

SINGAPORE

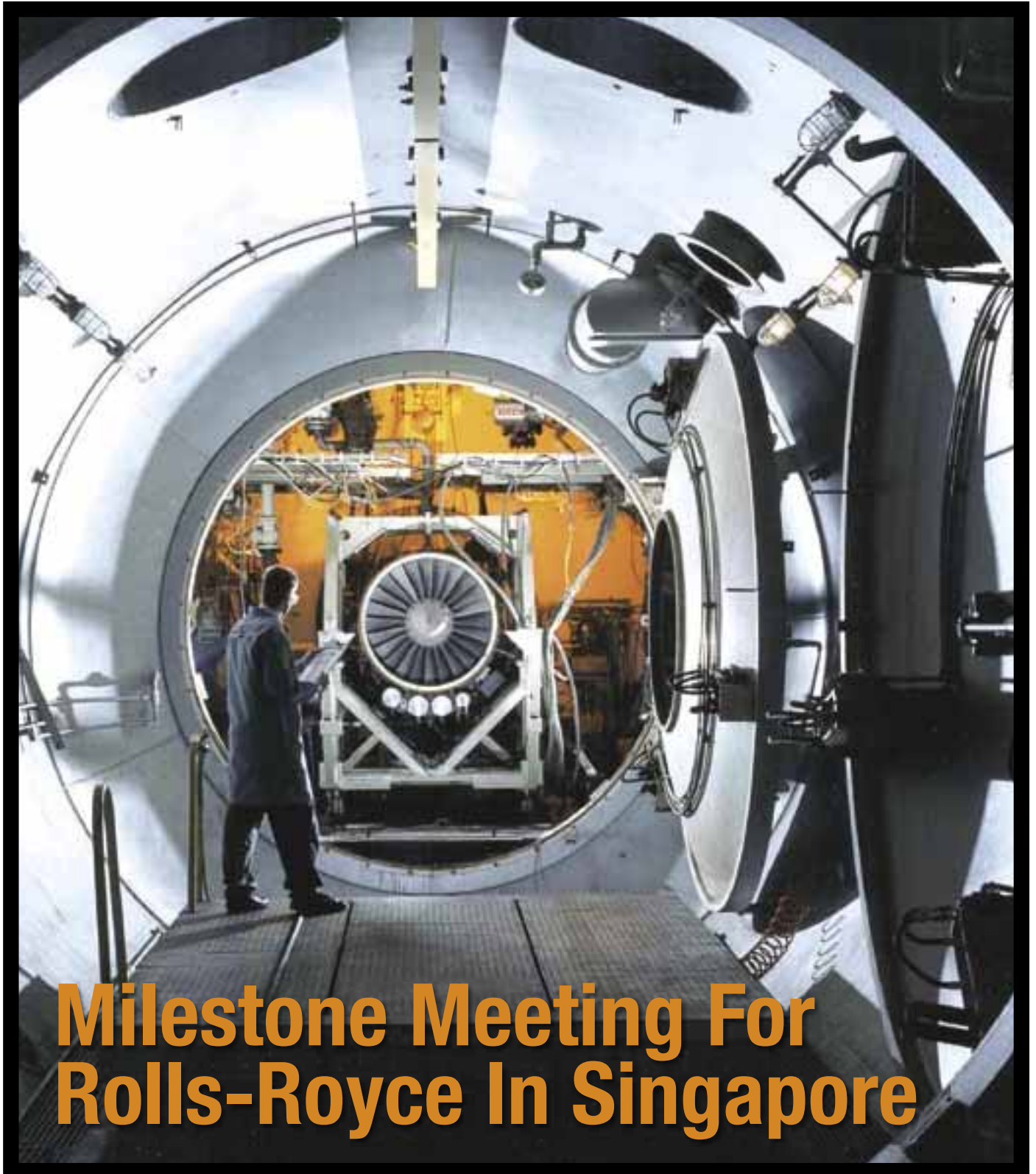
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TNT invests S\$8 Million In Its World's Largest Regional Life Sciences Express Hub

The leading provider of global express services, TNT, launched its world's largest life sciences-focused regional distribution centre (RDC) in Singapore on 14 March 2007. Situated near Singapore Changi Airport, the new facility spans 65,500 sq ft, and is expected to handle in excess of S\$66.1 million (US\$100 million) worth of medical equipment per year.

