

KEMENTERIAN TENAGA, SAINS, TEKNOLOGI, ALAM SEKITAR DAN PERUBAHAN IKLIM

Bil	Berita	Media	Capaian Berita Penuh
19 NOVEMBER 2018 (ISNIN)			
1.	<p><u>Loji nuklear masih diperlukan di Malaysia</u></p> <p>Beliau berkata demikian dalam sidang akhbar selepas Majlis Perasmian Persidangan Tahunan Kali Ketiga Wanita Dalam Nuklear Malaysia (WIN) 2018 di Dewan Tun Dr. Ismail Agensi Nuklear Malaysia, Bangi dekat sini hari ini. Persidangan tersebut dirasmikan oleh Timbalan Ketua Pengarah (Penyelidikan dan Pembangunan), Dr. Zulkifli Mohamed Hashim, Agensi Nuklear Malaysia.</p>	Utusan Malaysia	Klik pada tajuk berita
2.	<p><u>Gempa bumi kuat landa Rantau Kepulauan Fiji</u></p> <p>Menurut kenyataan Jabatan Meteorologi Malaysia di sini, pusat gempa yang terletak di 17.9 darjah Selatan dan 178.9 darjah Barat dengan kedalaman 547 kilometer berlaku di 279km timur Laucala, Fiji.</p>	Kosmo	Klik pada tajuk berita
3.	<p><u>Gempa bumi kuat landa Kepulauan Fiji</u></p> <p>Menurut kenyataan Jabatan Meteorologi Malaysia di sini, pusat gempa yang terletak di 17.9 darjah Selatan dan 178.9 darjah Barat dengan kedalaman 547 kilometer berlaku di 279km timur Laucala, Fiji.</p>	Sinar Harian	Klik pada tajuk berita
4.	<p><u>Awan pelik bukan petanda tsunami</u></p> <p>Jabatan Meteorologi Malaysia (Met Malaysia) mengingatkan orang awam agar tidak panic dengan fenomena garis badai yang berlaku disekitar kawasan Pengerang dekat Kota Tinggi pagi semalam</p>	Kosmo	Rujuk lampiran 1
5.	<p><u>Tiada tsunami di Pengerang</u></p> <p>Pengarah Jabatan Meteorologi Malaysia (MetMalaysia) negeri, Amirzudi</p>	Utusan Malaysia	Rujuk lampiran 2

	Hashim berkata, fenomena tersebut merupakan perkara biasa ketika musim tengkujuh.		
6.	<u>Solar doctor to the fore</u> Renewable energy, particularly solar power, is coming into prominence again in Malaysia. More so with Energy, Science, Environment and Climate Change Minister Yeo Bee Yin announcing a revised Supply Agreement for Renewable Energy(SRE) programme.	Fokus Malaysia	Rujuk lampiran 3
18 NOVEMBER 2018 (AHAD)			
7.	<u>Johor nafi ada ancaman tsunami bulan ini</u> "Sampai sekarang, saya belum dimaklumkan lagi dan saya tak rasa akan ada tsunami memandangkan Johor (kedudukannya) dilindungi Pulau Jawa dan Pulau Kalimantan.Tetapi apa pun, saya akan periksa dengan Jabatan Meteorologi dan setakat ini, memang tiada ada apa-apa," katanya.	Astro Awani	Klik pada tajuk berita
8.	<u>Johor dilanda 'awan gulung'?</u> Dalam pada itu, menerusi laman web Jabatan Meteorologi Malaysia, mulai Selasa hingga Sabtu, Johor Bahru bakal dilanda ribut petir di beberapa tempat dan diminta untuk orang ramai lebih berwaspada.	Sinar Harian	Klik pada tajuk berita
17 NOVEMBER 2018 (SABTU)			
9.	<u>SLICE platform pamer produk inovasi</u> Sementara itu, Mohammad Redzuan berharap UNISEL akan menerima peruntukan lebih besar untuk bidang kajian dan pembangunan selaras usaha memartabatkan Revolusi Industri 4.0.	Berita Harian	Klik pada tajuk berita
10.	<u>Aktiviti pembalakan di Kelantan dipantau</u> Jabatan Alam Sekitar (JAS) Kelantan menubuhkan tiga pasukan pemantau bagi memantau aktiviti pembalakan dan penebangan haram di Gua Musang bagi mengelak banjir besar berlaku terutama sepanjang musim tengkujuh ini.	Sinar harian	Klik pada tajuk berita

