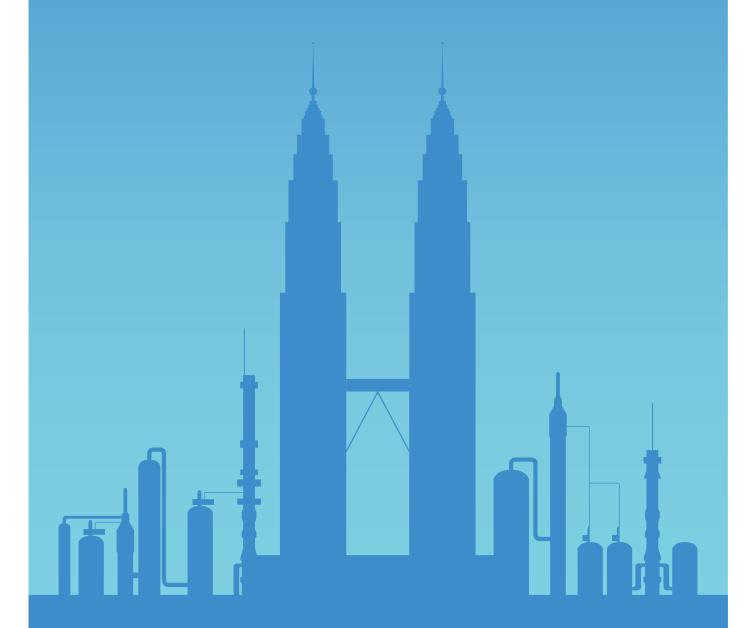
GLOBAL BUSINESS REPORTS

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MALAYSIA CHEMICALS 2014



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Dear readers.

Bustling with activity in its hot and humid tropical setting, Kuala Lumpur is a world-class modern city. Even on arrival it is easy to see why Malaysia is often the chosen point of entry into the South East Asia, for both tourism and business. The decaying facades of picturesque buildings from Malacca to Georgetown serve as a reminder of Malaysia's British colonial heritage, while state of the art modern buildings and transportations tells a story of country looking seriously at the future.

Bordered by Thailand in the north, Indonesia in the south, the Philippines in the east Malaysia is strategically located along the Strait of Malacca, a major sea-route connecting the Far East to Asia, Europe, and the Middle East. Malaysia's infrastructure is well developed with international airports and seven international seaports. In addition, as the largest investment banking service provider in Asia Pacific, Malaysia's sound financial infrastructure makes the country a recognized and attractive business destination.

Malaysia is achieving what developing countries across the globe are trying to achieve in shifting from an agricultural to a middle-income, knowledge-based economy. In 2013 Malaysia's GDP growth rate was a reasonable 4,7%. Looking at the Malaysian chemicals sector, competition with highly developed Singapore and up-and-coming Indonesia, is spurring the country to develop innovative strategies to retain its international strategic importance. While the palm oil and rubber segments continue to be strong, all eyes are focused on the petrochemical sector with the development new petrochemicals hub in Southern Johor.

The Malaysian government is committed to stimulate growth in the manufacturing sector through the Economic Transformation Plan (ETP) 2020. Ranked 24th amongst all exporting countries, Malaysia is a leading exporter of oil and gas, palm oil and rubber and today the Malaysian oleochemical industry is one of the largest in the world, accounting for 20% of the global capacity.

Sitting on the world's 14th largest natural gas reserves and 23rd largest crude oil reserves, Malaysia's petrochemical industry is world-renowned and is an intricate part of the wider chemicals industry providing a steady supply of feedstock material to the sector. Until now the three world-scale petrochemical zones in Gebeng, Kertih and Pasir Gudang has been the country's petrochemical manufacturing hubs. However, the refinery and petrochemical integrated development (RAPID) project in Penerang is poised to change the face of Malaysia's and South East Asia's chemical industry. It has been our privilege to interview a wide array of companies, government representatives and associations that contribute to the growth of the sector, the continuing economic development of the country and finally to the unique way in which Malaysia embraces people from all corners of the world.

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This research has been conducted by Vanessa Acuna Chapela and Anita Kruger Edited by Barnaby Fletcher Graphic design by Gonzalo Da Cunha

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Fighting for its Moment: Malaysia's Chemical Industry

"Looking at reported investment figures for any particular year does not necessarily reflect the trends in the industry, as one lump sum investment can skew the results. What MIDA wants to emphasize is the quality of the approved projects. Malaysia is attracting high value added projects that are creating more high-income jobs rather than very capital-intensive projects such as oil refineries. No one wants to have too many oil refineries in any one country. We are optimistic about the investments that have been approved thus far for 2013 including Petronas' 60 billion MYR investment in RAPID and the 24 new potential partnerships that will be required to bring the complex online."

- Datuk Phang Ah Tong, Deputy CEO, Malaysian Investment Development Authority (MIDA)

Image: Shutterstock

An Introduction to Malaysia

A brief overview of the country and economy





150km

On the 26th April 2014 United States President Barack Obama visited Malaysia, the first visit by a US head of state in 48 years. Economics were a focal point of his discussions with Malaysian Prime Minister Najib Razak. Yet although the two countries agreed to upgrade their bilateral relations, Obama failed to secure clear support from Razak for his proposed Trans-Pacific Partnership.

The idea that Malaysia would not pander to American requests would have been surprising not too long ago. The US is, after all, the largest source of foreign capital to Malaysia, investing \$1.9 billion in 2013 and with bilateral trade reaching \$35 billion annually. Today's Malaysia, however, can afford to pick and choose its agreements and its partners: on the 17th of April it signed a free trade agreement with Turkey. The demand that Malaysia finds itself in is a telling indication of both its current economic strength and its growing potential. As a middle-income economy, with a

population of over 30 million and a GDP per capita of \$17,500, it represents an attractive market. Its GDP growth - 4.7% in 2013 with an average of above 5% over the past decade - ranks among the best in the already-impressive Southeast Asia. Pro-business policies and an improving infrastructure have seen investments pour in from around the world: capitalizing on its Islamic heritage and expertise in Sharia-compliant banking and finance services has made it one of the favorite destinations of Gulf country investments. The transformation of Malaysia from an agricultural to a diversified and knowledge-based economy - started in the 1980s but arguably coming to fruition now - has made it a role model for many developing countries. After gaining independence from British rule in 1963, the contribution of agriculture to GDP has dropped from 28.8% in the 1970s to 11.2% in 2013. Malaysia continues to show a remarkable industrial production growth rate, reaching

7.5% in 2012, with industry the lead contributor to GDP at 41%. This has driven solid GDP growth since the country recovered from the Asian financial crisis of 1997/98 and the local business community often praises the government for seeking to promote investment and international trade. In an attempt to further Malaysia on its path to become a high-income, developed country by the year 2020, the Malaysian government is committed to stimulate growth in the manufacturing sector through the Economic Transformation Plan (ETP).

The measures have laid the foundation for a bright economic future in Malaysia. GDP growth in 2014 is expected to be 5.15%, followed by 5.5% in 2015. Long the underdeveloped cousin of its neighboring – and one-time federal partner – Singapore, Malaysia now poses a competitive threat: a manufacturing location that can offer comparable quality at a cheaper cost and with a far larger domestic market.



This bright outlook is not without its dark spots. Infrastructure still remains inadequate in many parts of the country. Though the regulatory framework is constantly improving, companies still list the implementation of that framework - carried out through inefficient government bureaucracy - as a major hurdle for doing business. Corruption is also frequently cited as a challenge, with the country ranking at a respectable but room-for-improvement 53rd in Transparency International's 2013 Corruption Perceptions Index. Inequality remains high, with the World Bank putting the Gini Coefficient - a measure of inequality - at a relatively high 46.2 in 2009. Nonetheless, the story of Malaysia remains a story of growth and improvement, powered by a dynamic private sector and sensible government policies. One of the greatest examples of these attributes is in the chemical sector: an industry that has grown from a side note to Asia's major chemical hubs to a major player. •

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Malaysia's economy has historically been healthy and is expected to deliver a growth rate of between 4% and 5% for 2013. When considering the country's growth potential one is really looking at a stable political situation, educated labor force with an efficient infrastructure. There is little to no geographical threat like floods and earthquakes and the availability of feedstock is very high. Most importantly, the Malaysian government provides various government incentives to facilitate doing business here, lending a strong competitive edge to those who invest in Malaysia.

- Nazmi Sallehudin, Director, Chemicals Division, CCM Chemicals

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MALAYSIA AT A GLANCE

Population: 30,073,353 (July 2014 estimate)

Capital: Kuala Lumpur

Head of Government: Prime Minister Mohamed Najib

bin Abdul Najib Razak
Currency: Ringgit (MYR)
GDP: \$312.4 billion (2013 estimate)
Growth Rate: 4.7% (2013 estimate)
GDP per Capita: \$17,500 (2013 estimate)

Economic sector breakdown: agriculture: 11.2%, industry: 40.6%, services: 48.1% (2013 estimate)

Exports: \$230.7 billion (2013): electronic equipment, palm oil, petroleum and LNG, wood and wood products, palm oil, rubber, textiles, chemicals, solar panels

Imports: \$192.9 billion (2013): electronics, machinery, petroleum products, plastics, vehicles, iron and steel

products, chemicals

.........

Major Trade Partners: China, Singapore, Japan, USA

\$312.4

billion

GDP (current US dollars) 2013

Source: CIA World Factbook

POPULATION AND WORKFORCE INFORMATION

INFORMATION

Population 2014 30,073,353



Labor Force 2013: 13,190,000

Unemployment 2014: 3.1%

Poverty Line 2007: 3.8%

Employment in Manufacturing and Construction 2013: **37%**

Datuk Phang Ah Tong & Yee Nai Tuck

DPAT: Deputy CEO

YNT: Director, Technology and Business

Division

MALAYSIAN INVESTMENT DEVELOPMENT AUTHORITY (MIDA)



Can you highlight MIDA's role in the Malaysian chemicals industry and the greater economy?

DPAT: MIDA was established more than 35 years ago in 1967, when it was still one of only three investment agencies in the world. It is the first point of entry for any company wishing to set up operations in Malaysia. Its role has recently increased from promoting and coordinating only industrial development in the country, to also include the services sector, excluding the financial, construction and telecommunication industries. MIDA isvour not run-of-the-mill investment development authority in that it does not only market and promote economic activity in Malaysia, but also facilitates and assists companies in obtaining the right documentation and benefitting from the numerous incentives that are available. Under the Economic Transformation Plan that was launched in 2010chemical production is a promoted activity having been identified as a National Key Economic Area (NKEA) and the biggest investment-generating sector in the country. Historically, Malaysia has been strong in the oil and gas sector as a net exporter of crude oil and natural gas since 1974. However, Malaysia strategy has changed significantly, shifting the focus away from non-renewable depleting activities to becoming increasingly strong in downstream chemical production. Malaysia would like to sustain the usage of its reserves through building partnerships between local and foreign companies that aim to produce higher value added products.

Can you highlight some of the trends and new developments in the industry that are emerging with the higher quality projects that you mention?

YNT: Although they remain the backbone of the chemical industry, there tends to be decreased focus on commodity chemicals as the industry evolves. RAPID is probably going to be one of the last big projects that will be very commodity driven, but on the other hand, will supply many of the products that are needed for further downstream chemical production. Malaysia is also very strong in oleochemical production, however it is growing increasingly difficult to obtain a license for basic oleochemicalproduction, as it appears it has reached it satiation point. In this segment too, the trend is towards the manufacturing of further downstream products. There is a whole range of biochemical product manufacturing that Malaysia is also aiming to attract. In the inorganic segment, the polysilicon sector will be an interesting area to watch. In the Sarawak corridor we are expecting to see an increased drive for renewable energy as we look at energy intensive industries to power with hydro electricity, creating a more sustainable and certifiable way to producechemicals in this area such as polysilicon.

How can Malaysia succeed in attracting investments over its strong neighbors such as Singapore?

YNT: While Malaysia is blessed with some valuable reserves, these are not world-renowned or highly exceptional. What sets Malaysia apart in the region, is itsstrategic location and the fact that the country still has an abundance of land and energy. The world's biggest market is China and the Middle East and Malaysia is at the center of these two growth points.

DPAT: Notwithstanding Malaysia's reserves and resources that provide a competitive advantage, another differentiating factor is the ease of doing business in Malaysia. Investors will find it hard to find another country in the region that offers the same type of stability that Malaysia can in terms of policy, continuity, consistency and predictability. Malaysia has a proven track record and many foreign companies are opening up even more branches and operations in the country as their confidence in the regulatory framework continues to grow. The World Bank now ranks Malaysia 12th out of 187 countries in terms of the ease of doing business. In the world competitiveness report using the four parameters of economic efficiency, business efficiency, government delivery and infrastructure, to determine competiveness, Malaysia wasranked 15th out of 58 countries. Malaysia cannot necessarily compete in terms of efficiency with Singapore that is at ranked at number one, but though it is a very efficient city-state, it is also very expensive and has an evident space constraint. Malaysia is set to gain from this as investors look to Malaysia to overcome these constraints andas MIDA, we are being very selective in terms of selecting and developing very particular industries to complete the value chain that we envision.

Can you give us your outlook on MY chemicals industry for the next five years?

YNT: As always the outlook of the chemical sector is very dependent on the price of the raw materials. Another factor that impacts the sector is the discovery of alternative energies such as shale gas. For Malaysia, the most important guestion is how we can sustain our reserves. This does not mean that it is the end of the line for our oil wells; we are just extended their life. We are also looking into developing our renewable and biomaterials production and utilization and leveraging on our palm-oil advantage. Further more we will be focusing on downstream activities and are also trying to develop our automotive and aerospace industries that will be able to use the products supplied by downstream chemicals manufacturers. •

Finding its Place

The chemical industry of Malaysia

Malaysia sits in what is unarguably the most competitive chemicals market in the world. Chemical production in the Asia Pacific region is, according to the American Chemistry Council, expected to increase by 46% between 2012 and 2020, beaten only by the slightly more distant yet still challenging India and China. By 2020, the region is expected to account for 50% of all chemical production.

In the past, this production may be exported to the wealthier economies of North America or Western Europe. Yet today local and international producers compete for a share of ASEAN's over 600 million-strong market: a market that is becoming increasingly affluent. Indonesia, the Philippines and Vietnam, previously the perennial underachievers, are now recording economic growth rates of between 5% and 7% a year. The traditional Asian Tigers - Singapore, Taiwan, Hong Kong and South Korea are now among the wealthiest markets on the planet. On the outskirts of the region, the potential giant of Myanmar is slowly beginning to open up.

As companies seek to capture market share, countries are competing to capture companies. With Singapore and Hong Kong leading by example – they consistently alternate the top spot in most international measures of ease of doing business – other countries are rapidly improving their infrastructure, regulatory environment and skill sets, pouring investment into chemical hubs that can compete on the global stage. Leading this pack, and putting real pressure on Singapore's traditional leadership in the chemicals sector, is Malaysia.

Malaysia, as an export-driven country, saw a total of 804 manufacturing

projects approved in 2012, with investment in the manufacturing sector totaling at 41 billion MYR (\$12.94 billion) and investments in chemical and petroleum products accounting for almost 30% of total investment in the sector. In 2013, there were 787 approved with a total value of 52 billion MYR (\$15.88 billion): again, chemical and petroleum products accounted for a bit less than 30%.

According to Dr. A. Hapiz Abdullah, chairman of the Chemical Industries Council of Malaysia, "Malaysia has a very diverse chemicals industry comprising various sub-sectors petrochemicals; oleochemicals; cosmetics and toiletries; organic chemicals; industrial gases; paints and coatings; as well as chemical traders, distributors and service providers. In 2012, the chemicals industry, including the petrochemicals industry, contributed 7.4% to Malaysia's GDP."

Nazmi Sallehhudin, director of the chemicals division of Chemical Corporation Malaysia (CCM) said: "With the changes

infrastructure in the region is unrivalled, Malaysia is working to ameliorate its own. However, being the lesser developed of the two still has advantages in terms of lower costs when it comes to labor and land ownership and availability. Here, however, Malaysia is competing with the likes of Indonesia, and Thailand, where the palm oil industries are on the rise and labor costs are even lower still. H. A. Khoo, general manager of local chemical distributor, Suka Chemicals, elaborates on Malaysia's competitive position in region: "When it comes to manufacturing, Malaysia cannot compete with the likes of China's ability to produce and take advantage of economies of scale. However, Malaysia's advantages in the development of its logistic and financial infrastructure give it an advantage in the region over countries such as Indonesia that is also rich in resources."