The centre will boost the company's market leading position in Singapore. Managed by specialists in the field, it enables healthcare manufacturers to consolidate and store products bound for the Asia-Pacific market. Leveraging Singapore's central location and TNT's extensive domestic, regional and global air and road network, the centre will also offer services to life science customers who will be able to send any item from this hub to their



From L-R: Onno Boots, Regional Managing Director, TNT Southeast Asia; James McCormac, Chief Operating Officer, TNT Express Worldwide; Lim Siong Guan, Chairman, Economic Development Board; and Damien Tan, Managing Director, TNT Singapore

distributors, hospitals or clinics in any major city in Asia within 24 hours.

"Asia is home to more than three billion people and is the fastest growing region for the healthcare industry in the world. In any industry, logistics accounts for up to 20 per cent of the overall cost, which presents tremendous opportunities for life science logistics in Asia," says Damien Tan, Country General Manager, TNT Singapore.

INFOCOMMUNICATIONS & MEDIA

Sybase Opens Wireless Development Centre In TechnoPark, Singapore



(L-R) Tan Teng Cheong, Country Manager, Sybase Singapore; Babak Hodjat, Senior Director of Engineering, iAnywhere Solutions; Matthew Talbot, Vice President, Mobile 365; John Chen, Chairman, CEO & President, Sybase Inc; Lim Siong Guan, Chairman, EDB; Willie Jow, Vice President, Business Operations, Corporate Marketing & Communications; and Linda Sein, Executive Director for Infocommunications and Media, EDB

Sybase's new engineering centre, opened on 15 March, is set to develop mobile and wireless software solutions and create intellectual property in Asia. The largest global

enterprise software company focused on managing and mobilising information from the data centre to the point of action, Sybase, Inc. intends for the new Centre to focus on developing new technologies in the areas of RFID, embedded software, and mobile middleware. These include developing Bluetooth and Ultra Wideband Software Development Kits for mobile device manufacturers (OEM and ODMs).

"This facility marks another significant milestone for research and development in Singapore," says John Chen, Chairman, CEO and President, Sybase, Inc.

This Centre marks the third phase of Sybase's research and development investment plan in Singapore. The first phase, Asia Development Centre, was set up in 1998 for the development of integrated information management solutions. The second phase was launched in 2005, with the opening of the Wireless Solution Centre – a place for partners and developers to test wireless projects in telecommunications, RFID, healthcare and mobile government.

ELECTRONICS

Qimonda Sets Up New Global Distribution Centre

Qimonda, a leading global supplier of Dynamic Random Access Memory (DRAM) products has increased its presence in Singapore by opening a new global Distribution Centre to complement the company's three other distribution centres in San Jose, Frankfurt and Tokyo. Qimonda also has its Asia-Pacific headquarters, regional IT operations centre and Qimonda enterprise IT development centre here.

Located at Changi South, the 25,000 sq ft global Distribution Centre is expected to streamline supply chain management processes, and consequently shorten delivery time to its worldwide customers. The global Distribution Centre will be run by global logistics service provider, DHL Exel Supply Chain.

"Singapore, we believe, is the ideal place for us to base such a critical operation," says Dr Daniel Wong, Regional



Qimonda's new global Distribution Centre.

President and Managing Director, Qimonda Asia Pacific. "Centrally located, it also boasts a mature logistics infrastructure and pro-business environment."

The global Distribution Centre will hold the majority of total worldwide inventory. Built to handle thrice the existing capacity of worldwide distribution, it is expected to cater to the company's strong projected sales growth and storage needs up to 2010. In addition to typical warehouse functions, a sample centre will be integrated to improve customer services.

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From L-R: George Huang Yi, Managing Director, CCIC Singapore; Chua Taik Him, Assistant Managing Director, EDB; Li Ming Lin, Minister Counsellor, Embassy of The People's Republic of China; and Huang Zheng Hai, Managing Director, CCIC Group

GLOBAL OPERATIONS

Singapore Is Home To First CCIC Overseas Petroleum Laboratory

China Certification and Inspection Co. Ltd (CCIC) Singapore, an overseas branch of CCIC, China's largest inspection, certification, survey and testing company has opened its first overseas petroleum laboratory outside China here.

