Networking in Maritime Technology, Science and Management Sector: An Industry Perspective

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The challenges posed by the current global economic situation are truly a concern for not only Malaysia and the region but also the world. Around the globe, national economies are one by one feeling the effects of the slowdown and crumbling into a sea of debts. With Iceland, Greece and today Spain, where the youth unemployment rate is 50%, requiring international financial assistance to keep afloat, who would not be worried? Meanwhile, the middle-eastern nations are in turmoil as civil war and anarchy is the order of the day. Against this gloomy backdrop, Malaysia, a nation which is striving to become a high-income nation by 2020, is embarking on a bold and strategic plan that will propel the economy of the nation to achieve greater heights.

The Economic Transformation Programme (ETP) has been launched. As with other mega initiatives that are as strategic as the ETP, it is expected to transform the nation's economy so drastically that it will transform the whole landscape of Malaysia to that of a high-income nation.

The question that probably lingers in one's mind would be, "Can this really be achieved?" Achievement means not only all the programmes as listed under various National Key Economic Activities (NKEAs) be completed successfully but also with the intended 'outcome' realised and dovetailed snugly into the framework of the new Malaysia.

The framework in question is the combination of elements amongst which, is related to the fundamental activity that is familiarly known as "Networking". In the industry, networking is essential, if not fundamental. In an effort to enhance Maritime Technology, Science and Management, the industry is the backbone of the whole process and without that the sector will not progress. It is the industry driven by maritime professionals that will realise the aspiration of the nation and not a plan in the world will be successful without the existence of industry that has been well managed. Therefore, networking and industry should go hand-in-hand to achieve success in Malaysia's strategic ETP and to transform our homeland into a better Malaysia.

INTRODUCTION

Malaysia is indeed a Maritime Nation with a coastline measuring 4,675 kilometers[i] with almost all of its states having a sea frontage. Generally, a maritime nation's economy would be dependent on the resources found in the seas and beneath it, and Malaysia is not excluded. Not only is the Malaysian economy dependent on the resources beneath the waves and under the seabed, but also on the sea-lines of communication such as the Straits of Malacca. This is a trade route that had been known to many traders from the early days since mankind took to the sea. In 2004, over 80% of Chinese crude oil imports transited through the Straits of Malacca, with less than 2% transiting the Straits of Lombok. This is a clear demonstration of the importance of sea-lines of communication or better referred to as SLOC[ii].

Since 1957, the Malaysian economy has had a gigantic leap. The transformation of the country's economy from one that was based on primary commodities such as tin, rubber and palm oil, to a dynamic and vibrant industrialising nation, is attributed to a variety of pull factors. Malaysia's political and economic stability, prudent and pragmatic investor-friendly business policies, cost productive workforce, developed infrastructure comparable to that of any western country and a host of other amenities have made this country an enticing place for investors.

Multi-national corporations from more than 40 countries have invested in over 5,000 companies in Malaysia's manufacturing and related services sectors, encouraged by the country's pro-business environment. Today, Malaysia is one of the world's top locations for offshore manufacturing and service-based operations and is centered in the heart of the Asian oil and gas hub. Malaysia is in its most radical transformation stage as it battles to achieve Vision 2020.

The New Economic Model (NEM) to be achieved through an Economic Transformation Programme (ETP) constitutes a key pillar that will propel Malaysia into being an advanced nation with inclusiveness and sustainability in line with goals set forth in Vision 2020. The ETP will be driven by eight Strategic Reforms Initiatives (SRIs), which will form the basis of the relevant policy measures. The 12 National Key Economic Activities (NKEAs) include:

a) Oil & Gas and Energy
b) Palm Oil
c) Financial Services
d) Tourism
e) Business Services
f) Electronics and Electrical
g) Wholesale and Retail
h) Education
i) Healthcare
j) Communications Content and Infrastructure
k) Agriculture
l) Greater Kuala Lumpur/Klang Valley.