Consequently, Malaysia finds itself in a somewhat awkward position as it determines on which level to compete with

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In the last couple of years, we have seen increased competition from China, India, Vietnam, Thailand, Indonesia and even eastern European countries. To manage the challenge posed from these countries, the Malaysian plastics industry must maintain its competitiveness. One advantage that we have is local resin supplies, but the resin prices have to be stabilized for us to stay ahead of the competition. As Malaysia cannot compete on labor costs, it is vital for companies here to invest in technologies and machinery. Low material costs and improved efficiencies will go some way in ensuring our continued edge in the market.

- Noraini Soltan, Vice President, Malaysian Plastics Manufacturers Association

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in market movement, such as the migration of businesses from Western Europe to Asia Pacific, the ever-changing market dynamics in Japan and China, the growth in India and the rise of the African continent, Southeast Asia is becoming an increasingly attractive location to invest in." With the refinery and petrochemical integrated development (RAPID) project, led by government-owned Petronas, Malaysia is sparking renewed attention as an investment destination, especially in light of the successes of neighboring Singapore and its integrated petrochemicals complex in Jurong Island. While Singapore's development in terms of

the momentous forces on both sides of the development spectrum. Nonetheless, there is no doubt about the staying power of the Malaysian chemical industry and, with the RAPID project, the country is showing its continued commitment to the industry and to attracting foreign investors. In the past, the Malaysia's unique characteristics were driving growth in the sector, but with growing competition in the region, innovation will be pivotal if the industry is reach its targeted growth levels and for Malaysia's transformation to high-income developed country. Malaysia has to fight for its moment. •

MANUFACTURING PROJECTS APPROVED 2013

Source: Malaysia Investment Development Authority

| | NEW | EXP/DIV | TOTAL |
|--------------------------|----------|---------|----------|
| Number | 463 | 324 | 787 |
| Potential Employment | 53,791 | 39,197 | 92,988 |
| Total Capital Investment | 11,613.9 | 4,270.6 | 15,884.5 |
| Domestic | 4,660.8 | 1,913.8 | 6,574.6 |
| Foreign | 6,953.1 | 2,356.8 | 9,309.9 |

MANUFACTURING PROJECTS APPROVED 2013 BY INDUSTRY

Source: Malaysia Investment Development Authority

| | DOMESTIC INVESTMENT | FOREIGN INVESTMENT | TOTAL CAPITAL INVESTMENT |
|-----------------------------------|------------------------|-----------------------|-----------------------------|
| Chemical & Chemincal Products | 620,503,260 | 1,145,745,471 | 1,766,248,731 |
| Basic Metal Products | 349,797,955 | 1,349,319,045 | 1,699,116,999 |
| Transport Equipment | 1,355,603,133 | 658,670,085 | 2,014,273,217 |
| Petroleum Products | 892,315,244 | 988,971,341 | 1,881,286,585 |
| Rubber Products | 863,864,764 | 242,234,675 | 1,106,099,438 |
| Food Manufacturing | 626,873,698 | 700,517,112 | 1,327,390,810 |
| Electronics & Electrical Products | 402,237,731 | 2,590,137,180 | 2,992,374,912 |

MAJOR EXPORTS (JAN-FEB 2014)

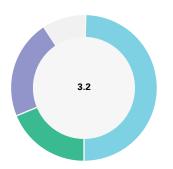
Source: MATRADE



| Palm Oil 6 Crude Petroleum 4 Manufactures of Metal 3 Machinery, Appliances & Parts 3 Optical & Scientific Equipment 2 | .5% .2% .2% .9% .5% .8% .3% |
|---|---|
| | .3% .6% |

ASIA PACIFIC'S CHEMICAL INDUSTRY

Source: BASF, IHS Global Outlook



| Asia Pacific North America | 50% |
|--|------------|
| North AmericaEurope | 19% 21% |
| Rest of World | 10% |

IMPORTS AND LOCAL PRODUCTION IN ASIA PACIFIC

Source:BASF, IHS Global Outlook

PRODUCTION FOR LOCAL MARKET
 IMPORTS

66%

76%

CHEMICAL PRODUCTION PREDICTED GROWTH (2012-2020)

ource: American Chemistry Council

PERCENT CHANGE 2012-2020

| North America | 25% |
|----------------------|-----|
| USA | 25% |
| Canada | 27% |
| Mexico | 28% |
| Latin America | 33% |
| Brazil | 35% |
| Other | 31% |
| Western Europe | 24% |
| | |
| Emerging Europe | 35% |
| Russia | 34% |
| Other | 36% |
| Africa & Middle East | 40% |
| | |
| Asia-Pacific | 46% |
| Japan | 22% |
| China | 66% |
| India | 59% |
| Australia | 23% |
| Korea | 35% |
| Singapore | 35% |
| Other | 44% |

Global Business Reports INTERVIEW

Dr. A Hapiz Abdullah

Chairman

CHEMICAL INDUSTRIES COUNCIL OF MALAYSIA (CICM)



Can you tell us more about the CICM's role and evolution in Malaysian chemical industry?

The CICM was established and incorporated in Malaysia in 1982 with the key objectives of promoting development and co-operation within the Malaysian chemical industry. We aim to serve as a channel of communication between the industry and the government and to promote Health, Safety and Environment (HSE) excellence and sustainable development. CICM's thrust over the recent years has been on the Responsible Care initiative, with our new vision centeringon the word 'sustainable', which is pivotal if we still want a vibrant chemical industry in 20 years. In our new vision, we also call ourselves a 'champion'that is by taking the lead and pushing our members to incorporate sustainable business models. This isto be crafted around our Responsible Care initiative. Running chemical plants is risky and trying to run it without any disruptions is extremely difficult and requires a collectively focused effort.

Multinationals seem to be very aware of international environmental sustainability standards, but compliance

from local companies appears to be lagging. Why is this the case and how will this be addressed?

Malaysia is implementing standards and regulationsthrough bodies such as Ministry of International Trade and Industry (MITI) and Malaysian Investment Development Authority (MIDA), have been very active in trying to facilitatelocal compliance with regulations that are up to global standards. REACH is one example of such an initiative. The competency buildingprocess takes time and it may seem slow, but all the required legislation will come in due time.

Can you give us an overviewof the Malaysian chemical industry and the contributing factors to the strong growth of around 63% in 2012?

Malaysia has a very diverse chemicals industry comprising varioussub-sectors - petrochemicals, such as basic industrial chemicals, fertilizers, pesticides;oleochemicals; cosmetics toiletries; organic chemicals; industrial gases; paints and coatings; as well as chemical traders, distributors and service providers. In 2012, the chemicals industry, including the petrochemicals industry, contributed RM 55.8 billion or 7.4% to Malaysia's GDP. Looking at Malaysia's natural resources and competitive advantages, the available feedstock leads you to the chemicals industry's cornerstones, namely oil and gas and petrochemicals and oleochemicals.

The chemical industry is dependent on regional and global economy and while the European economy is not as healthy as it should be, the US is beginning to pick up. China is probably going to deliver 5% to 6% GDP growth this year, which is comparatively low from its previous double-digit growth, andgrowth in India has not really lived up to expectations.

Yet, looking at countries such as Indonesia, Vietnam and Myanmar as well as other Southeast Asian countries that are doing relativelywell, theybalance things out for the petrochemical and natural gas markets. At the moment, the palm oilsector is slow, as it is price driven and depends on the harvest scenario and substitutes. Malaysia's biggest palm-oil export markets continue to be India and China, and when these economies are not growing too well, the demand for

crude palm-oil demand goes down, which is also affecting the down-stream oleochemical sector. Malaysia is currently ranked the world's number two palm-oil producer behind Indonesia and accounts for approximately 20% and 12.5% of the global capacities for fatty acids and fatty alcohols respectively.

Can you elaborate on key projects that will drive growth in Malaysia's chemical sector over the next few years?

The Economic Transformation Programme (ETP) was launched at the end of 2010 with the goal of elevating Malaysia to developed nation status by 2020. Two of the 12 National Key Economic Areas (NKEAs) that have been identified form the mostimportant part of the chemicals industry, namely petrochemicals and oleochemicals.

Two key petrochemical projects are PETRONAS' Refinery and Petrochemical Integrated Development (RAPID) project in Johor at a cost of about RM60 billion and PETRONAS Chemicals Group's Sabah Ammonia Urea (SAMUR) project in Sabah at the cost of about RM4.5 billion.

Can you highlight some of the features that differentiates Malaysia's chemical sector in the region?

Malaysia is a very politically stable country that welcomes multinational companies to partner with local companies. Malaysia is alsoat the center of Asia Pacific's growth and strategically located to access any of the surrounding markets. What is even more outstanding is that neighboring countries in the Asia Pacific region complement each other rather than compete. Malaysia has a well-entrenched feedstock in terms of gas, crude oil and palm oil. Lastly, Malaysia's chemical industry has shown its ability to progress and has had ahead-start in the region in terms of joint ventures and partnerships with multinational companies, meaning know-how; and the technology level is excellent. There are, however, two sides to this coin, as when our workforce is seen as highly skilled, they become very desirable employees for countries in the Middle East, for example, where there are many petrochemical facilities being built. •





A Diversified Portfolio: Malaysian Chemical Production



"Evyap is quite bullish and excited about its prospects in Malaysia and if all goes according to plan, we should think of expansion very soon. We are doing our homework and we shall be ready to capture the Asian market, which consumes more than 60% of global oleochemical production. Evyap has to start somewhere in Asia and we are happy with our choice being in Malaysia."

-Tanuj Roy, Managing Director, Evyap Sabun Malaysia

Image: Shutterstock

RAPID Growth

Refining and petrochemicals

While Malaysia may not be the largest or most affluent market in the world (although both are improving, with a population growth rate of 1.47% and a GDP growth rate of 4.7% in 2013), it does have downstream feedstock for chemical producers. The country holds the world's 14th largest natural gas reserves and 23rd largest crude oil reserves. Its petrochemical industry is world renowned and is an integral part of the wider chemicals industry providing a steady supply of feedstock material to the sector.

Malaysia's strength in this sector is exemplified by Petroliam Nasional Berhad, better known as Petronas, which is viewed by many as a model example of a national oil company and one of the few to achieve huge success as it moves into petrochemicals. "We have the competitive advantage in the availability of feedstock through our partnership with Petronas. Unfortunately Malaysia has a limited local market and up to 90% of BASF production in Malaysia is exported. BASF is close to its feedstock in Malaysia, but not that close to its customers, which adds to transportation costs," explains Daniel Loh, managing director of BASF Malaysia

Until now, the three world-scale petrochemical zones in Gebeng, Kertih and Pasir Gudang, all operated by Petronas, have been the country's petrochemical manufacturing hubs. However, the refinery and petrochemical integrated development (RAPID) project in Pengerang is poised to change the face of Malaysia's and South East Asia's chemical industry. Petronas is the driver behind the RAPID project. Upon completion the RAPID complex developed in Southern Johor, will produce 9 million tonnes of petro-

leum products and 4.5 million tonnes of petrochemicals per year (mt/y). The proposed 300,000 bpd crude oil refinery will produce diesel and gasoline to Euro 5 specifications and will supply the feedstock for the production of highly specialized chemicals at the petrochemical complex. With this, the project aims to take a sizeable portion of the \$400 billion global specialty chemicals market.

Being developed at an estimated cost of 60 billion MYR (\$18.94 billion), the RAPID project was launched in May 2012 with completion expected by 2016. However, the recent delay in awarding work contracts for the project means that Petronas has set the new target for the sites full commission and completion in 2018. With a project of this size, delays are not unexpected, but the investment community is eager to see the project take off: an announced delay in July causing shares in Petronas to drop by 0.6%. The construction of the site is expected to be done through 20 construction contracts, creating an estimated 40,000 jobs during construction and a further 4,000 jobs when completed.

In order to complete such as huge task, Petronas has opened up the contractor playing field, allowing non-Petronas licenses companies to compete for contracts. As Sarjit Singh, general manager of Rotary Mec, explains, "this means highly increased competition that is especially apparent with the RAPID project. RAPID is one of Petronas' projects that do not require the company to have a Petronas license. Considering the size and scale of the RAPID project and the fact that it is aiming for completion in the next four years, it makes sense to include a wider selection of contractors and subcontractors."

The RAPID project will aim to become the new face of the Malaysian chemicals industry from one driven by low cost and physical capital to an industry that reflects the strength of innovation, efficiency and technology. In line with Vision 2020 of becoming a developed country, the RAPID project should set the new industry standards in the employment of latest technologies that will minimize the impact on the environment.

Yasuhiro Hirano

Managing Director IDEMITSU MALAYSIA

What do you see as the main challenges and main opportunities for Idemitsu's operations in Malaysia?

Malaysia is not the only country we operate in, nor is it the only country to operate in. When you are solely focused on the downstream, location becomes very important. However, if you want a strong focus on connecting the upstream to the downstream. Malavsia has always presented an important opportunity for us. Wherever there are upstream opportunities, we like to see how we can be involved, whether in Korea, Indonesia or China. If we locate our assets based on demand, China is the best option; but China is not quite an open market, so Malaysia presents a strong alternative. Malaysia's biggest advantage is its political stability. From its early years, Malaysia's government has done a great job inviting investors. The investment at-

mosphere has been well nurtured and or-

MALAYSIA'S PLANNED AND EXISTING REFINERIES

Source: IEA

| REFINERY | OPERATOR | CAPACITY (BBL/D) | STATUS |
|------------------|----------------------------------|---------------------------|---|
| Melaka 1 (PSR-1) | Petronas | 93,000 | Distills sweet crude oil and condensate |
| Melaka 2 (PSR-2) | JV of Petronas & Conoco Phillips | 126,000 | Processes sour crude oil grades |
| Port Dickson | Shell | 125,000 | Supplies solely domestic market can accept heavier crude oil grades |
| Port Dickson | San Miguel/Petron (Philippines) | 86,000 | Existing |
| Kertih | Petronas | 40,000 crude destillation | Processes naphtha condensates through a splitter |
| Lutong | Shell | 45,000 | Only refinery located outside of Peninsular Malaysia |
| Kemaman | Kemaman Bitumen Company | 24,000 | Converts heavy crude oils to bitumen |
| RAPID | Petronas | 300,000 | Planned, 2017 |

ganized. Malaysia is also a resource-rich country and provides competitive infrastructure and energy utilities to go alongside this.

What main changes can we expect to see from the Malaysian petrochemicals industry in the next five years?