The Petroleum Oil Laboratory in Singapore, the first of its kind in the region, has the capability for blending gasoline, fuel oil and gas oil, catering to customers like oil majors, oil traders and bunker fuel suppliers.

It will allow energy suppliers from ASEAN, Middle East and Australia to gain access to the China market, the world's second largest energy consumer after the US, while providing synergy for the regional energy market. In addition, it will function as a third party inspection lab certifying all petroleum products coming in and out of China in accordance with international industry standards and in compliance with China's specifications.

"I believe, with the opening of the new laboratory, CCIC will be well positioned in the region to capitalise on the high volume of movement of petroleum products in Singapore, where major refineries and storage terminals are located. The role of the new laboratory is essentially, and strategically, to provide us a base in the region for further expansion into neighbouring countries," says Huang Zhen Hai, Managing Director, CCIC China.

Alcatel-Lucent Launches Asia Pacific IP Transformation Center



Vince Pizzica, Chief Technology Officer, Alcatel-Lucent Asia Pacific, speaking at the launch of the Center.

THE NEW CENTER WILL FOCUS ON DEVELOPING, INTEGRATING AND TEST BEDDING ADVANCED COMMUNICATIONS TECHNOLOGIES.

As Internet Protocol (IP) continues to become the main transporter of information for companies big and small, the need to address challenges in managing complex IP infrastructure networks grows in importance as well.

Leading global telecommunication solutions provider, Alcatel-Lucent has answered the call by launching its Asia Pacific IP Transformation Center (IPTC) in Singapore to bolster its network of IPTCs worldwide and provide expertise as well as resources to support IP networking in the region.

The Center is expected to host around 50 technologies and employ approximately 80 professionals, representing an investment of up to S\$40 million (US\$26.4 million) over three years.

CONNECTING THE WORLD

The state-of-the-art IPTC, the first centre of its scale in Asia-Pacific, will develop, integrate and test end-to-end IP networking solutions to help operators and enterprises as they transform their networks to a full IP-based architecture. Thanks to Alcatel-Lucent's extensive network of vendors and strategic partners and comprehensive portfolio of market-driven integrated end-to-end solutions, clients are assured of top quality.

In addition, the new IPTC will work in tandem with the company's existing IPTCs and Network Integration Centers in Antwerp, Belgium; Lisle, Illinois; and Plano, Texas through shared knowledge, resources and best practices to aid service providers in executing their IP Transformation projects.

What this translates to is fast, efficient service. "Shortening the IP transformation period and ensuring seamless customer network migration are the prime objectives of our global IP Transformation Centers and Network Integration Centers," explains Frederic Rose, President, Alcatel-Lucent Asia Pacific. "Our key asset for the execution of these network transformations is our project and management expertise delivered by a team of experienced services professionals worldwide."

In fact, the IPTC has already kicked into gear. It is currently working on rolling out critical infrastructure that will enable sophisticated IP communications services for Companhia de Telecomunicações de Macau S.A.R.L (CTM)'s business and consumer customers to deliver a new generation of communications services that will keep pace with the Macau Special Administrative Region's sustained growth.

"It is essential for us to ensure that we have the capabilities required to meet our customers' future needs for sophisticated IP-based communication services," says Phil Green, CEO, CTM. "Only Alcatel-Lucent has the necessary expertise and experience to help us do so."


PARTNERSHIP FOR SUCCESS

The IPTC marks the long-standing relationship between Singapore and Alcatel-Lucent; Alcatel first arrived in 1976, while Lucent set up shop here in 1987. Last year, Alcatel established its first IPTV and Triple-Play Center of Competence for the region



in Singapore, successfully boosting the nation's infocommunications industry.

Alcatel-Lucent's latest venture builds on these successes and demonstrates Singapore's attractiveness as a hub for a broad spectrum of high-end infocommunications innovation activities, ranging from R&D to system integration and deployment of new services and solutions for global markets. In addition, Singapore's strategic location, connectivity, and highly skilled workforce are major pluses. IPTC is within easy access of the company's potential Asia-Pacific customers, and can leverage skilled manpower.

The IPTC's presence here is also a major coup for Singapore's thriving infocommunications industry. "The convergence across IT, telecommunications, media and digital entertainment presents Singapore with new opportunities," says Ko Kheng Hwa, Managing Director, Singapore Economic Development Board. "And Singapore is well positioned to ride on this wave." It is a win-win situation for all involved. 