Some entry point projects have been identified in supporting these NKEAs and those related to the maritime technology sector would be, the oil and gas, energy, agriculture, and to a small extent, the Tourism NKEA. It is therefore obvious that the Maritime Technology, Science and Management sector will be necessary to support the national aspiration of becoming a high-income nation as targeted under the ETP.

[i] *www.indexmundi.com <Malaysia Geography>*
[ii] *www.wikipedia.org <sea_lines-of_communication>*

Malaysia has achieved 14 continuous years of trade surplus. The total trade in 2011 reached RM1.269 trillion, with an increase of 8.7% as compared to 2010, and it is the highest total trade ever recorded thus far. Exports showed a positive growth with an increase of 8.7% to RM694.55 billion in 2011, while imports rose by 8.6% to RM574.23 billion.

International trade, especially seaborne trade, has traditionally been the lifeblood of Malaysia. The key word "seaborne" trade signifies the sea transportation mode as fundamental in the economic development. Today, more than 90% of the country's trade is seaborne and is carried out via seven international ports of Malaysia, namely Penang Port, Port Klang, Johor Port, Port of Tanjung Pelepas, Kuantan Port, Kemaman Port in Peninsular Malaysia and Bintulu Port in Sarawak. In tandem with the expansion of the economy and trade, ports in the country have registered impressive growth in recent years. Two of the ports, Port Klang and the Port of Tanjung Pelepas (PTP), are ranked amongst the top 20 container ports in the world.[iii]

THE INDUSTRY

"Where the medium and long term outlook for the maritime and aerospace industries is concerned, Malaysia is well positioned to take advantage of any future growth opportunities. Malaysia's strategic location, competitive costs, skilled and talented work force and first-class infrastructure provide an excellent environment for investment."

– Dato' Sri Mohd. Najib Tun Abdul Razak[iv]

The above quote was made by the Honorable Prime Minister in the book published by MiGHT titled, "Malaysian Shipbuilding/Ship Repair Industry Strategic Plan 2020" and was launched at Langkawi International Maritime Aerospace Exhibition (LIMA) in December 2011. The statement reinforced the nation's belief and trust that the maritime industry shall be able to drive the nation's economy to greater heights. It identifies the elements such as location, costs, skill and talent of workforce, and infrastructure that will ensure the climate for investment is truly suitable. The maritime science and management related industries are as follows but not limited to:

a) Oil & Gas and its supporting industries
b) Agriculture (aquaculture and fisheries related)
c) Tourism (resorts construction on islands and sea fronts)
d) Energy and its related industries
e) Port management
f) Shipping (Charter)
g) Shipbuilding and ship repair (inclusive of maintenance)
h) Ocean engineering
i) Training and human resource development
j) Coastal engineering/management.

This paper shall address four major industries that contributes generously towards the Gross National Income (GNI) and very much related in some ways to the NKEAs identified in the ETP and the significance and impacts of networking in enhancing the Maritime Technology, Science and Management sector. These involve the oil and gas, fisheries (agriculture), tourism and shipbuilding and ship repair industry.

OIL & GAS INDUSTRY

With the development of new oil finds and current trends in technologies related to the industry, Malaysian oil and gas industry is poised to increase and boom. Tax incentives announced at the budget 2013 too will be another factor to be reckoned with the increasing foreign direct investments streaming into the industry. A 100% tax exemption for a period of 10 years, and the exemption of withholding tax and stamp duty for public-private partnership projects in the development of oil industry will spur greater opportunities for Malaysians. Quoting Ernst & Young LLP Partner in the Star, dated 13 October 2012, the chances of a hit in oil exploration used to be 1 in 8 and now with advanced technologies, it is 1 in 2. A high probability ratio in this magnitude will only result in further expansion of new wells and rapid growth in the industry.

On the financial side, expenditure is about USD15 trillion for the past 20 years that equates to approximately USD750 billion (RM2.3 trillion) per annum.[v] The three key fundamental success factors are technology, global reach and local delivery capability, and for Malaysian oil companies involved in the provision of services, the opportunities are just there for the taking.