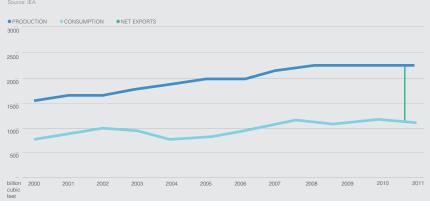
RAPID is going to bring Malaysia into a different new phase. In the past Malaysia has been focusing on fully utilizing what they have, based on gas, chemicals and condensate. These assets are enviable and have been doing the backbone of Malaysia's growth for over a decade. Nowadays it has become very common to integrate facilities having a condense epilator, an aromatics plant, ethane cracker, etc. all at the same complex, but the scale was kind of limited. RAPID will be a massive refinery integrated with petrochemicals and is a totally new concept compared to these existing assets. The challenge for RAPID will be to figure out how to best improve the economics of a whole group of plants. When you have downstream factories, what makes a difference is that you try to select the best performing products from different processes and that will maximize the economics of the whole plant. Malaysia and Petronas are very wise in trying to open and invite the best partners available and I strongly believe that Malaysia will become Southeast Asia's new petrochemical hub. Yet, many surrounding countries have many similar projects and the competition is going to be very strong. Malaysia will remain an important hub for the Industry, and for the industry as a whole, but we will also be partnering with investors from Kuwait and Japan in developing our presence in Vietnam. •

ASIA PACIFIC PROVEN OIL RESERVES Source: IEA CHINA INDIA INDONESIA WALAYSIA INDIA INDIA INDIA INDONESIA WALAYSIA INDIA INDIA INDONESIA INDIA INDIA INDONESIA INDIA INDONESIA

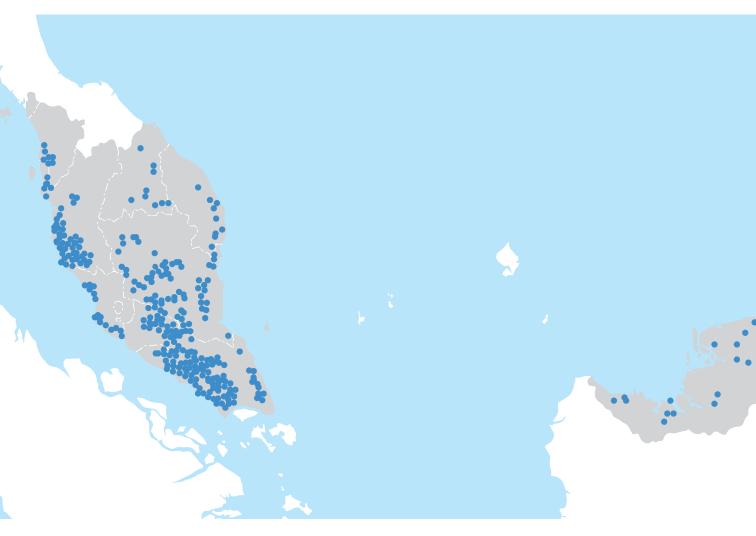




MALAYSIA'S NATURAL GAS PRODUCTION AND CONSUMPTION



EDITORIAL Global Business Reports



Natural Products

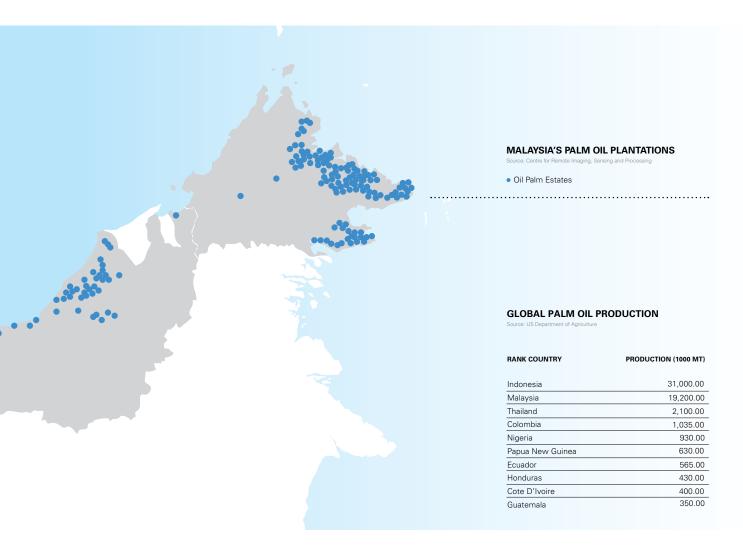
The oleochemical industry

Malaysia falls only slightly behind Indonesia in the ranks of global palm oil producers, accounting for 39% of global production and 44% of global exports. Since the 1980s, the country's palm oil refining and processing industry has expanded rapidly and today its oleochemical industry accounts for 20% of global capacity and home to some key players in the sector such as KLK Oleo, Pacific Oleo and Nat-

ural Oleo. Although it may still sit just below Indonesia in terms of volume, there is a widely held view that Malaysia has the edge in terms of innovation.

Oleochemical companies are currently feeling downward price pressures due to the current oversupply of oleochemicals in the global market. "The edible oil industry is more predictable as human consumption and human needs will always be there and as such, there will always be a market there," explains Yong Khai Wenia, director of Oiltek Sdn. Bhd. "The oleochemical segment on the other hand is surfactant and chemical orientated and thus the industry is competing with many other sources as far as the feedstock is concerned, such as fossil and vegetable based alternatives. In this regards, the edible industry is more stable and sustainable. In the oleochemical industry there is an oversupply and as demand is not directly related to human consumption, this market remains uncertain."

However, as in many industries, the market is a cyclical one and many are positive about the industry's long-term future, despite the current difficulties. As a leader in the Malaysian and the region's oleochemical industry, A. K. Yeow, managing director of KLK Oleo, provides some insight into the cyclicality of the market: "Malaysia is an export driven economy an the market for oleochemicals changes very quickly and favorability varies from one day to the next. Every market has its cycle and therefore you have to spread your footprint to have opportunities at every phase of the cycle. While the prices in the oleochemical industry mirrors the oil price, the consumption of oleochemicals is not really cyclical as a majority of oleochemicals are being used for the household and personal care industries. These two industries do not, to a certain extent, feel external market conditions such as recession, while demand for oleochemicals in other industries like the plastics and



tyre-manufacturing industries may come down significantly."

When risks are higher, new business developments seem bolder, and the recent entry of Turkish soap manufacturer Evyap has sparked much excitement in the industry. The company has chosen Malaysia as it first point of entry into the Asian market as well the very first destination where it has become involved in oleochemical manufacturing. Tanuj Roy, managing director of Evyap Sabun Malaysia, explains the significance of this move: "There had been absolutely no investments made in Malaysia by a Turkish company nor have there been any business ties between the two countries for 28 years. Evyap saw this as an opportunity to move into the market just as the business ties were restarting." Evyap manufactures soaps in Turkey and Egypt from beef tallow and Roy elaborates on the many factors prompting the decision to move into the oleochemical industry. "Relying solely on beef tallow,

a feedstock that represents only 12% of global oil and fats with a global production level of 25 million to 26 million mt/y is no longer the best raw material to depend on. As a company operating in many Muslim countries and catering to Muslim market you have to be absolutely clear on the halal certification and traceability of your product. Coupled with the logistical difficulties of sourcing the beef tallow from the US, which requires around two to three months shipping time, and the issue of sustainability, it is a major part of our motivation to switch to vegetable base manufacturing and diversify into oleochemicals and therefore enter into Asia."

For bodies like MIDA (Malaysian Investment Development Authority), the hope is that many companies follow suit. In a region where countries are vying to attract foreign direct investment, the entry of Evyap in Malaysia is a victory and proof that the right incentives are in place.

"While incentives like indirect fiscal benefits were offered by Indonesia, we perceived it as a temporary benefit and were proven correct as Indonesia's export tax has fallen from 25% to 0% over the last two years. Policies change as governments change, but Evyap's investment would remain and therefore we wanted to invest in a place where ease of doing business is more stable and with more developed infrastructure," said Roy.

Despite being overtaken by Indonesia as the world's largest producer of oleochemicals, the Malaysian oleochemical industry remains strong and is forecast to continue to grow, albeit at a slightly slower pace. "Even though some figures estimate growth in the Malaysian oleochemical sector to be 6% in the next five years to reach 15 million mt/y by 2018, 3% to 4% is a more realistic expectation in line with the global trend and taking into account the economic uncertainty in the West," said Yeow from KLK Oleo. •

A. K. Yeow

Managing Director **KLK OLEO**



KLK has been synonymous with plantations and palm-oil production in Malaysia since 1906. Can you tell us about KLK Oleo's main milestones over the last decade?

KLK Oleo has been manufacturing oleochemicals for the past 22 years. When palm-oil production was undergoing major growth, down-stream production of oleochemicals was strategically chosen in 1998 partly as a hedgeto manage thecyclical risk as it was uncertain whether the palm oil prices could be sustained and to ensure that the KLK plantations business would remain profitable in the long run. The learning curvefor oleochemicals for the part of the palm of the prices of the palm of the palm of the prices of the palm o

chemical production stretched almost eight years and KLK Oleo is now a fully integrated business. Over the last decade, KLK oleo has been expanding very rapidly bringing our capacity up from 300,000 tons 10 years ago to 1.6 million tonnes today. KLK Oleo aims to produce up to 2 million tonnesworldwide by the start of 2014. Our own plantation supplies a part of our oleochemical feedstock, and we also rely on our partnerships in Malaysia and Indonesia for our feedstock needs.

Where is the largest demand for oleochemicals coming from and what are KLK Oleo's main export markets?

Malaysia is an export-driven economy. KLK Oleo tries not to put the emphasis on one continent and aims to have a balanced global reach. The market for oleochemicals changes very quickly and varies from one day to the next. Every market has its cycle and therefore you have to spread your footprint to have opportunities at every phase of the cycle. While the prices in the oleochemical industry mirrors the oil price, the consumption of oleochemicals is not really cyclical as a majority of oleochemicals are being used for the household and personal care industries. These two industries do not, to a certain extent. feel external market conditions such as recession while demand for oleochemicals in other industries like theplastics and tire-manufacturing industriesmay come down significantly.

Under the KLK Group there is also further downstream resource-based manufacturing in China, Indonesia and Europe. While Malaysia remains your manufacturing center, can you tell us the motive behind establishing these other production sites?

Malaysia remains our core manufacturing center, but it is not our core market as more than 95% of the oleochemicals manufactured in Malaysia are exported.

Trade barriers are on the increase in many countries through regulations such as anti-dumping laws, import tariffs and new standards. At the rate that KLK Oleo is growing, we cannot be solely reliant on the export of our products from Malaysia and we also need to have a base in these countries where it is becoming increasing difficult to export to. Bases also need to be established in these countries for logistic and supply chain reasons.

Apart from rising trade barriers, what are the biggest challenges in Malaysia's oleochemical industry?

One of the biggest challenges is the logisticalcost that is now the single biggest expense, after manufacturing costs. In the export driven marketplace we have to look at our total cost from end-to-endand if that is too high you cannot be competitive. Another logistical problem stems from the economic slow-down in the West; there is an imbalance between cargo coming from the West, and that going to the East. Currently the freight going to Europe from Asia is almost double than the other way around and is a very different situation from 20 years ago, hence the need for our operations to be strategically located close to our customers.

You mentioned the importance of retaining your competitive advantage. Can you tell us more about the trends in regional competition?

The spread of global oleochemical manufacturing was quite evenly distributed 15 years ago. Yet in the last two decades the oleochemical sector has been driven by technological innovation and the accompanying efficiency improvements, and the business is mushrooming in South East Asia. This has forced many oleochemical companies, which did not have the right operational efficiencies and economies of scale to close down. In the next five years, there will be keen

competition among the players in the region especially Malaysia and Indonesia, resulting in the erosion of profit.At that stage we can expect another phase of re-consolidation.

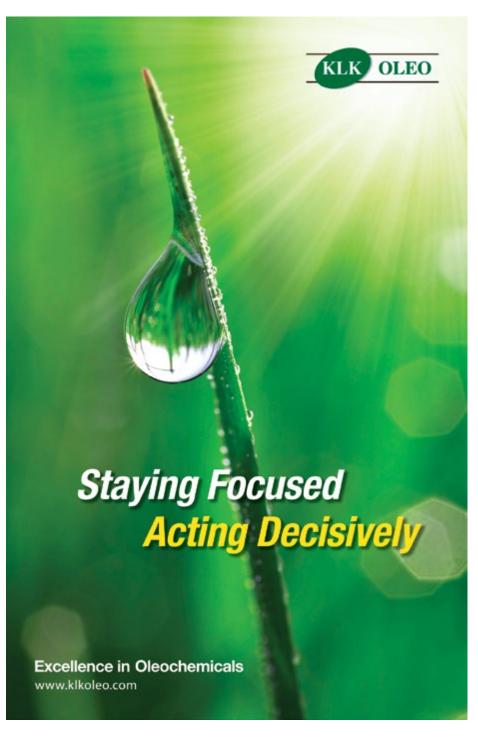
Palm-oil production suffers from a negative perspective in terms of sustainability.

How does KLK Oleo address these perceptions?

KLK is one of the founding members of RSPO and is strongly committed to promote the production and use of sustainable palm oil. Most of KLK's plantations are certified: our Malaysianand European oleochemical sites are 100% certified andby 2015 the whole KLK Group will be certified. We believe that the market forces are driving all players to give serious consideration to environmental issues. We are among the first to embrace this initiative and will continue to pursue it, and there are many companies supporting it. For sure, KLK Oleo will be at the forefront to offer renewable solutions to meet product and sustainable development needs.

Where will KLK Oleo be in the next five years?

Even though some figures estimate growth in the Malaysian oleochemical sector to be 6% in the next five years to reach 15 million tonnes by 2018, 3% to 4% is a more realistic expectation in line with the global trend and taking into account the economic uncertainty in the West. KLK Oleo always strives to achieve the highest possible efficiency to ensure that no matter what happens in the market, the company will be in the best possible position to buffer the downturn in order to survive. KLK Oleo aims to grow organically in line with our customers' needs and we foresee continuous growth for at least the next year and a half, although we are mindful of the huge overcapacity in the coming two to three years. •



Tanuj Roy

Managing Director **EVYAP SABUN MALAYSIA**



Could you brief us a brief overview of Evyap Sabun and its decision to move into Malaysia?

Established in 1927 in Turkey, Evyap is celebrating its 86th year as a soap manufacturing company. Evyap grew from a soap manufacturer, diversifying into different categories in personal care industry such as cosmetics, skin care, grooming, and hygiene care products. Today Evyap has multiple production locations in Turkey, Egypt and, from last year, a production facility in Malaysia while the major second investment coming up in 2014. Evyap also runs a commercial port in Istanbul called Evyap Port, which is a fully-fledged commercial port. Evyap's portfolio constitutes 90% of personal care products while soap remains the mainstay segment of our business. Evyap is the market leader in Turkey and Russia and among the top three soap manufacturers in the MENA. Evyap has been making soap by importing pure beef tallow from the US for many years and is the largest single location soap manufacturer in the world in terms of capacity, which is 350,000 tons of soap per year. We are currently exporting to over 100 countries but have not been

present in Asia and made the decision in 2011 that it is time to say yes to Asia and diversify into vegetable based feedstock, especially in light of changing consumer preferences and rising concerns about sustainability of tallow. Relying solely on beef tallow, a feedstock that represents only 12% of global oil and fats with a global production level of 25 to 26 million tons per year is no longer the best raw material to depend. As a company operating in many Muslim countries and catering to Muslim market you have to be absolutely clear on the halal certification and traceability of your product. Tallow is available in large volume in Europe, but we have not been able to source from there because it is not 100% beef tallow and traceable. Coupled with the logistical difficulties of sourcing the beef tallow from the US, which requires around two to three months shipping time and the issue of sustainability, it is a major part of our motivation to switch to vegetable base manufacturing and diversify into oleochemicals and therefore enter into Asia

Why did Evyap choose Malaysia as its point of entry over other countries in Southeast Asia that are also rich in feedstock?

The shortlisted investment destinations after setting our sights on Asia in 2011 were Indonesia and Malaysia. Despite the fact that Indonesia, at the time, was offering many benefits to companies investing there, we finally chose Malaysia for a number of reasons. There had been absolutely no investments made in Malaysia by a Turkish company nor has there been any business ties between the two countries for 28 years. Evvap saw this as an opportunity to move into the market just as the business ties were restarting. While incentives like indirect fiscal benefits such as export tax to grow domestic industries and value added industries were offered by Indonesia, we perceived it as a temporary benefit and were proven correct as Indonesia's export tax has fallen from 25% to 0% over the last two years. Policies change as governments change, but Evyap's investment would remain and therefore we wanted to invest in a place where ease of doing business index is more stable and more developed infrastructure. MIDA

and MITI have also been very welcoming and helpful in Evyap's process of setting up in Malaysia. Another factor in our decision was infrastructure and the location of the plant that we are constructing in Johor, is within 50 km radius of five of the worlds top 20 ports, Singapore, Tanjung Pelepas and Johor Port. Logistically, Malaysia has clear advantages, as its infrastructure is very developed. When it comes to cost of production, one may argue that labor costs in Indonesia is much lower, however one should not discount that there is a tradeoff that is diluted by the cost that will be incurred in compensating for a lower level of infrastructure development and much higher logistic cost compared Malaysia.

Could you elaborate on the plant that is currently under construction in Malaysia?