"The convergence across IT, telecommunications, media and digital entertainment presents Singapore with new opportunities. And Singapore is well positioned to ride on this wave."

– Ko Kheng Hwa,
Managing Director,
Singapore Economic
Development Board

Rolls-Royce Holds Milestone Meeting In Singapore

ITS NEW INTERNATIONAL ADVISORY BOARD AND BOARD OF DIRECTORS CONVERGE HERE FOR THE FIRST TIME.



Engines by Rolls-Royce are used in Singapore Airlines' fleet of aeroplanes.

With its vibrant business eco-system, excellent infrastructure and skilled workforce, Singapore has firmly established itself as the place to do business. But multi-national companies are now finding the Lion City an ideal location to converge and talk shop as well.

Rolls-Royce, the world-leading provider of power systems and services for use on land, in air and at sea, is one such company. The company zoomed in on Singapore for the inaugural meeting of its new International Advisory Board (IAB). The IAB, made up of prominent global figures and chaired by Lord Powell of Bayswater, former Foreign Affairs and Defence Adviser to Prime Ministers Margaret Thatcher and John Major, was formed last year to better enable Rolls-Royce to keep pace with emerging business, political and economic trends. The two-day event held in March also coincided with the first visit of its board of directors to the country.

A MEETING OF MINDS

Joining Sir John Rose, CEO, Rolls-Royce and Simon Robertson, Chairman, Rolls-Royce were top industry and government figures such as Sir Rod Eddington, former CEO, British Airways; Lee Hsien Yang, President, Singtel; Ratan Tata, Chairman, Tata Group; and Dr Ernesto Zedillo, former President of Mexico.

During their two days here, the delegates attended presentations by both the Singapore Economic Development Board (EDB) as well as the Strategic Policy Office, under the Prime Minister's Office, and visited several Rolls-Royce facilities including Singapore Aero Engines Services Limited (SAESL), its major aero-engine maintenance, repair and overhaul joint (MRO) venture with SIA Engineering Company. The board also held meetings with major customers such as Singapore Airlines, which placed the largest order in the company's history for the supply of Trent 800 engines for its Boeing 777 aircraft in 1995.

PERFECT FIT

According to Sir John Rose, Singapore stood out for a number of reasons when the company was considering an ideal venue to hold this milestone event. "The decision to meet here underscores the importance of Singapore to Rolls-Royce and the increasingly international nature of the Group," he explains.

Since the company first set up a modest representative office here in the 1950s with a handful of employees, it has grown from strength to strength, and in tandem with Singapore's rise. Today, its activities here spans the full value chain, from MRO, sales and marketing, warehousing, headquarters function and R&D, with close to 1,000 Rolls-Royce and joint venture employees across its business sectors. "All four of our



Rolls-Royce supports the development of local engineering talent in Singapore through its participation in EDB's inaugural Aero Gas Turbine Technology Training and Attachment Programme (TAP).

business sectors - civil aerospace, defence aerospace, marine and energy - are well established here and our partnership with Singapore increasingly reflects our global activity," adds Sir John Rose.

In fact, Rolls-Royce was awarded the prestigious Distinguished Partners in Progress, Singapore's highest corporate honour, last year in recognition for its substantial operations here and contributions to the local economy. It is a key player in the development of Singapore's aerospace and marine industries, and actively contributes to the R&D scene. The company also harnesses Singapore as the strategic base for much of its regional activities.

One of the reasons for this lucrative and long-standing partnership is a common outlook. Says Robertson, "Like all true friends, we understand each other well and it is increasingly clear to both of us that we have a common and mutually beneficial agenda."

"The decision to meet here underscores the importance of Singapore to Rolls-Royce and the increasingly international nature of the Group."

- Sir John Rose, CEO, Rolls-Royce

SEALING A WARM FRIENDSHIP

As part of the Rolls-Royce International Advisory Board's (IAB) itinerary during its inaugural meeting in and visit to Singapore, they played host to Lee Kuan Yew, Minister Mentor for Singapore, and his wife for dinner on 14 March 2007. During the event, Simon Robertson, Chairman, Rolls-Royce, highlighted the importance of the relationship Rolls-Royce has with Singapore and the significance of the IAB's decision to convene in Singapore for its meeting. The following is the complete speech by Robertson welcoming MM Lee and his wife.