On the global front, deep-water offshore exploration in eastern Mediterranean, Brazil, Africa and offshore basins in Australia are potential markets that will grow. Renewables will be a subject explored by many countries as an alternative energy resource but it will not pose a threat in the next few decades as the development and growth will take time. Close scrutiny of the industry will reveal that the elements of Maritime Technology, Science and Management in their different facets and forms exist and, in some instances, the magnitude of its importance ranks high.

FISHERIES INDUSTRY

Although the outlook for oil and gas industry may seem promising, fisheries industry play an important role in Malaysia's culture and economy too. Malaysia is a nation with more sea than land and there are more than 120,000 licensed fishermen and aquaculture operators within the fisheries sector in 2007. The total fish production in 2007 was 1.65 million tons. The total revenue from the fisheries industry was RM5.8 billion (Department of Fisheries, 2007).

Despite the increase in revenue over the years, the situation on the ground is worrying. Fisheries resources have depleted since 1970, so much so that fish biomass has declined as much as 90% between 1971 and 1997 in some fishing areas. This is based on the Department of Fisheries' decadal resource survey to assess demersal fish biomass,

[iii] *www.mdbc.com.my<Malaysian Economy>*
[iv] *Malaysian Shipbuilding/Ship repair Industry Strategic Plan 2020. MiGHT 2011*
[v] *The Star, online 13th October 2012*

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growth, mortality, yield and catch-per-unit-effort (CPUE) which concludes that the demersal resources in the west coast and east coast of Peninsular Malaysia, Sabah and Sarawak were already over-exploited in 1997.

The threats to sustainable management of fisheries are both terrestrial and marine-based. Some of the immediate threats are:

- **Overfishing** – the fish resource harvested is more than the sustainable level.
- **By-catch** – the use of non-selective gears such as trawl nets results in high catch of non-targeted species (non-commercial fishes, juveniles of commercial fishes, turtles, dolphins and others). This practice will deplete fish resources, as well as effect the food chain and marine biodiversity.
- **Destructive fishing practices** – many fishermen use cyanide, bombs and electric gears to stun that enable them to easily catch the fishes, but the impact of these practices on the natural habitats of coral reefs, sea grass and the marine environment is devastating.

Above are some information with regards to Malaysia's fishing industry and the elements that contributed to the depletion of fish stock and what the outcome would be like in the future if positive actions are not taken now.[4]

Travelling along the track related to fishery industry, the two key elements that warrant close scrutiny are the eco-system in which the fish reside and the conservation of the various species. There are currently many initiatives and studies that are underway towards improving the two elements. The eco-system management regimes transcend across political boundaries and draw in the involvement of numerous agencies and bodies both in the public and private sectors. The conservation of the eco-systems and natural habitats and the recovery of local populations of species living in the proximities require scientific, technology and management approaches dovetailed into statutory regulations conforming to world's standards.

Some of the lead agencies and organisations (stakeholders) that are directly and indirectly involved in the efforts are:

a) Ministry of Science, Technology and Innovation (MOSTI)
b) MiGHT
c) Ministry of Energy, Green Technology and Water
d) Ministry of Natural Resources and Environment
e) Ministry of Human Resources
f) Department of Town Planning (Coastal Zoning)
g) Malaysian Maritime Enforcement Agency
h) Department of National Heritage
i) Ministry of Tourism
j) Department of Environment
k) Ministry of Transport.

TOURISM INDUSTRY

Malaysia is truly an exotic country when it comes to beauty of the flora and fauna landscape. As such it becomes an attraction for tourism, especially the beaches and islands that are found in abundance along the coastline. Adding to this, the diverse culture and way of life of the local inhabitants also pose as a value adding ingredient in the promotion of the tourism industry.