The construction of the plant started in September 2012. We are at 70% completion and should be commissioning the full project in the second quarter of 2014. This operation signifies a paradigm shift for Evyap as it is a completely new location and market, with new people and culture and most importantly, a new process. Evyap is not a fully-fledged oleochemical company and for the first time, we will strive to become one in Malavsia. This plant will be one of the world's largest integrated oleochemical plants and, once commissioned, should be producing close to 400,000 tons of product per year which will include a range of fatty acids from C-6 to C-18, oleic acid, glycerin, soap noodles and soap bars. In the first phase we are investing close to USD 150million with a very long-term perspective. This production plant will cater to our captive consumption partially. Evyap will also be selling all kinds of fatty acids into the market, as part of a new business segment. We are also very excited about Asia market because everything we do will be something new for us. •

Rubber and rubber gloves

Dealing with differentials

According to the Ministry of Plantation Industries and Commodities, the Malaysian Rubber Industry contributed over 36.4 billion MYR (\$11.49 billion) to total exports last year. To ensure the strong growth of this sector, the Malaysian Rubber Board (MRB) plans to launch special strategies within the next few months, which aims to increase the average national rubber productivity to 2,000 kg/ha per year by 2020. Just be-

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There are many companies that are competing in the glove market and many challenges that Top Glove needs to overcome on a daily basis. Our strongest competitors come from Malaysia, Thailand, Indonesia, Sri Lanka, China and India but there are also companies from many other countries that also want to grow in this industry. Another challenge that we face is the lack of skilled workers in the glove industry, which is especially challenging for Top Glove as we have set high growth and expansion targets. In order to solve this issue, we recruit staff straight after university and give them extensive on-thejob training, and retain them so they can work with us to expand the business.

> - Tan Sri Lim Wee Chai, CEO, Top Glove Corporation



hind, Thailand, Indonesia and Vietnam, Malaysia is currently the fourth largest producer of natural rubber in the world, producing 0.9 million mt/y of rubber in 2012.

Identified as a National Key Economic Areas (NKEAs) in the ETP, the industry aims to increase production to meet the goal of 30 billion MYR (\$9.47 billion) by 2020. According to Lim Kwee Shyan, president of the Malaysia Rubber Glove Manufacturers Association (MARGMA): "[MARGMA] did the first analysis of this goal in 2010. At that time, raw material was almost double the cost of what it is now, as was crude oil. As 50% of the cost was feedstock, increasing revenue was a bigger challenge. It is difficult to predict feedstock prices, but if they remain at present levels, both consumers and manufacturers will benefit."

Rubber gloves remain the industry's flagship product. "Malaysian rubber gloves are the main product in the rubber sector, contributing 80% of its revenue. In 2012, this contribution was 10.56 billion MYR in exports and in 2013 we hope to cross the 11 billion MYR threshold. Rubber gloves are the most established product in the Malaysian rubber industry and Malaysia exports over 60% of its output. Regardless of how the revenue in value terms grows, production output growth will continue to grow steadily at the rate of 8% to 12% annually barring any unforeseen interruption," says Lim.

Malaysia's four top rubber glove producers, Hartalega, Kossan Rubber, Supermax and Top Glove continue to expand production as the demand for synthetic gloves also continues to rise. As the world's number one rubber glove manufacturer, Top Glove is setting targets



Malaysian rubber gloves are the main product in the rubber sector contributing 80% of its revenue. In 2012, this contribution was 10.56 billion MYR in exports and in 2013 we hope to cross the 11 billion MYR threshold. Rubber gloves are the most established product in the Malaysian rubber industry and Malaysia exports over 60% of its output. The US is our biggest single export center, while the EU is our biggest regional customer. Latin America and Southeast Asia are also growing in importance. MARGMA started as a very small association and has grown fairly large. We have organized six international conferences for the industry, with the next one coming up in September 2014... [This] demonstrates the increased dialogue and cooperation MARGMA has facilitated for the rubber industry both domestically and regionally.

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- Lim Kwee Shyan, President, Malaysia Rubber Glove Manufacturers Association



in line with optimistic growth expectations. "We expect to grow at a rate of 10% annually over the next five years and we are confident that we will meet our objective to hold 30% of the global market share by 2015," says Top Glove Chairman, Tan Sri Lim Wee Chai.

MARGMA is confident that Malaysia will retain its leading position in years to come, with the only precondition being a continued drive for efficiency and innovation. "We have teams dedicated to working on how to increase efficiency, capacity, and automation technologies and, while we have achieved a great deal so far, we have a great deal more to achieve in the future," says Lim Kwee Shyan. •



Sector Support

Specialty and Industrial Chemicals

As admirable as the Malaysia's – largely successful – efforts in the petrochemical and oleochemical markets are, they have been assisted by the country's wealth of natural resources. A more telling and impressive sign of the country's ability comes from its industrial and specialty chemical sectors.

These sub-segments of the chemical industry have important linkages to practically every other sector in the economy. As such, they are key to Malaysia's ongoing efforts to diversify their economic base.

Paul Ellis, managing director of Schaefer Kalk in Malaysia, explains the significance of the guicklime and other lime products that the company produces in Malaysia: "Schaefer Kalk sells its product as a chemical that goes into the manufacturing of other products. Malaysia's geographical characteristics allow Schaefer Kalk to produce some of the world's finest quality quicklime and hydrated lime. Schaefer Kalk has managed to develop our product to the extent that we have international oil companies that use our products in the manufacturing of oil additives. With the growing automotive industry in Asia, many American oil additive manufacturing companies are moving to this region. Schaefer Kalk has had the opportunity to develop products for these companies to use here in Asia."

Taking the cue from leading international players, the sector continues to attract positive attention. "The Linde Group recognizes Malaysia's long-term growth potential and has, over the past three years, invested around 90 million MYR (\$28.41 million) in the business here," says Wong Siew Yap, managing director of Linde Malaysia. Linde is just one of

Daniel Loh

MALAYSIA R&D SPENDING

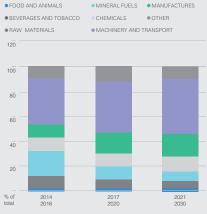
Source: Battell

| | GDP (PPP,\$ BILLION) | R&D (% OF GDP) | GERD (PPP,\$ BILLION) |
|------|-------------------------|-------------------|--------------------------|
| 2012 | 507 | 0.8% | 4 |
| 2013 | 531 | 0.8% | 4 |
| 2013 | 557 | 0.8% | 5 |

Managing Director **BASF MALAYSIA**

INCREASE BY SECTOR Source: Oxford Economics • FOOD AND ANIMALS • MINERAL FUELS • MANUFAC

MALAYSIA'S EXPORT CONTRIBUTION



leading specialty and industrial chemical companies that have facilities in Malaysia and the A-list includes players such as BASF, Evonik, DOW and DuPont. As a highly technical sector, the drive is for international companies to bring research and development facilities to the country to increase innovation in the region holding such a vast market with unique needs. Ellis, from Germany-headquartered Schaefer Kalk, explains the company's position in this regard: "It is certainly time to seriously consider having a technical expertise base in Asia, especially looking at growth markets such as the rubber glove industry that is located here. Malaysian materials have certain characteristics that the European materials cannot have because of the quality characteristics of the limestone here. The process of bringing in more technical expertise to Malaysia is starting and there is a general shift from relocating research and development centers in Europe and the US to Asia." •

Can you highlight some of BASF most innovative products used in Malaysia and elsewhere in the region?

BASF is very strong in construction chemicals in Malaysia. Our technologies have been used in many highly publicized construction projects such as the Burj Khalifa in Dubai and the construction of the Penang 2nd Bridge in Malaysia. BASF developed the polymer technology that was needed for pumping concrete mixture vertically, without the separation of the cement and aggregates, upward called BASF Smart Dynamic Concrete. Using this technology has also had a positive environmental impact, as it requires less machinery, labor and parts replacement. The product which was initially developed in Germany was further adapted through joint development to suit the local project needs and conditions. In 2013, BASF rebranded over 30 construction brands all under the Master Builders Solutions name so that people can identify the wide range of products with BASF.

Another example of Malaysia specific innovation is the development Clearfield Rice Production system. Malaysia was facing a weedy rice infestation, which threatened the well being of the county as rice is Malaysia's staple diet. The technology was originally developed in the US, for a similar problem they had faced with corn. Working closely together with the Malaysian Agriculture Research and Development Institute (MARDI) when the rice yield dropped tremendously, we were able to develop a crossbreed of rice that is resistant to a specific herbicide. With BASF's Clearfield production system, we were able to increase the yield from three to four mt per ha to eight mt per ha. As per BASF's product stewardship guide and focus on sustainability, we advised that the system should be used for two consecutive seasons, before alternating one season with normal production to ensure that this is a longterm solution, instead of the crossbreed becoming susceptible to a new form of the problem. This shows BASF's commitment to the long-term viability of its solution and not just a 'quick-fix'.

Can you tell us what the main opportunities and challenges are for BASF in Malaysia?

As per Malaysia's Economic Transformation Plan (ETP) there are five key sectors that are identified as National Key Economic Areas (NKEAs) that are highly relevant for BASF and where we see the most opportunities. These are agriculture, electronics and electrical, construction, oil and gas, palm oil and rubber. We have the competitive advantage in the availability of feedstock through our partnership with Petronas. Unfortunately Malaysia has a limited local market and up to 90% of BASF production in Malaysia is exported. BASF is close to its feedstock in Malaysia, but not that close to its customers, which adds to transportation costs. Another challenge for Malaysia's chemical industry is the very significant competitive threat that China poses, especially when we look at the upstream commodity chemicals. •

Paul Ellis

Managing Director SCHAEFER KALK (MALAYSIA) S.B.



Can you provide us with some background information on Schaefer Kalk and its establishment in Malaysia? Schaefer Kalk is a family-owned company, started in 1860 by the Schaefer family in Germany. The majority of major lime producers in the world are all family owned, as the limestone used - which is a basic material used in building roads, in concrete manufacture, and for other construction products - is an inexpensive material but buying land for a limestone quarry is a very expensive exercise and the return on the capital does not meet modern day business thinking. Shareholders are not usually interested in companies expanding into limestone and therefore we find these quarries and limestone businesses are owned by families who

are in it for the long run and, in Schaefer Kalk's case, this translates to five generations of family management. Schaefer Kalk started producing precipitated calcium carbonate (PCC) from limestone through burning quicklime. These processes and capabilities were built up in Germany, resulting in Schaefer Kalk starting to sell these crystals all over the world in the 1980s. Schaefer Kalk also started to develop products suitable for the production of cigarette paper that was traditionally dominated by the US and Europe in the 1960s and 1970s. When the demand for cigarette paper started to rise in Asia, Schaefer Kalk knew that if it wanted to produce products of the right quality for this market, they had to use the right raw materials. Asia was the future in in the early 1990's and Schaefer Kalk started selling its product into Asia. In the mid 1990s Schaefer Kalk formed a joint venture with a local entity and opened a plant in northern Malaysia that started production in 1997. Despite the difficulties that the Asian crisis brought in 1997/1998, the cigarette paper market was still growing in Asia and ever since that time, cigarette paper production has moved predominantly to Asia. The market is such that there is a continual drive for higher quality and in this area Schaefer Kalk is specialized; designing and producing high quality filler for the cigarette paper. Today Schaefer Kalk's global operations produce filler for over 50% of the world's high-grade cigarette market

Can you tell us more about the nature of the PCC market in Southeast Asia and Schaefer Kalk's position in the region? Standard quality PCC is produced in huge quantities all over the world and is used in almost every imaginable product. However, Schaefer Kalk prides itself in the fact that we are only producing PCC of a very high and consistent quality. Consistency and reliability of our products are most important differentiators from the competition and we are essentially selling a designer crystal that meets very specific requirements. While there is some competition in this very niche market coming from Japan, Schaefer Kalk is very comfortable in its chosen market. Schaefer Kalk is also

present in the PCC market in China, Indonesia and India as well as in Thailand, and Saudia Arabia, where our core market is supplying to cigarette paper producers, and toothpaste manufacturers. An exciting market that Schaefer Kalk has identified is in supplying its product to milk powder and baby formula manufacturers in New Zealand, which is a hot topic in Asia. We see an opportunity here and have the certification, the reputation, the control systems and the quality to move into this market.

Can you elaborate on Schaefer Kalk's product development processes and the possibility of establishing a research and development center in Malaysia? When Schaefer Kalk came to Malavsia and developed the production facilities here, we found that Malaysia's limestone is second to none with about 99% pure calcium carbonate, which is very unusual. This allows Schaefer Kalk to produce some of the world's finest quality quicklime and hydrated lime. Schaefer Kalk has managed to develop our product to the extent that we have international oil companies that use our products in the manufacturing of oil additives. With the growing automotive industry in Asia many American oil additive manufacturing companies are moving to this region. Schaefer Kalk has had the opportunity to develop products for these companies to use here in Asia. While product development often happens in collaboration with the clients, Scheafer Kalk's experts are based in Germany where we have an extensive research and development center. It is certainly time to seriously consider having a technical expertise base in Asia, especially looking at growth markets such as the rubber glove industry that is located here. Malaysian materials have certain characteristics that the European materials cannot have because of the quality characteristics of the limestone here. The process of bringing in more technical expertise in Malaysia is starting and there is a general shift from in relocating research and development centers from Europe and the US to Asia. As quality requirements increase Schaefer Kalk, has gone through the certification processes in Malaysia and have been awarded good manufacturing practice (GMP) certification and because of that we are leading the group.

Can you tell us about the main challenges of operating a limestone quarry and supplying PCC in Malaysia?

Having a quarry requires land and land is a difficult subject in Malaysia as it is in the world, as landowners are very emotive about land. The British system of land division to ensure that Malaysians are getting an adequate proportion is very complicated and now somewhat outdated. Land is controlled by the State and the administration of land does not currently meet modern day aspirations. Somehow the country has to move forward and find a way to deal with this very political issue. Another challenge that Schaefer Kalk has to face is red tape when it comes to exports. Schaefer Kalk sells its product as a chemical that goes into the manufacturing of other products, but the Malaysian government sees it as a mineral that is subject to the control of mineral exports. Lastly, logistics is expensive and it is not a free market in Malaysia adding to costs and that needs to change so that material can be shipped competitively.

Where will Schaefer Kalk be in Malaysia in five years?

For Schaefer Kalk, Malaysia still has great potential. In terms of the ease of doing business, it is English speaking, open and free and politically stable. Malaysia has solid infrastructure that keeps developing and new projects such as RAPID serve as a magnet for other companies to set up in Malaysia as more products and services are needed

Schaefer Kalk has built its reputation in Malaysia and is expanding in the region through a joint venture in China and having just signed a letter of intent to open another production facility in China. Schaefer Kalk is also busy developing the plant in Malaysia. We are estimating a 30% increase in PCC production over the two to three years and will double our total business in the next five to 10 years. Schaefer Kalk is in expansion mode right now, run by a solid and experienced team, and we are running it flat out.

Schaefer Kalk Malaysia is regionally focusing on niche PCC markets mainly in the paper, healthcare, food, and pharmaceutical industries, as well as niche lime markets mainly in the chemical, food, and pharmaceutical markets. We see these as important growth areas, and have already developed our quality assurance systems to meet the very high quality demands in these sectors.

Progress by Tradition

SCHAEFER KALK Kalk





SCHAEFER KALK stands for high quality lime and quicklime products as well as for Precipitated Calcium Carbonates (PCC).

At SCHAEFER KALK, it has always been our company goal to produce and deliver the highest quality limestone products, to fulfill the differentiated wishes of our customers and to help them in solving specific problems.

APPLICATIONS:

- Chemicals
- Paints
- Cosmetics/Pharmaceuticals/Food
- Paper
- Plastics

SCHAEFER KALK (MALAYSIA) SDN. BHD.

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Ong Ewe Hock

Managing Director **DUPONT MALAYSIA**



DuPont has been pioneering new technologies in Malaysia since 1974. Can you highlight some of DuPont's key milestones in last decade?