"I am sure you are aware that Rolls-Royce has greatly expanded its activities in Singapore over the last few years. From just a handful of company representatives, we currently employ almost 1,000 people across all our business sectors here.

"For this reason, I felt that it was entirely right to bring our main board to Singapore to demonstrate our increasing commitment

to Singapore and the importance we attach to your country as a place to do business. Today, we also held the inaugural meeting of our newly formed Rolls-Royce International Advisory Board, under the chairmanship of Lord Powell, a long-standing friend (I believe of yours) and of Singapore.

"Singapore Airlines' selection of our Trent engine in 1995 led to the significant strengthening of our relationship with Singapore. The trust placed in us then, confirmed by many subsequent orders and the success of our joint ventures, encouraged Rolls-Royce to choose Singapore for many of its regional activities.

"The Singapore Economic Development Board, too, has been crucial to this success. Its understanding of our business needs, and the intense focus shown when responding to our long-term aspirations, means that little time is wasted in searching for areas of common interest. This 'win-win' approach lends itself to efficient and fruitful partnerships.



Lee Kuan Yew, Minister Mentor for Singapore (left), receiving a commemorative Trent engine model from Simon Robertson, Chairman, Rolls-Royce (right).



From L-R: Dr Tommy Koh, Ambassador-at-Large, Singapore; Euleen Goh, Chairman, International Enterprise; and LG Lim Chuan Poh, Chairman-designate, A*STAR

"We are partners in two extremely successful joint ventures in the maintenance, repair and overhaul sector with SIA Engineering Company, our vital partner in the region. The maritime sector is also very important, and we engage directly with a number of Singaporean partners and your navy in the oil and gas area. We have also entered into a joint venture with Enertek to develop our increasingly advanced activity in the fuel cell arena.

"A*STAR has also engaged us in the area of research, establishing highly effective collaborative programmes in the energy sector and we recently participated in the launch of the Science and Technology Research Council's Aerospace Programme as well. We work closely, too, with Nanyang Technological University on various research fronts.


"Singapore's position in Asia offers unique challenges and opportunities. China and India, along with the large South East Asia market, represent both threats and opportunities. The robust and growing competition has become a constant and challenging factor, but the region also offers powerful partnership and investment opportunities. Your successful industrial parks in China, India and Vietnam are striking examples as we contemplate our own increasing engagement in the region. Indeed, we have



Chew Choon Seng, CEO, Singapore Airlines, at the dinner reception.

just initiated discussions to explore potential manufacturing partnerships in China with EDB, International Enterprise and Singapore industry representatives.

"Singapore has become a competitive and attractive centre for manufacturing and we are in constant discussions with our partners as we contemplate the scope for further investments.

"Minister Mentor, we are very much aware that Singapore is a great place to do business, but our commitment to Singapore goes beyond that. Like all true friends, we understand each other well and it is increasingly clear to both of us that we have a common and mutually beneficial agenda." 

Buzzword For MAXA 2007: Bigger And Better

BASED ON ITS INAUGURAL SUCCESS, THE FIELD FOR THIS YEAR'S MAXA AWARDS IS EXPECTED TO BE HIGHLY COMPETITIVE, TO SAY THE LEAST.



Seagate Technology International, the 2006 MAXA Award winner.

It was just last year that the Singapore Economic Development Board (EDB), in collaboration with McKinsey & Corporation and the Singapore-MIT Alliance (SMA), introduced the Manufacturing Excellence Award (MAXA) to recognise and reward the sterling work and impressive standards posted by outstanding manufacturing companies. The participating companies were measured against global standards in manufacturing excellence and innovation.

Since then, the manufacturing sector has seen continued growth and there is no shortage of companies excelling in their various fields, providing even more candidates to be considered and recognised in the coming 2007 MAXA Awards.

The results posted since the inception of the Award has also spurred the industry, as a whole, to excel. In 2006, fixed asset investments grew to S\$8.8 billion (US\$5.8 billion) and S\$13.4 billion (US\$8.9 billion) total value-added per annum generated from projects. Furthermore, 2006 also saw the creation of 26,800 jobs, the highest number posted since 2001.



"Manufacturing plays an important role in the Singapore economy, contributing to about a quarter of our GDP," says Aw Kah Peng, Assistant Managing Director, EDB. "MAXA is one of the major initiatives to celebrate and create greater awareness among the international

business community and Singaporeans that manufacturing in Singapore is thriving and of world class standards."