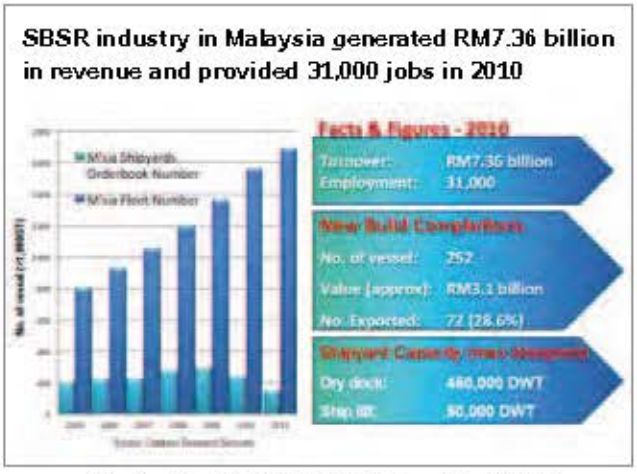
Following the expansion in the industry of tourism, the development of infrastructure shall require a rapid growth too, as new resorts and chalets are required to be built, thus requiring involvement of transportation facilities such as boats, ferries, jetty facilities and other related amenities and utilities, which will inevitably compliment the need of collaborative actions amongst the maritime technology and management pool of expertise. The logistics element has to be increased and perfected in order to offer a good service to the tourists.

Tourism Malaysia has grown by leaps and bounds with its focus on promoting Malaysia at the domestic and international levels. It aims to market Malaysia as a premier destination of excellence in the region. Its vision is to make the tourism industry a prime contributor to the socio-economic development of the nation.

The growth of world tourism and Malaysia's potential as a destination of tourism have contributed to the change and focus in the country's tourism sector. The tourism sector has helped generate substantive foreign exchange earnings and employment, and it would only be a matter of time before Malaysia places itself in the global map as a tourism-centered destination sought by many around the world.

SHIPBUILDING AND SHIP REPAIR INDUSTRY

In the global scenario of shipbuilding and ship repair industry, emerging giant China has taken over Korea as the world's largest shipbuilding nation in terms of number of vessels produced, and combining the two nations, they produce almost 85% of the world's total order booked for new shipbuilding. The demand of new ships is very much generated by the maritime industry and its expansion. The five-year statutory dry dock repair for big ships with sizes longer than 300m are taking up dock spaces up to 2015 and this would certainly boost the ship repair industry.



Extracted from SBSR (PEMANDU) Presentation MiGHT

[4] *www.worldwildlifefederation.save our seafood.my*

The local shipbuilding and ship repair industry only represents a small contribution to the global statistics. However, it is still an industry that is in direct support of the nations Maritime industry as a whole. According to statistics, Malaysia's order booked in 2009 represented only 0.8% of the world order booked. The revenue generated approximately RM7.36 billion and provided 31,000 employments. From the 252 new ships built locally, only 72 ships were exported (28%).[vii]

Currently the domestic shipbuilding and ship repair market outlook is promising, as this is driven by the demands of new ships from the local ship owners. In the Oil & Gas sector, the demands for Offshore Support Vessels (OSVs) shall continue to increase so long as the industry is booming. To date there are 450 OSVs owners who are providers of service to Petronas Carigali and other Production Sharing Contractors (PSCs) servicing 350 offshore platforms all over the country. However, only 40% of these vessels are built locally in Malaysian shipyards.

In the shipbuilding and ship repair industry, application of technology and the research in sciences related to geotechnical structures as well as petrochemical attributes are indeed abundant. On the support side of the house, the logistical element that forms the backbone of the industry is an intricate and massive pool of resources of high technology and value investments. The parties involved in the support sector varies from companies belonging to the private sector to government statutory agencies policing, regulating the safety and conduct through to the conservation of environment and the eco-system balance.

The management including coordination and collaboration between inter and intra agency network is indeed majestic. So much has been said about the Marine Technology, Science and Management domain that seem to be involving numerous people from different sectors and agencies both public and private alike that are instrumental in the driving of the industry and above all the economy of the nation, but what would be the impact of networking that gels all the elements into one big melting pot.

NETWORKING

Business Networking

Business networking is a socio-economic activity by which groups of like-minded business people recognise, create, or act upon business opportunities. A business network is a type of social network where business activity is its reason of existence. As an example, a business network may agree to meet weekly or monthly with the purpose of exchanging business leads and referrals with fellow members. To complement this activity, members often meet outside this circle, on their own time, and build their own one-to-one relationship with the fellow member.