DuPont in Malaysia started of with as representative office in Malaysia in the 1970s with only 30 people and has since grown to employ more than 250 people. One of our key milestones has been establishing our rice field research center in 1997, built on about 14 acres of land in Penang. This facility has been approved by the relevant authorities such as the Pesticide Board and affords DuPont the opportunity to test the active ingredients of its chemicals in a safe and closed space. Another highlight for DuPont in Malaysia has been relocating to the new Kuala Lumpur office that centralizes DuPont's presence in Malaysia. It is necessary to collaborate with the scientific community and with the government. This strategic move means that DuPont is now more connected, both in terms of infrastructure and software. DuPont's move to the city is consistent with DuPont's global collaborative innovation strategy and we are now able to connect to 10,000 scientists and researchers on real-time basis, based on project need. We have developed our model from just bringing in products to the market to collaborating with the market and offering local solutions, driven by DuPont's integrated science. While DuPont has divested in the coatings area of its business in the second quarter of this year, the company grew through the acquisition of the Danish food ingredient conglomerate, Danisco, more than two years ago. As a part of that acquisition, we also gained the plant in Penang that has more than 160 people and is an important part of DuPont's global operations in Malaysia.

Can you tell us more about the industries that you will be targeting under DuPont's new global strategy?

DuPont is renowned for its advanced materials and these products - such as polymers, specialty chemicals and electronic material - remain a significant part of our product portfolio. Central to our global strategy is the bio-base industry, which is an integral and connecting part of both DuPont's advanced material, nutritional and agricultural solutions. Through the acquisition of Danisco we have enhanced our capabilities in this central industry as Danisco is not only specialized in food ingredients, but had also acquired a Genencor, one of the world's largest fermentation companies producing industrial enzymes. This is a very important segment as DuPont specializes in hybrid or biogenetic seeds and crop protection chemicals as well as specialty food ingredients. Finally, DuPont is focused on sustainability science and sustainable growth and DuPont believes firmly that the growth in available biomass and bio waste that accompanies global population growth can be converted into some of the chemicals such as polymers that we are selling today.

Could you elaborate on the biomass prospects in Malaysia and how it compares with other countries where DuPont is present?

In the last two years, delivering solutions through our integrated system has become very important to DuPont. In Malaysia, such large-scale biomass is available from palm oil. However, due to the geography of the palm-oil plantations, being scattered across the coun-

try and often in remote locations, the logistics for the collection of biomass is complicated. Having a center point for the collection of biomass is key for this sector to function. The Malaysian government is well aware of these challenges and has put many programs in place to facilitate this. The bio-based economy has been identified as one of the key focus areas of the Economic Transformation Plan, which illustrates encouragement from the government to partner with local enterprises to help bring the necessary technologies to Malaysia.

Other countries that are successful in leveraging on biomass have large acreages of corn for example, such as the US and China. While Malaysia does not have this advantage, we firmly believe that we can tap into biomass from palm oil for potential usage, including cellulosic ethanol. DuPont's demonstrating plant in Tennessee hosts visitors from both Malaysia and Indonesia and showcases the technology that DuPont can offer to convert waste into energy or useable material. DuPont continues to work closely with major players in the industry and though technological development is still very much US-centric, we believe the technology can be replicated in Malaysia once we uncover the right partner.

Apart from the complicated logistics of sourcing bio-waste in Malaysian, could you elaborate on other main challenges that need to be overcome for the industry to flourish?

Having environmentally sustainable operations is becoming an increasingly important factor across all industries, including palm oil. There is a drive for less land to be cleared and enhanced productivity from the land at a lower cost to support sustainability. This can be achieved through planting material enhancement. The oil-palm plant has many genetic traits that have not yet been not fully mapped. The breeding matter of the oil-palm industry is still very traditional and it takes about 11 years per breeding cycle. Through genetic mapping we believe we can optimize the breeding cycle time, rendering the yield and quality of the material more predictable. It also presents an opportunity to repurpose the technologies that we are using to screen crops and seeds. •

Global Business Reports INTERVIEW

Wong Siew Yap

Managing Director **LINDE MALAYSIA**



Linde Malaysia Sdn Bhd, formerly MOX-Linde Gases Sdn Bhd, is the leading gases supplier in Malaysia since 1960. Last interviewed by GBR in 2010, the company was showing impressive growth. Can you tell us about your current position as Linde Malaysia?

As the leading industrial gases supplier in the country, Linde Malaysia has continued to register growth in tandem with Malaysia's GDP growth or even outpace it. For over 50 years, we have been a steady partner in the economic and industrial development of Malaysia and will continue to invest in our business to take advantage of emerging needs in the metal processing, manufacturing, fabrication, construction, chemicals, petrochemicals, pharmaceuticals, glass and food manufacturing market sectors. Linde Malaysia is also the key gases partner to most of the country's largest and most important healthcare facilities. One of Linde Malaysia's most significant changes has been the acquisition of the remaining 49% shares in Eastern Oxygen Industries Sdn Bhd (EOX) in August 2011 in Sarawak, taking our ownership to 100 percent. EOX, the largest gases company in East Malaysia, has been rebranded to Linde-EOX Sdn Bhd in January 2013. Now, Linde operates as a single unit throughout Malaysia, consolidating our market leadership across the country.

With regards to the investments you have mentioned by Linde in Malaysia, can you speak to the importance Linde Malaysia is towards the Linde Group's growth in South and East Asia?

Within The Linde Group's South and East Asia regional business unit, which comprises 11 countries stretching from Pakistan in the West to South Korea in the East, Linde Malaysia is the largest biggest business unit both in terms of turnover and profit contribution.

The Linde Group recognizes Malaysia's long-term growth potential and has over the past three years invested around 90 million MYR in the business here. In 2013 we have also brought on stream a dry ice press unit, consolidating our position as the largest dry ice producer and supplier in the country. Furthermore, by end of 2013, Malaysia will be home to the regional remote operations center from which almost all Linde plants are operated.

In 2014, we expect further new investments as we open new hydrogen plants in Q1 of 2014 at the East Coast near the new petrochemical facility. In addition, many of our sites will be redeveloped and upgraded over the next five years in anticipation of meeting the expected increase in demand, and reaffirming our commitment to serving the growing and evolving needs of the local market.

The Malaysian chemical industry relies on industrial gases, amongst others, to improve efficiency, productivity and to meet growing environmental needs. How does the use of Linde gases by chemical producers contribute to these goals?

The industrial gases market has always been a local business. Linde Malaysia has been serving the Malaysian market for more than 50 years now; our infrastructure & facilities, coupled with knowledge of the local environment and the extensive network that we have established thus far, has made us a reli-

able service provider to our customers. As a critical service provider to the industries, we understand that plants' downtime need to be kept to the minimum in order to cater for continuous and sustainable customer's demands. We are proud of our gases solutions and applications technologies in helping our customers meet their business requirements. This is why our strong network is pivotal, as we need to ensure our customers of the continuous and uninterrupted supply of Linde high-quality gases and services.

Environmental sustainability is drawing increasingly more focus from the international community as well as from South East Asia. What changes have you seen in the local approach to such challenges?

As part of our ongoing drive to ensure sustainable operations, we are leveraging on The Linde Group's technology to continuously reduce the amount of energy that is used to produce one molecule of gas and we have been successful in this process. Linde is also capturing waste gases such as carbon dioxide from the petrochemical industry, which would have been emitted into the air with harmful effects. In this way we are reducing the amount of pollution that would have been emitted and repurposing it for other uses.

Where will Linde Malaysia be in five vears time?

Linde remains committed to maintain our market leadership in the gases business in Malaysia. To achieve this goal, we will continue our efforts to invest and develop innovative solutions and applications technology that meet the unique needs of our customers. leveraging our wide geographical footprint and close ties with long-standing customers. We are committed to building a high performance culture in the company, working to outperform the market and continuously increase our productivity. Linde Malaysia is here for the long term, and we will continue to make further investments in Malaysia, ensuring we are well positioned as the leading partner for the local chemical industry, especially in fine chemicals and downstream chemicals. •

Lee Chooi Keng & Teh Li King

LCK: Managing Director TLK: Group Managing Director HEXTAR CHEMICALS

Could you give us a brief overview of Hextar Chemicals as a truly Malaysian chemical distributor?

LCK: Hextar has been operating since 1985, gradually expanding from doing solely agricultural chemical trading to formulating our own products under the Hextar brand. While agricultural chemicals remains our base business, Hextar has also expanded into related fields such as industrial and specialty chemicals. In the 1980's Hextar took the opportunity that presented itself to set up its first export business outside of Malaysia in Pakistan where we started by selling our products directly to our clients before gradually increasing our presence and setting up a factory.

TLK: In Malaysia alone, in terms of chemical manufacturing alone we have about 15 acres for agrochemical manufacturing under the Hextar brand. While we import the active ingredients mostly from China, Hextar is responsible for the formulation of its own products and does this with the support of its own team of chemists and its own laboratory facilities.

Can you tell us about Hextar's evolution and expansion into different products?

LCK: The formulation and manufacturing

of agrochemicals requires many different excipient chemicals or industrial and specialty chemicals. To deliver the quality that has come to be associated with Hextar Chemical's, sourcing and using the right specialty chemicals is a priority. As such, Hextar has formed a joint venture with an Indian specialty chemical company, Unitop to form Hextar Unitopin 2011 that support our needs in agrochemical formulation.

TLK: The joint venture was initially used to support Hextar's agrochemical manufacturing, but through the transfer of Unitop's technologies, we were able to commercialize this business and we now have a substantial client base throughout the region that make use of these specialty chemicals.

Of the industries you supply to, where do you foresee the most growth in the future?

LCK: Hextar has more capacity for growth in the agrochemical industry and we also see a great growth potential in industrial chemicals that cover many areas. Though innovative strategies such as the Hextar Unitop joint venture, Hextar was able to grow more than ten fold in last eight years in terms of revenue.

TLK: Hextar is also capable of producing chemicals for the oil and gas sector as we it requires similar emulsifiers as those used in for agrochemical production, but we still have a long way to go in this area. We have a big enough capacity and available land on standby for any opportunity that arises. Moving forward Hextar cannot rely solely on the agrochemical sector, but have and will continue to use our expertise in this area to expand into related fields.

Given that Hextar has been able to grow its international business, how important is the Malaysian market relative to its operations in Pakistan, Indonesia, China, India, the Philippines and Australia?

LCK: Malaysia holds many advantages such as English being the preferred business language and a central location, however we have built partnerships and affiliates in these countries as we believe that the business in these countries will grow quicker than in Malaysia as they have the population growth on their side. Hextar is also looking to expand into Thailand and Vietnam where we see similar potential.

When establishing our presence in a country, we start with agrochemicals as our base and after we establish a good partnership we expand our product offering to industrial chemicals, fertilizers and specialty chemicals

TLK: In addition to the countries where we have established our presence and have registered offices, Hextar is currently exporting to 30 countries, the majority of which are in Southeast Asia, but we have also gone as far as Nigeria and Latin America.

In a highly competitive market where there are many multinationals present, how does Hextar add value for its clients and ensures that it retains a sizeable portion of the market?

TLK: As a generic product manufacturer, we are able to offer the same quality chemicals at a lower price. In terms of revenue and product registration, Hextar is the largest local company, offering the most comprehensive range of crop protection, fertilizers and related products. In the years to come we will seek to consolidate this position by becoming a one-stop solutions provider to our customers and we have invested a lot of putting the supporting infrastructure in place.

LCK: In our laboratory we are able to test and trial formulations to create cost effective products. Hextar has invested significantly in the right equipment and are focused on increased and accurate data generation to ensure the highest quality products. Where it is possible Hextar aims to use downstream palm-oil products to replace hydrocarbon products as well as using water-soluble chemicals. Hextar follows the strictest FAO (Food and Agriculture Organization) standards and specifications.

What type of growth do you foresee for Hextar in Malaysia in the next five years?

TLK: Hextar should continue to see high double-digit growth, though the main growth may change from agrochemicals to industrial chemicals and fertilizers. Malaysia is a great country to invest in and local companies such as Hextar have lot to offer in terms of technology, expertise and facilities. Hextar is always open to new opportunities and Malaysia is the perfect country from which we can to reach the right markets.•

The New Face of the Malaysian Chemical Industry

Neither a member of the high-growth Asian Tigers club nor facing the same infrastructural challenges as its Southeast Asian neighbors such as Indonesia, Malaysia seems to be a country with many faces. The Malaysian economy is often held as a role model for developing countries with its successful shift from an agricultural to a middle-income, knowledge-based economy. The contribution of agriculture to GDP has dropped from 28.8% in the 1970s to 11.9% in 2012 and industrial production continues to grow at a remarkable rate, reaching 7.5% in 2012 and making industry a lead contributor to GDP at 41%.

Now the Malaysian chemicals sector is taking the lead. While the palm oil and rubber segments continue to be strong, all eyes are focused on the petrochemical sector with the development of a new petrochemicals hub in Southern Johor.

Malaysia is bordered by Thailand in the north, Indonesia in the south, and the Philippines in the east. Strategically located along the Strait of Malacca, a major sea-route connecting the Far East to Asia, Europe, and the Middle East, Malaysia's infrastructure is well developed with international airports and seven international seaports. In addition, as the largest investment banking service provider in Asia Pacific Malaysia's sound financial infrastructure makes the country a recognized and attractive business destination.

Malaysia has been enjoying solid GDP growth after recovering from the Asian financial crisis of 1997/98 and boasts with a stable government that seeks to promote investment and international trade. In an attempt to further Malaysia on its path to become a high-income, developed country by the year 2020, the Malaysian government is committed to stimulate growth in the manu-

facturing sector through the Economic Transformation Plan (ETP). Despite the central bank's (Bank Negara Malaysia) announcement of a downwardly revised GDP growth forecast for 2013 to between 4.5% and 5% from the previously projected 5% to 6%, Malaysia's economic outlook remains positive.

The manufacturing sector in Malaysia is largely centered on export manufacturing and has traditionally yielded high returns on investment. A total of 804 manufacturing projects were approved in 2012, with investment in this sector totaling at RM41 billion and investments in chemical and petroleum products accounting for almost 30% of total investment in the manufacturing sector.

Ranked 24th amongst all exporting countries, Malaysia is a leading exporter of oil and gas, palm oil and rubber. Malaysia enjoys an abundance of palm oil and since the early 1980s the industry has expanded rapidly. Today the Malaysian oleochemical industry is one of the largest in the world, accounting for 20% of the global capacity.

According to the Ministry of Plantation Industries and Commodities, the Malaysian Rubber Industry contributed over RM36.4 billion to the country's total exports last year. To ensure the strong growth of this sector, the Malaysian Rubber Board (MRB) is planning launch special strategies within the next few months, which will aim to increase the average national rubber productivity to 2,000 kg/ha per year by 2020. Just behind, Thailand, Indonesia and Vietnam, Malaysia is currently the fourth largest producer of natural rubber in the world, producing 0.9 million tonnes of rubber in 2012.

Sitting on the world's 14th largest natural gas reserves and 23rd largest crude oil reserves, Malaysia's petrochemical industry is world-renowned and is an intricate part of the wider chemicals industry providing a steady supply of feedstock material to the sector. Until now the three world-scale petrochemical zones in Gebeng, Kertih and Pasir Gudang has been the country's petrochemical manufacturing hubs. However, the refinery and petrochemical integrated development (RAPID) project in Penerang is poised to change the face of Malaysia's and South East Asia's chemical industry.

Petroliam Nasional Berhad, better known as Petronas, dominates the Malaysian industry, petrochemicals operating Malaysia's three petrochemical hubs and now the driver behind the RAPID project. Upon completion the RAPID complex developed in Southern Johor, will produce 9 million tons of petroleum products and 4.5 million tons of petrochemicals per year. The proposed 300,000 bpd crude oil refinery will supply the feedstock for the petrochemical complex. With this, the project aims to take a sizeable portion of the \$400 billion global specialty chemicals market.

Being developed at an estimated cost of RM60 billion, the RAPID project was launched in May 2012 with completion expected by 2016. However, the recent delay in awarding work contracts for the project means that Petronas has set the new target for the sites full commission and completion in 2018. With a project of this seize, delays are not unexpected. but the investment community is eager to see the project take off with the announced delay in July causing shares in Petronas to drop by 0.6%. The construction of the site is expected to be done through 20 construction contracts, creating an estimated 40,000 jobs during construction and a further 4,000 jobs when completed.