STRINGENT EVALUATION

The judging criterion for the MAXA Award 2006 was based on the framework and methodology involving the following factors – innovation, operating systems and sustainability – as mooted by the three partners. This year, the Award is also including recommendations made by the Intellectual Property Office of Singapore (IPOS) to further enhance and emphasise the importance of innovation and its management in manufacturing. This is also in line with the Republic's diligence in wanting to develop a robust Intellectual Property protection regime.

MAXA underscores the continued importance of manufacturing as a major pillar of economic growth for Singapore and MAXA winners demonstrate Singapore's capacity to host world-scale manufacturing activities as well as its strengths in complex manufacturing activities. Companies participating in MAXA will benefit from an independent assessment, and in doing so, learn how their practices measure up to the best of global manufacturing practices.

The overall winner of the 2006 MAXA Award, Seagate Technology International, echoes this fact. "Winning the inaugural MAXA was a strong endorsement of Seagate's manufacturing leadership and operations excellence benchmarked against the best global manufacturing practices," says Chee Teck Huei, Vice President, Recording Media Operations, Seagate. "The Award process and feedback from the Award partners and panel of judges provided us with extensive learning and information from which we have made improvements to our operations processes to enhance innovation and business sustainability."




JUDGING PANEL

This year, the Award selection panel will comprise eminent individuals respected in their various fields. The panel will be chaired by Professor Lord Kumar Bhattacharria, Professor of Manufacturing and Director of Warwick Manufacturing Group, Warwick University. The rest of the judges include Goh Geok Ling, Chairman, Sembcorp Marine Ltd; Dr Yoshiyuki Kaneda, Executive Deputy President Emeritus, Sony Corporation; and Helmut Wieser, Executive Vice President and Group President, Alcoa Inc.



"Participating in the Award is a great way for Singapore-based operations to learn from their peers and to measure themselves against global benchmarks in all three dimensions," says Dr Roland Villinger, Director and Leader of the Asian Operations Practice, McKinsey.

If the success of the inaugural 2006 MAXA Awards is anything to go by, this year's Award selection process and commemoration looks set to be an event not to be missed. With the *crème de la crème* in Singapore's manufacturing industry aiming for its top prize, the nation's manufacturing standards will no doubt be brought a notch higher. 



Past Award winners and finalists.

Advance SCT's New Integrated Copper Refinery Represents Huge Coup For Minerals, Metals And Materials Industry

THE CONSTRUCTION OF THE LARGEST INTEGRATED COPPER REFINERY AND MANUFACTURING PLANT IS ONE OF THE NEW EXCITING PROJECTS BEING INTRODUCED TO THE INDUSTRY.

No one would have wagered a bet on seeing a copper refinery plant being developed in Singapore. After all, why would a resource scarce island-state play host to such a complex manufacturing process? However, January 2007 saw such a breakthrough, literally, with Advance SCT Limited's (ASCT) groundbreaking ceremony of its – and one of the world's – largest integrated copper refinery and manufacturing plant.

When the 130,000 sq ft plant, located in Tuas and slated for completion in November 2007, is fully operational, it would be equipped to produce up to 36,000 tonnes of refined copper and end products. It will also be one of the world's largest integrated plants of such capacity.

"For us at Advance SCT, it is breaking new grounds as we progress through our journey to become one of the leaders in the global copper supply chain," says Terence Tea, Chief Executive Officer, ASCT.

EXCELLENT CONNECTIVITY

Congratulating ASCT's latest investment, Lim Siong Guan, Chairman, Singapore Economic Development Board (EDB), notes, "The project will benefit from Singapore's reputation as a trustworthy and secure location for complex manufacturing activities. It will tap on our connectivity, supply chain management capability and international trade linkages to establish and expand its supplier and customer base." He also adds that the organisation would benefit from having the assurance of "Singapore's robust intellectual property protection regime and technological capabilities" when ASCT sets up its materials development and application centre here.

The construction of such a plant also signals ASCT's commitment and determination to improve its integrated copper supply chain. It is an integral part of the organisation's plans to leverage Singapore's excellent business infrastructure to become a platform for its overseas expansion. The organisation, having previously started out in testing printed circuit boards and distribution of related products, has also announced that its copper operations would soon account for some 80 per cent of ASCT's business.

