MISSION READY FLEET
IN THE ROYAL MALAYSIAN NAVY**

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DECLARATION

We earnestly declare that, we have undertaken the project entitled "Logistics Support System and Its Effectiveness in Supporting and Maintaining a Mission Ready Fleet in the Royal Malaysian Navy". We also declare that the work in this Project Paper is our own except for quotations, phrases and excerpts which have been duly acknowledged.



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ABSTRACT

This paper examines the overall RMN logistics support system that involved organisations within RMN namely the Navy Headquarters, Fleet Operations Command, Fleet System Command, Fleet Maintenance Depot and Fleet Supply Depot. The study addressed RMN policy on Total Quality Management and benchmarked on the Integrated Logistics Support purportedly being implemented. The researchers were called upon to undertake this study as it significantly addressed RMN's current problem with respect to fleet support and maintenance. The evaluation looked into the awareness, involvement, satisfaction and respondents recommendations with the objectives to assess the effectiveness of the RMN logistic support system, determine the RMN fleet officers' awareness and recommend changes to the RMN Logistics Support System. The study was conducted through a survey method, using questionnaires and interviews. Respondents from RMN ships totalling 62 officers (20 percent of the fleet officer population) had provided data for this study. The study sample is non-random samplings focussed on Commanding Officers, Technical Officers and Supply Officers who are considered sufficient and appropriate to both represent the whole fleet population and provide professional feedback based on their respective responsibility onboard ships. Standard editing, coding and simple tabulation and cross-tabulations has been utilised to analyse the data. The result of the study came as a surprise as the officers' awareness and satisfaction were so low and numerous rooms for improvement were found. The current practice worked but not to the level of the fleet officers' expectation. There are issues that need serious attention by RMN top management that includes policy review (including the RMN Direction Statement) and work processes improvements which are not impossible to achieve as it is in line with RMN goals.

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LIST OF ABBREVIATIONS

A & A	Alteration & Additions
ALD 1/11	Area Logistic Depot 1/11
AMP/SMP	Assisted Maintenance Period/Self Maintenance Period
ANZAC	<i>Denotes the Cooperation Between Australia and New Zealand</i>
APM	Asset Performance Management
ASRS	Automated Store Retrieval System
BAT L 8	Borang Angkatan Tentera (BAT) L 8 (Baucar Permohonan Dan Pengeluaran Barang-Barang Tentera Laut Diraja Malaysia)
BB1/2	Bahagian Bekalan 1/2
BRL 1985	Panduan Pengurusan Pembaikan Berjadual Kapal-Kapal TLDM (Edisi Ke-2).
CALLS	Continuous Acquisition and Life-Cycle Support
CAT 1 - 5	Category 1- 5
CIMM	Computer-aided Integrated Maintenance Management
CNLD	Central Naval Logistics Depot
CO	Commanding Officer
DED	Docking for Essential Defects
DLM	Depot Level Maintenance
EDI	Electronics Data Interchange
EEZ	Exclusive Economic Zone
ERDL	Emergency Repair Procedure
FAC M	Fast Attack Craft (Missile)
FCA	Free Carrier (Using The International Commercial Term)
FMD	Fleet Maintenance Depot
FOB	Freight Onboard
FOC	Fleet Operations Commander

FOM	Figure of Merit
FOS	<i>Follow on Support</i>
FSC	Fleet System Command
FSD	Fleet Supply Depot
FSSU	Fleet Supply Support Unit
GSR	General Staff Requirements
HR	Human Resources
ICT	Information and Communication Technology
ICT	Information Communication Technology
ILM	Intermediate Level Maintenance
ILS	Integrated Logistics Support
ILSMP	In-Service Logistic Support Management Plan
IPDA	Institut Pengurusan Tentera Darat (Army Institute of Management)
JIT	Just in Time
KPI	Key Performance Indicators
LCC	Life-Cycle Costs
LSA	Logistic Support Analysis
MAF	Malaysian Armed Forces
MAMPU	Malaysian Administrative Modernization Planning Unit
MBTF	Mean Time Between Failures
MCMV	Mine Counter Measure Vessel
MEO	Mechanical Engineering Officer
MEO	Mechanical Engineering Officer
MoD	Ministry of Defence
MTO	Malaysian Transport Operator (National Transport Operator)
MTW	<i>Malaysian Territorial Waters</i>
NATO	North Atlantic Treaty Organization
Naval HQ	Navy Headquarters

NDIC		The National Defence Industries Council
NETC		Naval Education and Training Command
NOOR		Outside Repair Procedure
OCM		Operational Centred Maintenance
OEM		Original Equipment Manufacturer
OLM		Organizational Level Maintenance
OPV		Off Shore Patrol Vessel
PFI		Privately Finance Initiatives
PPS		Pelan Perancangan Strategik TLDM
PSC-NDSB		PSC-Naval Dockyard Sdn Bhd
R & D		Research and development
RCM		Reliability Centred Maintenance
RMAF		Royal Malaysian Air Force
RMN		Royal Malaysian Navy
SLEP		Service Life Extension Programme
SMS		Management of Ship Maintenance System
SPIA		Sistem Pengurusan Inventori Armada
SYO		Supply Officer
TQM		Total Quality Management
TQM		Total Quality Management
UM		University of Malaya
UPS TLDM		Unit Pengawasan Senggaraan TLDM
URDEF		Urgent Defects
WEO		Weapon and Electrical Engineering Officer
OSL		Onboard Spare List
URDEF		Urgent Defect (a signal message)
PC		Patrol Craft
OPV		Offshore Patrol Vessel
DA		Surveillance Radar

GLOSSARY OF TERMS

TERMS	DEFINITION
Alteration & Addition	A major design or additional change (in-service) change that has been approved by the Navy HQ. It is a process that involved the changes an the ship structure, system and/or the layout of ship
Best Practice	Refers to the procedure, model, framework, culture and practices that have been proven and resulted in successes in other sectors or industries
Corvette	A class of warship serving in the RMN. The ships are equipped with sensors and weaponry as system.
FAC M	A class of warship which carries missile onboard and equipped with sensors and weaponry configured as a system. Considered as small ship.
Frigate	A class of warship considered as a capital ship in the RMN, displacement between 2,000 to 6,000 tones and equipped with specialized sensors and weaponry configured as system to be effective fighting unit in the naval warfare.
MCMV	A class of ship which deals with mine countermeasures. Considered as small ship and carries special equipment for mine countermeasures tasking. The ship is made of fibreglass reinforced plastic hull.
Operational Availability	The percentage of the time that a system or a ship is capable of performing specified design functions or operations under specified operating procedures. The capability includes the manpower, equipment, collective performance, deployability and sustainability.
RMN Service/ service	Refers specifically to the personnel serving with the RMN or the management of the RMN
Ship's Category.	The overall ships performance/capabilities depending on the availability of appropriate ranges of equipment in meeting the operational tasking requirements. The ship is categories CAT 1 as fully operational to CAT 5 for non operational ship.

Stakeholder	Any organization or individual who have interest in the system. This includes vendor, management, government and others
Urgent Defect	Signal reports send by ships upon detection of defects which is beyond ships' staff capability to rectify it. The detects reported reflect the ships category as well as operational capability.
Vendor or External Supplier	Vendor can be described as any organization or individual that provides services or products to the RMN.
OSL	The list of spare parts that required to be carried onboard for any immediate repair.
Storedem	A signal message indicating the requirement of spare.
Ship's Staff	The ship's crew borne onboard.