The RAPID project will become the new face of the Malaysian chemicals industry, transforming it from an industry driven by low cost and physical capital to an industry that reflects the strength of innovation, efficiency and technology. In line with Vision 2020 of becoming a developed country, the RAPID project will set the new industry standards in the employment of latest technologies that will minimize the impact on the environment. The development of the RAPID project is setting the standards for new developments in manufacturing in Malaysia and the entire South East Asian region. The global stage that the RAPID project is commanding is refocusing the world's attention on Malaysia, its strategic global position and the unique advantages that it offers international investors. •

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Challenges and Opportunities: Transport, Human Resources and Sustainability

"For Schaefer Kalk, Malaysia still has great potential. In terms of the ease of doing business, it is English speaking, open and free and politically stable. Malaysia has solid infrastructure that keeps developing and new projects such as RAPID serve as a magnet for other companies to set up in Malaysia as more products and services are needed."

- Paul Ellis, Managing Director, Schaefer Kalk (Malaysia) S.B.



Chemical Barriers

Hurdles for the sector

The chemical industry is, at its core, an attempt to solve the world's problems. "In the current scenario, the key challenges moving forward will be ensuring sustainable energy, environmental and climate protection, meeting the demands for food and nutrition and doing all this with increasingly limited available land. Chemistry enables us to find solutions to each of these challenges," explains Daniel Loh, managing director of BASF Malaysia.

In order to play this role, however, it must first address its own challenges. Although the potential of Malaysia's chemical industry is in little doubt – and its future prosperity seems all but assured – there are a number of hurdles that currently exist or will arise as the industry develops. Infrastructure, human resources and questions of environmental sustainability loom large in Malaysia, and companies are finding ever more innovative ways to address them.

AVERAGE AND MINIMUM MANUFACTURING WAGES IN ASEAN

MONTHLY IN USD

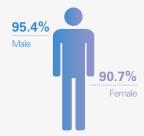
| MONTHLY IN USD | AVERAGE MANUFACTURING WAGES | MINIMUM WAGES |
|----------------|--------------------------------|------------------|
| Cambodia | 101 | 43 |
| Indonesia | 182 | 132 |
| Laos | 45 | 64 |
| Malaysia | 666 | N/A |
| Myanmar | N/A | 17 |
| Philippines | 212 | 181 |
| Singapore | 1,639 | N/A |
| Thailand | 263 | 79 |
| Vietnam | 107 | 49 |

LITERACY RATE

CIA World Factbook

93.1 %

Total Popoulation



TOP UNIVERSITIES IN ASIA

Source: QS University Rankings 2013

| RANK | UNIVERSITY |
|------|--------------------------------------|
| 33 | Universiti Malaya (UM) |
| 57 | Universiti Kebangsaan Malaysia (UKM) |
| 61 | Universiti Sains Malaysia (USM) |
| 68 | Universiti Teknologi Malaysia (UTM) |
| 72 | Universiti Putra Malaysia (UPM) |

EDUCATION EXPENDITURE

5.9%

OF GDP

ource: CIA World Factbo

Noraini Soltan

Vice President

MALAYSIAN PLASTICS MANUFACTURERS ASSOCIATION

There has been increased focus on sustainability and environmental legislation across the globe. Can you please discuss Malaysia and MPMA's efforts in raising environmental standards and awareness?

The plastics industry has always suffered from a negative perception with regards to the environment and we see a great deal of bad publicity in the press. The problem here is that our processes are

Malaysia is one of few emerging economies that boast negligible unemployment. However, the low unemployment rate translates to a lack of readily available skills, in professional and elementary positions. According to James Thong, country manager of Dow Malaysia: "At the moment, there is a slight labor shortage in the country with almost a million (890,000) elementary jobs vacant. If not addressed quickly, some industries may be forced to move, challenging Malaysia's competitive edge in some sectors."

Professional recruiter for the oil and gas and petrochemicals industry, Brunel-Energy Malaysia's general manager, Ganesan Periasamy, describes the situation: "In the late 1990s, it was an employers market [in Malaysia], but over the last decade it has become an employees market. We have seen a growth in the market and from 2000 they have all been competing for people with the right skills."

no worse than any other manufacturing sector; it is how plastic is used and disposed of that causes environmental problems. To manage the situation, the MPMA has raised funds from its membership to help launch media campaigns promoting 'Don't be a Litterbug' and the '3Rs': Reduce, Reuse and Recycle. We are working with volunteers, schools and other organizations to reach out to the public to reduce littering. In terms of manufacturing, we are constantly working towards improving our technologies and processes to reduce carbon emissions. We are also promoting Life Cycle Assessment (LCA) and Sustainability. On LCA, MPMA had recently published a book on LCA, whilst on sustainability MPMA had recently organized a conference on sustainability that provided a forum for both government agencies and Industry to discuss sustainability initiatives. Many people are unaware that plastic products such as plastic bags have a low carbon footprint.

In the face of increasing competition, Malaysia's extremely low unemployment rate and high skill level are seen to be a major asset. What would be your advice to any companies facing other challenges at the moment?

In the last couple of years, we have seen

Periasamy elaborates on the affect of regional projects on local skills availability: "Petronas is the industry's backbone and dictates the policy that aims to employ local people and utilize local resources. The fabrication yards become busy with local jobs, but there are also international jobs being created by massive projects such as the Gorgon project in Australia that is being developed by Chevron for which some modules are also fabricated in Malaysia. The yards are getting busier but the resources available remain the same. The talent is not sufficiently developed and there is always a shortage."

The RAPID project will be the largest strain on the labor pool. "In considering the skills that will be required for this project we have to be realistic. RAPID will be located in Penerang where the local population is only 10,000 people. At its peak the project will require 70,000 people and these people will need to

increased competition from China, India, Vietnam, Thailand, Indonesia and even eastern European countries. To manage the challenge posed from these countries, the Malaysian plastics industry must maintain its competitiveness. One advantage that we have is local resin supplies, but the resin prices have to be stabilized for us to stay ahead of the competition. As Malaysia cannot compete on labor costs, it is vital for companies here to invest in technologies and machinery. Low material costs and improved efficiencies will go some way in ensuring our continued edge in the market.

MPMA also has a talent development programme, funded through a RM3 million grant provided by the Economic Planning Unit (EPU) of the Prime Minister's Department, with the aim of creating a pool of knowledge based technicians/engineers who would be able to drive product innovation and transform companies from OEM to ODM; while our labor costs may not be the lowest, we want to ensure that the quality of our labor is of the highest standard. During Malaysia's industrialization, many multinational corporations came here. Their need for reliable producers has encouraged us to invest in further developing the skills of our workforce and raising the talent benchmark. •

come from all over the region, including India, the Philippines and Thailand," explains Sarjit Singh, general manager of Rotary Mec. "The RAPID team has been very thoughtful about this issue and will be building accommodation onsite. In the oil and gas sector there is generally a big challenge in the scarcity of human resources. Rotary Mec is in the privileged position of having access to Rotary Singapore's global workforce that is almost 7,000 people strong. For the RAPID project we will require 3,000 employees that we will get from this global workforce. The skills need to be sourced globally, and as the world continues to become smaller and borderless, it becomes easier. Even though Rotary Engineering is listed in Singapore, it is a truly multinational company with 56% of its workforce coming from India. Our skills and training centers in India and elsewhere ensure that Rotary employees are suited for the desired position

and well versed in the safety, regulatory and cultural requirements of Singapore or Malaysia."

Another issue that companies must be conscious of is environment sustainability. In the past, Malaysia may have lagged behind other regions in the world in enforcing safety and environmental regulations, although in an export-orientated market companies were still forced to maintain foreign

standards. "There is much regulation and legislation governing product safety standards in Europe, where our product and process development takes place," explains Kiew Chee Heong, managing director of Thor Specialties Sdn Bhd. "Malaysia has been quite slow in passing legislation to make environmentally safe products the acceptable standard. However, our international customers are geared towards the trends in Europe

and have been demanding our environmentally sustainable products for a few years now and foresee that these trends will come to South East Asia."

Even today, Western Europe and other developed markets impose greater environmental regulations on companies that Malaysia does, as Lothar Lauszat, managing director or Leschaco Malaysia explains: "restrictions and requirements in the developed markets are much higher and stringent than what we find in emerging markets such as Malaysia. In Malaysia safety and environmental regulations are still seen as a grudge purchase rather than a necessity while the country is going through the same learning curve that the developed markets have already gone through."

This proves a disadvantage for some companies: notably those who rely on the quality of their product of their innovation, rather than purely on their price. "There also has not been an adequate shift towards environmentally friendly technology, especially waterborne technology in Asia except in Japan, Korea and Singapore to some extent. This makes it harder for Nuplex to compete in the local market when it comes to pricing in the low segment," says Giorgio Noli, general manager of Nuplex.

This situation is, however, rapidly changing, with Malaysia becoming increasingly focused on these concerns over recent years. H. A. Khoo, from Suka Chemicals, observes: "In different segments of the industry the increased focus on environmental sustainability is a significant challenge. The trend is to move toward water-based or environmentally friendly chemicals."

The Chemical Industries' Council of Malaysia (CICM) is sending a clear message on sustainability, as Dr. A Hapiz Abdullah, CICM chairman, notes: "[CICM's] new vision centers on the word 'sustainable', which is pivotal if we still want a vibrant chemical industry in 20 years. We are taking the lead and pushing our members to incorporate sustainable business models. This is to be crafted around our Responsible Care initiative. Running chemical plants is risky and trying to run it without any disruptions is extremely difficult and requires a collectively focused effort."



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project management, recruitment and consultancy



Ganesan Periasamy

General Manager

BRUNEL-ENERGY MALAYSIA

Brunel is present with 107 in 41 countries. Can you tell us more about your operations in Malaysia and its relative importance in Brunel's global network?

Brunel started in Malaysia in 1996 through an acquisition exercise, with the main purpose of serving the oil and gas industry and providing them with manpower. This Brunel's core business in Malaysia and we provide our services to most of the oil operating companies here

What can you identify as the key changes in Malaysia's labor market over the last decade?

In the late 90's it was an employers market, but over the last decade it has become an employees market. In this industry it is the employees that dictate the terms and for Brunel this means that you have to go to extra lengths in sourcing talent and finding the right people. There are a lot of new players in the oil and gas industry that have established their presence in Malaysia where there used to be only two, namely Exxon and Shell. We have seen a growth in the market and from 2000

they have all been competing for people with the right skills. The moment these companies find a new opportunity that want to start getting the first oil, so there is no more time for training or skills building. They have resorted to headhunting from the small pool of especially local talent, so it became an employees market.

Can you elaborate on the challenges of finding and employing local talent?

There appears to be a shortage across the board from skilled, semi-skilled to professional people. Differentiating between upstream and downstream operations, upstream processes comprises of any operations to get the product out of the ground and downstream refers to petrochemical production and fabrication. With many new developments in Malaysia and the rest of the region, the existing local fabrication yards are fully utilized, creating a lot of job opportunities. Petronas is the industry's backbone and dictates the policy that aims to employ local people and utilize local resources. While the fabrication yards become busy with local jobs, but there are also international jobs being created by massive projects such as the Gorgon project in Australia that is being developed by Chevron for which some modules are also fabricated in Malaysia. This means the yards are getting busier but the resources available remain the same. The talent is not sufficiently developed and there is always a big short-

The local industry is struggling to meet demand especially with skilled labor, as there are restrictions on importing labor. The shortage unskilled labor is easier to address and immigrant workers are not hard to come by. There still is some flexibility to source skill internationally and that is where Brunel comes in with its international network. There remains a relatively high degree of labor mobility in Asia and we source a lot of professional talent from India and the Philippines.

There is also a big brain drain from Malaysia to the Middle East. Malaysians are preferred in this region as they have the right skills and experience in the oil and petrochemicals industry and are

also culturally similar. The ease, with which Malaysians are able to obtain visas and permits to work in the Middle East, enhances the trend even further and the local industry suffers from this.

Can you tell us more about your Brunel's global network and other differentiating factors?

Brunel is the first company, purely dealing in human capital to be listed on the stock exchange in 1996. Brunel then went through a period of acquisition ensuring Brunel's presence from Houston down to Brisbane and Perth. Our network is of the main differentiating factors and the reason why we are able to secure global contracts. Brunel has become a one-stop center for global companies, facilitating the process of moving talent around for these companies. Brunel seconds employees so that companies do not have to deal with any logistical, payroll or tax management arrangements to get the talent where it is needed. The flexibility Brunel offers is unparalleled.

What differentiates Malaysia as a preferred business destination?

Brunel has been present in Malaysia for 17 years and even though there are challenges there is a lot scope for growth. Malaysia has always played a prominent role for Brunel's operations, both in the sourcing of talent as well as supplying to the job market here. We are also able to carry out our local business here because we have our license through the strategic acquisition in 1996, which some of our multinational competitors cannot do. Even though Malaysia is important for our international operations, Brunel is still very much involved in the local business here too.

Where will Brunel be in five years time?

Although we must accept that there is an influx of competition, Brunel will continue to grow. As most of our growth is dependent on our clients it is encouraging to see the industry in Malaysia growing. Brunel has been able to grow even through the late 1990s when the price of crude oil dropped dramatically and that serves to prove that Brunel will be here for many years to come.

Production to Consumption

Transport, Logistics and Distribution



Located along the Strait of Malacca, a major sea-route connecting the Far East to Asia, Europe, and the Middle East, Malaysia's infrastructure is well developed with international airports and seven international seaports. The country's strategic location is a key differentiating factor as Roy from Evyap explains: "[A key] factor in [Evyap's] decision to set up a plant in Malaysia was its infrastructure and location. Logistically, Malaysia has clear advantages, as its infrastructure is very developed. When it comes to cost of production, one may argue that labor costs in Indonesia are much lower, however one should not discount that there is a tradeoff that is diluted by the cost that will be incurred in compensating for a lower level of infrastructure development and much higher logistic cost compared to Malaysia."

The efficient management of Malaysia's ports is pivotal to the industry and organizations such as the Kuantan Port Consortium continue to drive development and evolution in the services it offers. "When Kuantan Port was established in the early 1970s and as the Malaysian economy evolved, the port gradually

moved toward the import and export of chemicals. Malaysia boasts a number of world-class ports and Kuantan Port, in its own right, has managed to attract major players in the chemical industry," says Ir. Hj. Khasbullah A. Kadir, chief operating officer of the Kuantan Port Consortium.

Kuantan Port is one of Malaysia's key chemical transportation channels and recognizes the importance of partnerships with companies in its main export destinations. Kadir explains: "Most of the chemicals exports we see through Kuantan are shipped to China and other Far East markets such as Japan and Korea. In a strategic decision, 40% of the new expansion will be owned by China's Guangxi Beibu Gulf International Port Group (GBIPG) to strengthen trade from Kuantan Port to the Chinese market even further. This will be a catalyst for Kuantan Port that has been experiencing marginal and organic cargo growth of between 5% and 10%, to grow even faster. The new port will be more attractive to modern businesses. eager for newer systems."

While Malaysia's infrastructure is comparatively well developed in the region,

66

Despite the fact we do not have the economies of scale that Thailand or Indonesia have, Connell Bros. still has significant business in Malaysia and most importantly, it is diversified. Malaysia is a central hub in Southeast Asia and the center of the global latex industry. This is an industry that Connell Bros. needs to entrenched in and become the leaders in the chemical distribution side. Malaysia is also home to Connell Bros.' regional head quarters for food ingredients with the acquisition of Gulf Chemicals seven years ago. As Connell Bros. continues to focus on value added products more so than on commodity chemicals, Malaysia will remain an integral part as we also have a regional headquarters here for biocides. Malaysia's versatility in terms of culture and communication also facilitates doing business in the region. In five years Connell Bros. in Malaysia plans to hold the position as one of the top distributors for the coatings, latex and rubber food industries and beyond.