FOSTERING GROWTH

EDB, having identified the minerals, metals and materials (MMM) industry as one with significant economic potential, has encouraged the fostering of the sector.

As the industry is regarded as a critical component in moving countries up its value chain and expanding its economies, MMM activities have increased exponentially in the region, with countries such as China, India and Indonesia being some of the main beneficiaries. Thus, the investment from ASCT should be considered as one of EDB's finest achievements in this field thus far.

Besides this groundbreaking development, the EDB has been actively scouring the world to bring in such exciting and innovative projects to the already flourishing and diverse business landscape here in Singapore. And the MMM sector, considered to be a multi-billion dollar industry, has been busy these past few years in strengthening its position. In fact, some of the industry's biggest players, such as BHP Billiton and Baosteel, have already set up offices in the Republic. Singapore is also a major distribution centre for the London Metal Exchange, which holds significant amounts of metals such as tin and copper in accredited warehouses here – making the Republic a key node in the global supply chain for metals. Last year also saw the arrival of a tin refining company "whose output accounts for about 10 per cent of the world's tin market".

With all these developments at hand, especially the construction of what would be one of the world's largest integrated copper refinery and manufacturing plant, the future looks bright indeed for Singapore's minerals, metals and materials sector.

[The] organisation would benefit from having the assurance of "Singapore's robust intellectual property protection regime and technological capabilities" when ASCT sets up its materials development and application centre here.



Singapore's Precision Engineering Sector: 2007 And Beyond

BY FINE-TUNING ITS BLUEPRINT FOR DEVELOPING THE SECTOR, EDB IS KEEN TO BRING THE INDUSTRY TO THE NEXT LEVEL OF EXCELLENCE.

Precision engineering has not received quite the fanfare that other up-and-coming industries, such as the biomedical sciences, have been getting in recent times. Yet its relevance and importance to Singapore's manufacturing industry cannot be overstated.

In the 1970s, precision engineering activities started to appear on the scene and since then, the nation's precision engineering industry has flourished and is presently divided into two main sub-sectors – design and assembly of machinery and systems (M&S) and production of precision modules and components (PMC). Its growth has been exponential and in 2006 alone, the industry contributed S\$6.9 billion (US\$4.6 billion) in value-added and S\$21.8 billion (US\$14.4 billion) in manufacturing output.

PRECISION ENGINEERING: THE BREAKDOWN

In the M&S sector, established machine tools and semiconductor equipment-makers such as Makino, Yamasaki Mazak and Siemens have set up base here and provide the necessary

expertise to train local technicians. The PMC sector, on the other hand, is engaged in a wide range of manufacturing services – such as tool & die making and ultra-precision machining – as well as producing a diverse range of specialised components such as motors, vacuum pumps and watch movements.

“Precision engineering is the backbone of our manufacturing sector. It is a critical capability that has enabled Singapore to achieve strong leadership in many sectors such as manufacturing of hard disk drives, semiconductor equipment, machine tools, aerospace, and oil & gas equipment, just to name a few,” says Lee Yi Shyan, Minister of State for Trade and Industry, during the 25th anniversary dinner of the Singapore Precision Engineering & Tooling Association (SPETA) held on March 2007.


It is this particular highly skilled industry that the Singapore Economic Development Board (EDB) is keen to develop and to communicate its advantages to relevant companies globally. The flexibility of this industry in being able to function as a stand-alone industry, as well as support other industries such as medical technology and aerospace, is vital to EDB’s blueprint for development. Chang Chin Nam, Director of Precision Engineering, EDB, used the example of Norelco UMS’s S\$30.3 million (US\$20 million) aerospace manufacturing facility to highlight the diversification that the industry as a whole is undergoing in order to stay relevant on a global scale. “Norelco UMS is one example of a company that has moved on from its original operations of manufacturing semi-conductor and hard disk equipment to branching out into aerospace manufacturing by drawing on its existing technological infrastructure and know-how,” Chang explains.

Having evolved from simple skills-based capability to a workforce that possesses the necessary computer knowledge, complex manufacturing and measuring processes and inter-disciplinary engineering know-how, the industry is transforming itself into a knowledge and capital intensive sector.