Business networking can be conducted in a local business community, or on a larger scale via the Internet. Business networking websites have grown over recent years due to the Internet's ability to connect people from all over the world. Internet companies often set up business leads for sale to bigger corporations and companies looking for data sources. Business networking can have a meaning also in the ICT domain, i.e. the provision of operating support to companies and organisations, and related value chains and value networks.[viii]

Networking As A Tool

Networking has always been and will continue to be a common feature amongst business community as it is thought to be the bridging for communication amongst the parties involved in business. However, networking is not just limited to the business circle only, as it can be applied in other models where human interaction is essential. In everyday life, networking is occurring sometimes unknowingly amongst us. The housewife will network with the group of fishmongers in the market for reasons such that she will know which stock of fish is fresh and fetch the most competitive price in terms of value. Another example would be when networking occurs between lecturers from a university and those of other universities so that he or she could keep abreast with the developments of teaching skills and methods taught by other institutions as compared to his or hers. Thus, networking is an activity that brings positive results developing from meeting, communicating, merging, and exchanging ideas and thoughts. Ultimately, networking will ease the process of rapport and facilitate the decision-making process and ease of collaboration and co-operation on a mutual basis.[ix]

Networking can also be considered as a tool for producing results with other people, as people are the most important resource of an organisation. The ability to network would be one's greatest asset as the skill can turn someone into a successful career person. There are several prominent business networking organisations that create models of networking activity that, when followed, allow the businessperson to build new business relationships and generate business opportunities at the same time.[x]

If one were to attempt networking by merely using the content of conversation, we are doomed to failure. The reason being that it is not just through communication that we create a networking circle. Communication is a major portion of the equation but not the only one. Other attributes that will ensure successful networking are:

a) Understanding the other parties' thinking processes
b) Understanding the body language
c) Knowledge of the over arching determinants
d) Managing hierarchy and levels
e) Developing trust, respect, integrity, credibility and ownership.

[vii] *Malaysian Shipbuilding/Ship repair Industry Strategic Plan 2020. MiGHT 2011*
[viii] *www.en.wikipedia.org/wiki/<Business_networking>*
[ix] *"The Magic of Dialogue", by Daniel Yankelovich, Nicholas Brealey Publishing, 1999*
[x] *"Unlimited Power', by Anthony Robbins, CPI Cox & Wyman, 2001*

NETWORKING IMPACTS ON INDUSTRY

In earlier paragraphs, we discussed the intricacies of each industry working methodology in meeting their vision and goals. Each industry has to comply with certain governance regime that is being regulated by one or many statutory and regulatory bodies. Over and above this, companies associated with the industry have its performance targets to meet in order to be presented to the stakeholders. A business will fail if it does not offer a favourable business proposition by increasing the shareholders value. Therefore, the industry has a two-prong responsibility to satisfy. Firstly, towards the shareholders and secondly, to the agencies that are relevant in its governance (stakeholders). The former is probably the more difficult between the two as the latter is where the networking element is more sought after. It is more sought after because in the process of achieving success in the industry, compliance to strict regulatory terms imposed by the governing bodies must be met. Failure to comply will result in cancellation of contracts and even more drastic result, where a legal action or a heavy penalty in the form of a fine would be imposed.

To circumvent this possibility, companies involved in the industry will attempt to network amongst the same peers and similar industrial players for reason that in a case where assistance is required, provided of course good networking is in place, companies can actually help one another. The help that is described here is wide in range and not limited to just physical nature. Supply of material and financial assistance sometimes can also be facilitated in cases that warrant such assistance. During engagement with relevant authorities, such assistance could also be requested such as when engaging with government agencies and regulatory bodies. Just to name a few, examples of such agencies include customs and excise, immigration and international trade office. It is never a means to encourage malpractice or misconduct but rapport and networking do facilitate ease of transaction in many cases.