- Kevin Hack, General Manager, Connell Bros. Malaysia



according to Schaefer Kalk's Paul Ellis: "Logistics remains expensive and it is not a free market in Malaysia, adding to costs, and that needs to change so that material can be shipped competitively." Nonetheless, the overall picture is positive. "Malaysia is strategically located and has a well developed infrastructure and especially ports that are still grow-

ing," says Nazmi Sallehudin, Director, Chemicals Division, CCM. "In Southeast Asia competition is growing stronger in the race to become the next major chemical and petrochemical hub, but Malaysia should be able to pull through. Given the country's competitive edge and the various government incentives, we are confident that Malaysia will be

an attractive place to invest and we are open to any potential collaboration within the similar industries."

Linked to the infrastructure – making use of it – is Malaysia's network of chemical distributors. In a country with a strong chemical industry, it is no surprise that competition for chemical distributors in Malaysia is very strong,





Image: Kuantan Port

with the presence of many local and international players, such as Suka Chemicals, Finn Chemicals, Hextar, Connell Brothers (CBC), Brenntag and WWRC to name a few. Under these conditions, companies have to go above and beyond the needs of both their customers and suppliers to provide the value-added services that have become the industry standards.

Leong Buh Kwong, managing director of Finn Chemicals, elaborates on the importance of finding the right suppliers and niche products: "As a distributor, Finn Chemicals' main challenge is always to find the right supplier that renders the company competitive over the long-term. Our model of distributing new and unique products also presents its own challenges, as trying to source these products is not as easy as it is in a country such as China."

Local distributor Suka Chemicals also sees new opportunities outside of

Malaysia. "The Middle East is becoming Malaysia's biggest export destination in terms of lifestyle products. Until now the majority of the demand for these products has been supplied by Europe. However, being an Islamic country, Malaysia has a distinct advantage when it comes to doing business with Gulf countries", says Khoo of Suka Chemicals

Leong Buh Kwong from Finn Chemicals highlights the importance of leveraging on Malaysia's key growth areas. "Although growth across industries maybe slower than in the past, it is still positive. When we look at the advantages of different products in Malaysia, naturally the proximity to feedstock plays an important role and for Malaysia, the oleochemical industry has a particular advantage in this area."

In addition to oleochemicals, distributors are also tapping into the growing rubber sector. "When it comes to the overall economic growth of Malaysia, it is important to focus on the original industries, namely palm oil and rubber with which Malaysia has been naturally endowed. Rubber exports are expected to grow as gloves and other rubber producers continue to import latex from Malaysia. Similarly, Malaysia has the competitive advantage of raw materials, exporting crude palm oil for applications in the oleochemical industry," says Khoo from Suka Chemicals.

Distributors such as Brenntag are also offering value added services by collaborating with its clients. "[Brenntag] continues to bring our products to the market in the most innovative ways, co-developing products with our customers for example in the food and beverage industry. This also solidifies our philosophy that we are not a company that just buys, stores and sells, but also adds value," says KC Lim, managing director of Brenntag Malaysia.

Leong Buh Kwong

Managing Director FINN CHEMICALS



Could you give us an overview of Finn Chemicals and its evolution in the Malaysian chemical industry?

With a background in Chemistry, I set up Finn Chemicals in 1990 as an exclusive chemicals distributor. We have been able to grow from a company with a turnover of about MYR 5 million turnover 24 years ago, to company of MYR 120 million turnover today. Finn Chemicals is described as 'exclusive' as we normally work with a single source of supply and build relationships with our suppliers. We do not continually shop around for cheaper products, as we are more concerned about quality and reliability of supply. Finn Chemicals main focus lies in specialty chemicals distribution where the support and backup from our supplier is necessary to provide answers to questions on product usage and characteristics. Being the owner of the company, I do not concern myself too much about growth targets or fluctuating percentage of growth, but am more focused on business stability and retention of clients and supplier. In the last 20 years Finn Chemicals have experienced year on year growth. We are pleased with

a 12% growth in 2012 and expecting a similar figure for 2013.

Which industries are your key focus areas in Malaysia?

Finn Chemicals covers a wide range of industries including printing, coatings, inks and adhesives, which accounts for about 30% of our total business. We are also involved in industries such as polyurethane, electronics, construction chemicals, rubber parts for automotive, packaging adhesives and wax emulsion. As a chemical distributor, Finn Chemicals tends to look at its market a bit differently, focusing more on differentiated products rather than targeting specific industries. Finn Chemicals is always on the lookout for niche products. even in industries that we have not previously been involved in. Once we have identified a specialized product we evaluate its strength, the reputation of the principle and the competition that will impact the entry requirement. This unique approach means that Finn Chemicals cuts across many different industries. Once we have our product it is quite easy to enter into different industries and although growth across industries maybe slower than in the past it is still positive. When we look at the advantages of different products in Malaysia, naturally the proximity to feedstock plays an important role and for Malaysia the oleochemical industry has a particular advantage in this area.

What would be the biggest challenge that Finn Chemicals faces as a distributor?

As a distributor, Finn Chemicals' main challenge is always to find the right supplier that renders the company competitive over the long-term. Our model of distributing new and unique products also presents its own challenges as trying to source these products is not as easy. Finn Chemicals is the company that will take on the distribution of a product that may need a longer development period to be successful.

Could you tell us more about Finn Chemicals' distribution network and stock availability?

Finn Chemicals has come a long way from outsourcing warehousing and

storage needs to owning its own warehouse space in Shah Alam. This strategic investment was made mostly to ensure that our stocks are handled with correct procedures and care as an oversight when handling chemicals has a much larger impact than handling other goods. Finn Chemicals wants to ensure that when we supply to our customers, products they are packed to the right standards, ensuring that we do not have any rejects. Having our own facilities also means greater control of our overall operations, as we know exactly when we can or cannot deliver. Our facilities and capacity also allows us to take a lot of care with planning, relieving pressure and rushes. For all our deliveries from Shah Alam, for local delivery we normally can deliver within the next working day and for outstation whether it is to Penang, Johor Bahru or Singapore, it takes two to three working days. Our philosophy as a company is to prioritize the availability of stock and we are therefore more liberal with our stock levels. We believe it is much easier to sell stock to existing customers, than it is to find new customers if dissatisfied customers turns to another supplier. The constant availability of stock instills the confidence in our clients to call Finn Chemicals first whenever they have needs to be met.

What will Finn Chemicals' strategy be over the next few years?

Principles tend to approach Finn Chemicals as a distributor because of its reputation in Malaysia and we will continue to be a good partner to our principles. Finn Chemicals will also continue to look for 'non-traditional' products that add value to us. One of our key advantages stems from being able to be more flexible in terms of our stock levels and we will continue to leverage on this flexibility to help both our customers and the principles in navigating changing markets. •

Law Say Huat

CEO KERTIH TERMINALS

Could you give us a brief overview of Vopak and Kertih Terminals' operations in Malaysia?

Vopak currently operates two terminals in Malaysia: Kertih, a joint venture with Petronas and Dialog Group, and wholly-owned Pasir Gudang. In addition, we are constructing a joint-venture oil terminal in Pengerang.

Kertih Terminals commenced its industrial terminal operations at the beginning of the millennium and is committed to offering safe and reliable services to the chemical plants in Kertih Integrated Petroleum Complex.

Our latest facility, the Pengerang Deepwater Petroleum Terminal, is the first independent crude oil facility in Southeast Asia. The terminal has a capacity of 1.284 million m3 for oil products, and is on schedule for operational commencement in the first quarter of 2014. The first phase of the Pengerang terminal will cater mainly to oil majors, national oil companies and the trading community. Vopak will be offering storage and related value-added services to the industry.

Can you tell us if and how Kertih's operations have changed since speaking

with GBR in 2010?

Kertih Terminals is an industrial terminal meaning our customers store raw materials with us. Depending on production schedule, the raw materials are fed back to the different chemical plants in Kertih via contracted pipelines. The finished products in liquid or gaseous forms are once again stored in our terminal before being redistributed on behalf of our customers. The export destination depends on our customers' businesses, mainly intra-Asia.

Capacity at Kertih Terminals remains at 41 tanks of 395,000 m3. Kertih Terminals is targeting economies of scale to remain competitive and relevant in the market. This is done through increasing volume per tank, as higher volumes mean more competitive costs for our new and existing customers.

Kertih Terminals is also poised to provide logistics support for the upcoming Kertih BioPolymer Park which complements the Kertih Integrated Petroleum Complex.

What are the main challenges and greatest advantages of operating Kertih Terminals?

Sustainability has always been our guiding principle, and this means striking a balance in Profit, Planet and People. As a company, we are committed to growth in a responsible manner and at the same time looking after employee welfare.

At a staff strength of 180, the Kertih team is motivated and well-trained. Good relationship with different stakeholders is also key to the success of the company. To this end, Kertih Terminals has had a history of working with the Government and State agencies.

Can you elaborate on the technical expertise that is required to operate Kertih Terminals and how this is acquired? Safety is paramount at Kertih Terminals.

We strongly believe that all incidents can be prevented and remain committed to achieving the goal of zero incidents and no damage to the environment. With a specialized operation in the storage and handling of both liquid and gaseous chemicals, much emphasis is taken in the training of our staff to handle the products and its processes safely.

As an industrial terminal, Kertih Terminals feeds directly into our customers' processes and require highly-skilled staff

and efficient operations. Any disruption on our part can cause our customers' plants to shut down and reliability is compromised. On that front, we pride ourselves in operating according to Vopak's operating standards, which are consistent across Vopak's global network of 83 terminals. These standards cover all aspects of a terminal's lifecycle in the fields of Safety, Health, Environment, Quality and Operations, as well as Technical and Project Management.

Our expertise is also supported through the good partners we have in Petronas and Dialog.

How would you describe the Malaysian Chemical Industry outlook from your perspective?

Malaysia's chemical industry outlook remains positive, bolstered by the government's committed effort to promote healthy growth in the chemicals and oil and gas sectors through the Economic Transformation Plan (ETP). In addition, we continue to see renewed interest in downstream chemical production. Kertih Terminals will continue to work closely with the relevant Government and State agencies to help shape a more vibrant chemicals and oil and gas industry in Malaysia. From Vopak's point of view, we remain interested in the Malavsia market and we look forward to the opening of the Pengerang Deepwater Petroleum Terminal next year. •

H. A. Khoo

Managing Director SUKA CHEMICALS



Established in 1990 as total solutions provider for specialty chemicals, Suka's main growth driver has been its ability to expand and branch out into different industries. Has this approach remained in tact since your last interview with GBR in 2010 and what are the most significant changes that you have seen in the industry?

Suka Chemicals' has remained committed to the industries we serve here in Malaysia, and that has remained our main focus over the last three years. The Malaysian chemical industry faces many challenges. Even in the gloves, paper and electronic segments of the industry the trend of increased focus on environmental sustainability has become one of the most significant challenges. The trend is to move toward water-based or environmentally friendly chemicals. Looking at growth in the industry, Suka has seen strong potential in the supply of lifestyle product ingredients with higher demand for food and beverage and personal care products. In the last three years Suka's growth has continued to remain above the country's growth of around 5%.

What is the main driver the demand

for food and beverage and personal care products in Malaysia?

The Middle East is becoming Malaysia's biggest export destination in terms of lifestyle products. Up until now the majority of the demand for these products have been supplied by Europe. However, being an Islamic country, Malaysia has a distinct advantage when it comes to doing business with these countries, especially in light of some of these countries' strained relationship with the West. Malaysian products are credible in terms of halal standards, which is also very important for trade with the Middle East. As Malaysia is poised to be come the new export hub to the Middle East in terms of personal care products, Suka Chemicals will also be shifting its focus somewhat away from the industrial chemicals to personal care products. In Malaysia, the industry has almost reached a saturation point in terms of personal care supply and demand and companies seeking to grow will have to look at new markets outside of the country. Players in the Malaysian chemical industry also have to watch the Northern African Islamic countries where demand for personal care products is growing rapidly.

Can you elaborate on Suka's warehousing network and facilities in Malaysia and any other factors that differentiates Suka Chemicals from its competitors?

Suka Chemical's is proud to boast with one of Malaysia's most modern and sophisticated warehouses in Bukit Raja in Selangor, where we are also building an additional facility. Suka has chosen this central location as most goods that are being imported into the country come through Malaysia's main port, Port Klang. Suka keeps sufficient inventory available in our facilities through communication and knowledge of our customers' needs and operations by monitoring their past and present situation in order to accurately predict their future requirements. With solid logistic support and efficient planning and shipment Suka strives for same day delivery of our products to our clients and are successful in providing them with expedient services.

Being a Malaysian company, Suka Chemicals' most distinct advantage comes from our expertise and knowledge of the local

market. We react and respond to changes and challenges very swiftly. We have a very highly qualified staff contingent that has experience across the industry. In addition, we also have a very high employee retention rate with most of our employees working at Suka for over a decade, which translates to exceptional knowledge of our customers. The quality of the products that we supply also compliments the high standards of Suka Chemicals.

Malaysia's GDP is set to grow between 4% and 5% this year. Which industry do you see driving this growth and what advantage does Malaysia have over other countries in the region?

When it comes to the overall economic growth of Malaysia, it is important to focus on the original industries, namely palm oil and rubber with which Malaysia has been naturally endowed. Rubber exports are expected to grow as gloves and other rubber producers continue import latex from Malaysia. Similarly, Malaysia has the competitive advantage of raw materials, exporting crude palm oil for applications in the oleochemical industry. When it comes to manufacturing, Malaysia cannot compete with the likes of China ability to produce and take advantage of economies of scale. However, Malaysia's advantages in the development of its logistic and financial infrastructure, gives it an advantage in the region over countries such as Indonesia that is also rich in resources. Malaysia follows a British system of rule that facilitates doing business here. Malaysia's proximity to the Singapore port, the fourth largest in the world makes it very easy and efficient to export from here.

Where will Suka Chemicals be in five years?

Suka Chemicals will continue on its strong growth trajectory over the next five years. Malaysia is still in the growth stage, being an emerging market. This means the demand will grow and the country will continue to develop its infrastructure. Being a very multicultural company, Suka Chemicals has a distinct advantage in dealing with emerging economic powerhouses such as China and India and countries in the Middle East, as we understand certain unique aspects of these markets outside of Malaysia as we share the same languages and cultures with them.

Ir. Hj. Khasbullah A. Kadir

COO

KUANTAN PORT CONSORTIUM



Can you give us a brief overview of the Kuantan Port and the role it plays in Malaysia's chemical industry?

When Kuantan Port was established in

the early 1970s and, as the Malaysian

economy evolved, the port gradually

moved toward the import and export of

chemicals. Malaysia boasts a number

of world-class ports and Kuantan Port,

in its own right, has managed to attract major players in the chemical industry, such as BASF Petronas Chemicals Sdn Bhd, MTBE (Malaysia) Sdn Bhd, Eastman Chemical Sdn Bhd, RP Chemical Sdn Bhd (formerly known as BP Chemical), Polyplastics Asia Pacific Sdn Bhd, Kaneka Malaysia Sdn Bhd, Cryovac (Malaysia) Sdn Bhd, WR Grace Specialty Chemicals Sdn Bhd and others. Up until recently (2011), Kuantan Ports cargo comprised of 40% chemical products however. Kuantan Port has started exporting large amounts of iron ore (6.2) million FWT in 2013), mostly to China. While this has become an important feature and part of Kuantan Port's business, the chemical industry will remain a significant part of Kuantan Port's operations, as one of Malaysia's biggest economic drivers. As the Malaysian economy continues to evolve, the focus should shift toward the manufacture and trade of value added products. as building an economy solely on the exports of crude resources and commodities is not sustainable. Kuantan Port will also increase its focus and develop in the container area of its operations, as the port is traditionally export orientated.

Kuantan Port continues to strive to become one of the region's major petrochemical hubs and as such has recently launched its new expansion project. Can you elaborate on this new development?

When the port was built in the early 70's the draught was sufficient at 11.2 metres, but the size of shipments in-

creased over the years to reap the benefits of economies of scale. This means that the size of the cargo vessels had also naturally increased and this depth of 11.2 meters became a significant limitation. With the development and expansion of the port, the new draught will be at least 16 metres, which is on par with global standards modern port that can accommodate all types of vessels. In the first phase of the expansion we will build an additional one kilometre of berth with 0.5 kilometre dedicated to containers and the rest for chemicals, oleochemical cargo and other commodities. At only 30% occupancy, the Gebeng Industrial Estate also continues to grow and we hope to see the ratio of chemical to other cargo pick up again.