EQUIPPING THE WORKFORCE

In keeping the industry abreast with the times, EDB has highlighted several key thrusts in developing this sector further; one of these is the need to continually refresh and rejuvenate the talent pool for the future. Chang, in noting that the subsequent batches of people joining the industry have to have a wide range of skills, emphasises changes in the syllabus within tertiary institutions to address this trend. “The training given in our institutions, such as the polytechnics, is being tailored to simulate factory settings so as to give the students real-life working experiences in their curriculum,” says Chang. With this increase in knowledge, the trend for starting pay in the industry is also nudging upwards, making it an attractive proposition not just for companies looking to invest in the country but for the local workforce as well.

Facing competition regionally, particularly from China and Thailand who provide lower-cost alternatives for manufacturing, the need to see through this infrastructural fine-tuning is crucial and will ensure that Singapore’s precision engineering industry continues to be an attractive investment destination.

“By getting the fundamentals of technological prowess, market knowledge and manpower right, Singapore will be well positioned to enter the same league of excellence in precision engineering capabilities as Germany, Japan and Switzerland,” says Lee. 

The flexibility of this industry in being able to function as a stand-alone industry, as well as support other industries such as medical technology and aerospace, is vital to EDB’s blueprint for development.



Resin And Pigment Technologies' New Integrated Facility Consolidates Operations And Shaves Customer Costs



Bird eye's view from finishing end.

THE STRATEGIC MOVE TO JURONG ISLAND ALSO MAKES IT A MORE ATTRACTIVE LOCATION FOR RELATED ACTIVITIES.


When Resin and Pigment (R&P) Technologies moved to a new location in Jurong Island at the Jurong Logistics Terminal in January 2007, it was more than just a physical relocation. It signalled a major, forward shift in operational dynamics, offering a business model that integrates logistics and compounding in one location. This means customers get to enjoy cost savings, thereby making Jurong Island more attractive as a location for such activities. In a new operation alliance with Belgian logistics company Katoen Natie, which also owns and operates the terminal, R&P's new facility is a first in Asia, offering a one-stop solution service to its customers in the petrochemical and polymer industry.

R&P's new facility has a capacity of 20,000 tonnes per year and is capable of processing a wide range of polymers including PC, Nylon, ABS, HIPS, PP and PE. It also offers value-added compounding facilities integrated with bulk storage and handling features to serve the petrochemical and polymer industries.

The multifunctional processing and logistics terminal caters to the various post processing and supply chain requirements of the major polymer producers, thereby allowing the producers to be more cost competitive and efficient, as well as enabling them to react quickly to market needs and dynamics.

Explains Alex Tan, Managing Director, R&P, "By locating our compounding facility there, we will be able to offer the logistics and infrastructure required to move bulk polymers." Adds Tseng Kau Chou, Director, R&P, "The new compounding plant will be complemented by the terminal's handling, processing and packaging capabilities".

A subsidiary company of EnGro Corporation, Resin and Pigment Technologies was established in 1989 and has since grown into a regional company with facilities in Singapore, Malaysia and China. Spotting a niche to serve in the processing of modified engineering compounds, the company diversified its core focus on colour compounds through the processing of engineering compounds. Currently, products processed by R&P are used in various applications on electrical & electric appliances, automotive, telecommunications, semiconductors, house wares and a wide variety of other specific purposes. Outside of Singapore, R&P currently operates compounding and masterbatch facilities in Johor, Malaysia and Wuxi, China. In fact, R&P aims to integrate its compounding services into the major polymer business chain and become a value-adding party for polymer manufacturers.

On R&P's plans for the future, Tseng says, "We plan to develop more sophisticated compounding operations, including working with customers in new polymer grade developments. We believe we will have an important role to play in the compounding of customised product ranges for major polymer producers, to enhance their local and regional businesses." 

The Economic Development Board (EDB) is the lead government agency responsible for planning and executing economic strategies to enhance Singapore's position as a global hub for business and investment. We are the one-stop agency that facilitates and supports local and foreign investors in both the manufacturing and services sectors as they seek more value-creating operations, higher sustainable returns and new business opportunities.

Singapore commands global leadership positions in many areas. EDB is expanding and extending existing industry clusters, as well as exploring new growth areas to create good jobs and secure Singapore's future competitiveness. Our emphasis is on capital-intensive, knowledge-intensive and innovation-intensive activities.

For more information on how EDB can help in your business and investment, please visit www.sedb.com.

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