The objective of any business would be expeditious implementation of the contract and deliverables. Sometimes the red tape and bureaucratic impediments are in the way and block the progress of successful implementation. The path to success is to know your objective, taking action, knowing what results you are getting, and having the flexibility to change until you are successful. Businesses associated with Maritime Technology, Science and Management, as described earlier, are already in a complex industry. There could be more than one regulatory body that is involved in each industry and as the number grows, so does the complexity.

In the Maritime Technology, Science and Management sector, the industries are confronted with an environment that is full of uncertainties just like the climate or weather itself. Managing an unpredictable industry where the outcome of which is fluid and ever changing, is a task feared by many. Knowledge is superior and through networking the circle of knowledge and sharing of information can be further enhanced. Once the reaches are expanded, one can be more confident in determining to a certain level of accuracy and confidence of a certain action, and thus, a successful outcome. If networking is fundamental, how then can it be practised in the industry?

INDUSTRY'S PRACTICE IN ENHANCING NETWORKING

There are many ways an industry can enhance networking with relevant parties and here are some:

a) Social events where face-to-face engagement can be conducted (in groups or individually)
b) Conduct educational activities portraying related subjects or issues
c) Corporate Social Responsibilities (CSR)
d) Identify what can the industry do to offer positive support

e) Affiliation with an International Marine Professional Body such as the Institution of Marine Engineering Science & Technology (IMarEST).

Through the conduct of social events, a closer rapport can be created with peer industries, government and private agencies that are relevant to a particular sector, or in short their stakeholders. For example, shipyards in Malaysia can organise an annual dinner and invite co-workers from the Ministry of Transport (Marine Department) and Ministry of Finance as well as Classification Society such as Bureau Veritas to join. This rapport will strengthen ties and foster good relationships while enhancing networking. Likewise, conducting educational training courses could also be an activity to foster good rapport.

Like many industries elsewhere, Corporate Social Responsibility (CSR) is an activity that has been proven to be useful in introducing industries to the general public and other entities. Some of the CSR activities such as donations to family day or participating in a charity walkathon will help encourage networking. Positive reinforcement by industries too will contribute a great deal of *esprit de corps* and motivational sentiment amongst industries and government agencies, as this action will signal solidarity and a harmonious relationship.

Lastly, affiliation with a marine internationally acclaimed professional body or a learned society such as IMarEST which has a worldwide membership roll of 15,000 would certainly work well in promoting networking, especially in the Marine Science and Technology professional line.

CONCLUSION

In conclusion, related industries under the auspices of the Maritime Technology, Science and Management sector is indeed a key driver in the nation's ETP initiative directed towards transforming Malaysia into a high-income nation. It is never an easy task as there are 12 NKEAs that need to be administered and some are related to the sector. The discussions above have deliberated on some of the relevant industries that are directly involved with the Maritime Technology, Science and Management sector and have highlighted briefly their impacts to the ETP and the wide extent of agencies and organisations which have linkages with them and the complexities of their contribution. Each industry has its peculiar way of supporting the NKEAs, and the underpinning factor to ensure success but not limited to it is "Networking".

Networking is usually used in the business sector as it has been an appendage in the business world all these years. However, beside business, networking also exists in other sectors and in industries where one cannot delineate networking as something that is different as in business. Although its approaches in business may be slightly different, there are many similarities and the outcome would be the same – it facilitates the decision-making process; it speeds up actions and instills the sense of camaraderie amongst the industry entities.

Instilling a sense of camaraderie is demonstrated by the discussion above, where industries which participated in networking clearly showed success in more ways than one. Amongst them include conducting activities and inviting participation from peer industries and government agencies whilst continuously showing positive reinforcement to grow good rapport and improve networking. In the international arena, a professional body or learned society such as IMarEST that has a ready membership of 15,000 worldwide can offer instant networking with members from every corner of the globe.

In summary, from the industry's perspective, networking is indeed fundamental in facilitating ease of execution of tasks. It will also enhance the rapport amongst people from the industry and government agencies alike, to come together to share success, improving camaraderie and *esprit de corps* towards a strong and buoyant Maritime Technology, Science and Management sector which in turn will drive the economy of Malaysia into becoming a high-income nation. ■

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