How can Kuantan Port attract a bigger portion of cargo moving between the Far East and Southeast Asia?

Most of the chemicals exports we see through Kuantan are shipped to China and other Far East markets such as Japan and Korea. In a strategic decision, 40% of the new expansion will be owned by China's Guangxi Beibu Gulf International Port Group Co. Ltd. (GBIPG) to strengthen trade from Kuantan Port to the Chinese market even further. There is no doubt that this will be a catalyst for Kuantan Port that has been experiencing marginal and organic cargo growth of between 5% and 10%, to grow even faster. The new port will be more attractive to modern businesses, eager for newer systems than what have been established in areas such as Port Klang. Apart from the strategic location, international ship and port security compliance (ISPS) and good infrastructure that Kuantan Port offers, there is plenty of land space still available at a more competitive price than can be found on the West Coast. The Kuantan Port has also applied to become a 'Free Zone' that provides tax

incentives to increase trade and will create added value on our cargo imports and exports.

Can you give us some more detail on the planned expansion and timeline at Kuantan Port?

The Kuantan Port Expansion was launched by the Prime Minister of Malaysia, Datuk Seri Najib Tun Razak and the East Coast Economic Region Development Council on the 7th of September 2013 and should be commissioned in 2017. We expect the current physical capacity to double, which is 26 million tonnes per year to 52 million tonnes per year over the next four years. The expansion project also entails the construction of one of the world's longest breakwaters at 4.7 kilometres in length. The total investment involved in this project is around MYR 4 billion.

Do you have a final message to possible investors considering Kuantan Port as a possible trading hub?

Kuantan Port is following a very progressive expansion strategy that investors can take advantage of in the near future. Kuantan Port is able to cater to the increasingly complex requirements of the petrochemical and wider chemical industry as a petrochemical hub in Malaysia. The port offers value added services such as repairs, storage, monitoring and fumigation and also boasts modern and efficient infrastructure including ICT. Kuantan Port's main advantage however, lies in the fact that it is the shortest and quickest route to the Far East, home to many of the world's fastest growing markets and we welcome any investor that wants to take advantage of the opportunities that Kuantan Port has to offer. •



















KUANTAN PORT

The Gateway to the Eastern Corridor of Peninsular Malaysia

KUANTAN PORT CONSORTIUM SDN BHD (KPC), a subsidiary of IJM Corporation Berhad, a major public listed company in Malaysia, is the operator, manager and developer of Kuantan Port. Kuantan Port is a world-class petrochemical hub and multi-cargo port and a leading maritime and logistics services centre in the east coast of Peninsular Malaysia.

Kuantan Port is strategically situated on the eastern seaboard of Peninsular Malaysia, overlooking the major sea lanes through the South China Sea. The port started its operations in 1984 handling primarily sawn timber and palm oil. Today, Kuantan Port has grown into one of the busiest ports in the country and handles a wider range of cargoes emanating from the port hinterland.

A deep sea port with more than four (4) kilometres of berthing facilities encompassing dedicated container berths, palm oil berths, liquid chemical berths, mineral oil berth, multi-purpose berths and steel pipe berths. Kuantan Port facilitates trade activities and has become a commercial hub for the region and it is linked to global shipping destinations. The present facilities have a capacity to handle 40,000 Deadweight Tonnes (DWT) ships.

KPC in collaboration with the Government has embarked on a port expansion project to cater for ships up to 200,000 DWT and to commence operation in 2017. The expansion of the port shall act as a catalyst for the realisation of Malaysia-China Kuantan Industrial Park (MCKIP) in Gebeng. This will spearhead the economic development of the region and Kuantan Port shall be a regional trade hub in the coming years.



Kuantan Port Consortium Sdn Bhd

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Company

LotharLauszat

Managing Director **LESCHACO MALAYSIA**

Can you tell us about the main milestones that Leschaco has achieved in Malaysia over thelast year?

A major milestone for Leschaco in Malaysia has been the opening of our own warehouse inKlang Valley, Malaysia's main chemicals distribution and handling center, dedicated solely tothe storage and distribution of chemicals and harmful goods and set up according tointernational standards for chemical storage and handling. It is Leschaco's aim to continue its expansion while improving the international standardsfor handling chemicals in the Malaysian market.

With the expansion of the chemicals sector in Malaysia, what is Leschaco's potential forgrowth in the country?

Being part of a global group of companies, Leschaco Malaysia doesnot only offer logisticsservices such as freight forwarding, customs clearance, warehousing as well as tankcontainer operations, to name a few, but strong relationships with these expanding-companies and solid experience exactly meeting their needs.

How important is the chemical industry amongst the other industries that Leschacoservices such as the automotive industry?

The chemical industry is and has been for more than 130 years a core business of utmostimportance for Leschaco. We can proudly say that today we are working for leadingcompanies in different industrial segments that dominate the worldwide economicactivities.

What is the significance of Leschaco's Malaysian operations in the Southeast Asianregion?

Being well established in the region makes Leschaco Malaysia an integral part of theLeschaco network in Asia and worldwide, which enables Leschaco to offer operative excellence, innovation and sustainability to our customers in this emerging market.

What are the most important trade lanes for Leschaco Malaysia?

Apart from the strong European and US trade-lanes Leschaco Malaysia focuses on thestrong development of the intra-Asian market, which continuously grows.

How do international safety standards in Malaysia compare to that of the rest of theworld?

There are standards in place in Malaysia when it comes to safety but these standards haveto be enforced by the customers and authorities to have an impact.Restrictions and requirements in the developed markets are much higher and stringent thanwhat we find in emerging markets such as Malaysia. In Malaysia safety and environmental regulations are still seen as a grudge purchase ratherthan a necessity while the country is going through the same learning curve that thedeveloped markets have already gone through. Leschaco has already assimilated the knowledge from the developed markets in thehandling of chemicals according to the highest standards and the same standards have beenimplemented in Malaysia. Even simple standard operating procedures (SOPs) can greatly enhance safety whenhandling chemicals. The nature of the product means that here is a much greater risk

in handling chemicals thanother goods especially when you take the detrimental affects of chemical spillages intoaccount. Following the same global set of auditing guidelines and standards that we follow in othercountries is part of our challenges in Malaysia but it also contributes to our businessopportunities in the country.

Leschaco is ISO 9000 and 14001 certified and has set environmental targets to reach.

On a local level the standards in terms of transporting and warehousing will continue to riseand a lot has been achieved in Malaysia already compared to other countries in the region.

What other challenges do you face on the logistical side of the chemicals industry?

Logistics in Malaysia is very competitive and there are some very well established competitors in the market. As service providers, logistics companies are mostly non-asset based and we have to find away to create additional value for our customers by developing our product range and services.

In Asia, many customers are still very price focused and overlook the additional value ofother service and at the supply chain as a whole.Leschaco adds value by complying with global standards and to show our customers what ispossible in this realm.Essentially, Leschaco in Malaysia has become more than just a logistic service but also asupply-chain consultant and our supporting global IT platform allows us to increase end-to-endvisibility for our clients. •

KC Lim

Managing Director BRENNTAG MALAYSIA



Can you tell us more about Brenntag's presence and operations and Malaysia?

Brenntag has been present in Malaysia since 2008 through the acquisition of the Rhodia distribution network in Asia. whose history in Malaysia dates back to the 1960s. In 2010, Brenntag increased its operations here through the acquisition of EAC Industrial Ingredients who had been providing ingredients and services in Malaysia since 2002. Over the past seven years, Brenntag in Malaysia has grown tremendously with trusted names in the market and attracting many new clients. The growth we have experienced here has been guite high and since 2008 our topline has doubled. Brenntag in Malaysia is primarily specialty chemicals driven, though we see a great opportunity to grow beyond specialty chemicals into industrial chemicals.

How will Brenntag in Malaysia position itself to take advantage in of the growth it sees in the industrial chemicals market? The Brenntag name itself already attracts many business partners and coupled with our infrastructure, network and our excellent reputation through its existing customers we will be able to increase

our presence in the industrial chemical sphere. Brenntag has a centralized warehouse in peninsular Malaysia of 4000 m2 that is very strategically located with supporting sales offices in the south and in the north of Malaysia. Brenntag is also proud that this warehouse is triple certified with ISO 9001, 14001 and OHSAS 18001 as well as a member of the Responsible Care program.

Can you tell us more about Brenntag's emphasis on safety and sustainability?

Brenntag has always been a leader in the safety aspect and, even in the most routine of tasks, safety remains our number one priority. The company has implemented and complies with a very stringent product stewardship policy, thus ensuring not only the safety of our own employees, but also our customers. Working with such a wide product portfolio, it is pivotal to ensure that all products are properly classified and handled from their import down to disposal. Regulation in Malaysia is continuously being developed and increasingly enforced and Malaysia is definitely a leader in this area in the rest of the region.

How important is the Malaysian market in Southeast Asia and what are your key focus areas here?

Malaysia is centrally located and an integral part of the ASEAN community that is home to a population of over 600 million. Although Malaysia's domestic market is limited, many of the products that Brenntag distributes are produced by large chemical manufacturers so the value add in the country is high. In 2015, the ASEAN Economic Community (AEC) will be established where there will be a complete free flow of trade and being present in Malaysia is a big advantage for us. Brenntag continues to strive for a leading position through organic growth and targeted acquisition and while Brenntag holds a top position in Asia Pacific, there is always the opportunity to become number

Chemicals distribution is notoriously competitive in the industry. What differentiates Brenntag from other distributors?

Brenntag is in constant communication with both customer and supplier to en-

sure that we understand their needs. In addition, we continue to bring our products to the market in the most innovative ways, co-developing products with our customers for example in the food and beverage industry. We are able to customize the product for our customers in our dedicated Food and Beverage and Personal Care application laboratories in Malaysia and that is unique in this market. In addition we already have existing in-house mixing and blending facilities which we plan to use to add value to both specialty and industrial chemicals being sold to a variety of industries in Malaysia. This also solidifies our philosophy that we are not a company that just buys, stores and sells, but also adds value.

What can we expect to see from Brenntag Malaysia over the next few years?

Brenntag has a very unique business model with a dedicated industry focus. In Malaysia, we have already developed a number of these industries such as food and beverage, personal care, cleaning, coatings, rubber and pharmaceutical, but we clearly still have a lot of room for expansion, especially into different industries. The food and beverage industry will continue to remain a growth industry as well as the rubber and rubber related industries, given Malaysia's natural resources. Brenntag will also be exploring the oleochemical sector over the next few years. We will aim to grow faster and fully utilize the asset that we have here in Malaysia. We are aware that talent is very limited and we will continue to develop our people through our local as well as regional talent management programs. Over the last ten years, small players have dominated the distribution industry in Malaysia, but we hope to change that by increasing our market share by leveraging our network and expert product knowledge. Brenntag remains committed to the chemicals industry in Malaysia and we will continue to invest in resources here •





Into the Future: Final Thoughts, Index and Credits

"The 'Made in Malaysia' label is increasingly becoming a strong competitive advantage and this is an aspect that perfectly fits in Global Solution Asia's working model. In my opinion, the large players are realizing the importance of this factor and will start setting up local plants in the country over the next few years. Malaysia offers many natural resources, which is a growth driver for the chemical industry. Another advantage is that the local employees have been become increasingly well educated and this could be a turning point for the local companies with respect to their Western competitors. There is a lot of ambition in Malaysia's chemical industry and easily observed by taking a glance at Petronas' upcoming projects."

> - Andrew Lorenz, Technical Sales Manager, Global Solutions

FINAL THOUGHTS
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As a Malaysian company we need to stay close to our roots and this was an important factor that we took into account at the time of the decision-making. The Malaysian chemical market provides many opportunities, which are yet to be untapped. In addition, the regulatory framework in Malaysia is very much investor-friendly and the government works in a very stable manner

- Dato' Siew Ka Wei, Group Managing Director, Ancom (PKG)

Policies change as governments change, but Evyap's investment would remain and therefore we wanted to invest in a place where ease of doing business index is more stable and more developed infrastructure. MIDA and MITI have also been very welcoming and helpful in Evyap's process of setting up in Malaysia. Another factor in our decision was infrastructure and the location of the plant that we are constructing in Johor, is within 50 km radius of five of the worlds top 20 ports, Singapore, Tanjung Pelepas and Johor Port. Logistically, Malaysia has clear advantages, as its infrastructure is very developed. When it comes to cost of production, one may argue that labor costs in Indonesia is much lower, however one should not discount that there is a tradeoff that is diluted by the cost that will be incurred in compensating for a lower level of infrastructure development and much higher logistic cost compared Malaysia.

- Tanuj Roy, M<mark>anaging Director, Evyap Sabun</mark> Malaysia

In the next five years Mammoet will definitely continue to grow. We will aim to bring more equipment to Malaysia and establish Mammoet Romstar as a regional hub for equipment and expertise. As a project driven company we are dependent on the industry's development and if the oil and gas and petrochemicals industries flourish, our business flourishes too. In Malaysia, offshore load offs have been active nonstop for 15 years so we believe we will see a continuation of this.

- Baharom Hamzah, Managin<mark>g Director, Mammoet Romstar S</mark>dn. Bhd.

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There are a lot of opportunities in Malaysia and the success of RAPID can easily initiate the start of a second RAPID. The complex's location at the tip of southern part of Malaysia and right next to Singapore is very strategic and RAPID's proximity to Singapore's fantastic infrastructure presents the opportunity to connect the two hubs even further. Although Rotary Mec's main business remains in the oil and gas and petrochemicals sector, we are always open to the possibility of diversifying into petrochemical related products... Malaysia is very good investment destination with transparent and welcoming laws enabling the country to grow. We cannot grow in isolation and Rotary Mec is proud of how far we have come.

- Sarjit Singh, General Manager, Rotary Mec

MALAYSIA CHEMICALS 2014 Industry Explorations

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Malaysia has a stable economy and government, with the added advantage of English as the accepted business language. Despite foreign investment in Malaysia being lower than that of neighboring Indonesia, it has a well-developed infrastructure with a solid talent pool especially when it comes to management level. Malaysia is strategically positioned, bordering Nuplex's most important markets. While the facilities in Malaysia are good, when it comes to acrylics manufacturing, Malaysia is not rich in raw materials. Nuplex sources its raw materials mostly from China and some specialty materials from Europe and the US. Nuplex also has to plan very carefully to get adequate feedstock at the right quality, as it is hard to obtain solvents in Malaysia.

- Giorgio Noli, General Manager, Nuplex

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As per Malaysia's Economic Transformation Plan (ETP) there are five key sectors that are identified as National Key Economic Areas (NKEAs) that are highly relevant for BASF and where we see the most opportunities. These are agriculture, electronics and electrical, construction, oil and gas, palm-oil and rubber. We have the competitive advantage in the availability of feedstock through our partnership with Petronas. Unfortunately Malaysia has a limited local market and up to 90% of BASF production in Malaysia is exported. BASF is close to its feedstock in Malaysia, but not that close to its customers, which adds to transportation costs. Another challenge for Malaysia's chemical industry is the very significant competitive threat that China poses, especially when we look at the upstream commodity chemicals.

Daniel Loh, Managing Director, BASF Malaysia

The spread of global oleochemical manufacturing was quite evenly distributed 15 years ago. Yet in the last two decades the oleochemical sector has been driven by technological innovation and the accompanying efficiency improvements, and the business is mushrooming in South East Asia. This has forced many oleochemical companies, which did not have the right operational efficiencies and economies of scale to close down. In the next five years, there will be keen competition among the players in the region especially Malaysia and Indonesia, resulting in the erosion of profit. At that stage we can expect another phase of re-consolidation.

- A. K. Yeow, Managing Director, KLK Oleo

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The industry as a whole has to work very hard to embrace new technologies and continue to remain as up-to-date as possible. This effort must come from both the government and the private sector. It is vital that all stakeholders including governments, agencies, and companies collaborate to keep building the country's infrastructure. As far as Malaysia is concerned, we are not too big and are fairly concentrated, making communication faster and easier. We are leaders in the region for infrastructure, a position that we must guard closely.

- Lim Kwee Shyan, President,
Malaysia Rubber Glove Manufacturers Association



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