11.	<p><u>Lori terbabas, empat tong asid nitrik tumpah di atas jalan raya</u></p> <p>"Kita juga sedang menunggu pihak syarikat berkaitan untuk turut membantu membersihkan tumpahan itu. Selain itu, kita juga sedang menunggu ketibaan Jabatan Alam Sekitar di lokasi untuk tindakan selanjutnya," katanya.</p>	Astro Awani	Klik pada tajuk berita
12.	<p><u>Kelantan bebas pembalakan haram</u></p> <p>Pengarah Jabatan Alam Sekitar negeri, Hamzah Mohamad berkata, pemantauan pihaknya bersama Jabatan Perhutanan negeri mendapati kegiatan penerokaan tanah baharu juga tidak lagi berlaku di kawasan pedalaman sejak Oktober lalu.</p>	Utusan Malaysia	Klik pada tajuk berita
13.	<p><u>Mepa meterai MoU bersama ICEM, IEM</u></p> <p>Yang hadir sama ialah Pengerusi Tenaga Nasional Berhad (TNB), Tan Sri Leo Moggie; Presiden dan Ketua Pegawai Eksekutif TNB, Datuk Seri Ir. Azman Mohd. dan Pengerusi Suruhanjaya Tenaga, Datuk Ir. Ahmad Fauzi Hasan.</p>	Utusan Malaysia	Klik pada tajuk berita
14.	<p><u>Clearly on the green track</u></p> <p>Energy, Science, Technology, Environment and Climate Change Minister Yeo Bee Yin had announced that some RM2bil worth of projects will be up for bidding in January next year to produce 500MW of electricity via solar power.</p>	The Star	Rujuk Lampiran 4

TEMPATAN

Bil	Berita	Media	Capaian Berita Penuh
19 NOVEMBER 2018 (ISNIN)			
15.	<p><u>Banjir: Temerloh siap siaga</u></p> <p>Sebagai langkah akhir kita ada sistem siren yang dibangunkan Jabatan Pengairan dan Saliran (JPS) sebagai amaran kepada penduduk. Setakat ini, sistem siren telah dibangunkan di lapan di lokasi strategik dan berisiko banjir.</p>	Sinar Harian	Klik pada tajuk berita
16.	<p><u>Kereta nasional baharu pemangkin sektor ekonomi lain</u></p> <p>Beliau berkata, MITI dan MAI membangunkan pelbagai program bagi memastikan syarikat tempatan dapat meningkatkan keupayaan teknologi sejajar dengan keperluan Revolusi Industri 4.0 (IR 4.0).</p>	Berita Harian	Klik pada tajuk berita
17.	<p><u>Leader to bid for federal govertment's solar projects next year</u></p> <p>Leader Solar Energy(LSE) Sdn Bhd will take part in the upcoming federal Government's third large scale tender totaling 500MW to be launched in 2019</p>	The Star	Rujuk lampiran 5
18.	<p><u>Digital twist to biopiracy</u></p> <p>The developing world cried foul over this theft or "biopiracy"</p>	The Sun	Rujuk lampiran 6
19.	<p><u>Where are the Malaysian Scientists</u></p> <p>One of the most exhilarating global news headlines last week anounced the discovery of the world oldest known animal drawing deep inside a cave in Kalimantan, Indonesia.</p>	New Straits Times	Rujuk lampiran 7
20.	<p><u>Kerakusan manusia jejas keindahan El-Dorado Timur</u></p> <p>Lima sungai yang melalui kawasan pelancongan di Sungai Lembing atau yang turut dikenali sebagai El-Dorado Timur, di sini, terjejas akibat karakusan manusia.</p>	Berita Harian	Rujuk lampiran 8

18 NOVEMBER 2018 (AHAD)

21.	<u>Tingkat rondaan di kawasan berisiko banjir - Baru Bian</u> Lembaga Lebuhraya Malaysia (LLM) dan syarikat konsesi lebuhraya di Pantai Timur akan meningkatkan rondaan di kawasan berisiko sepanjang musim tengkujuh ini.	Kosmo	Klik pada tajuk berita
22.	<u>Platform to print</u> Two student used to sleep in their car or nap in quiet corners on campus when they first started pitching their product to potential partners	The Star	Rujuk lampiran 9
23.	<u>Award for innovation</u> Lim Kok Wing University of creative Technology founder and president Tan Sri Lim Kok Wing is the first Asian to receive the Legend in Innovation Award from the World Confederation of Businesses(WORLDCOB)	The Star	Rujuk lampiran 10
24.	<u>50,000 personnel ready for floods</u> All parties involved in rescue work are on high alert as the country braces for the onset of the year-end flood season.	The Star	Rujuk lampiran 11
25.	<u>Tackling food wastage with innovation</u> Not many realise that World Food Day is celebrated on Oct 16. Organisations that mark the occasion include the World Food Programme and the International Fund for Agricultural Development	NewStraitTimes	Rujuk lampiran 12

17 NOVEMBER 2018 (SABTU)

26.	<u>SMART berfungsi, projek pembangunan punca banjir kilat</u> Beliau berkata, sekiranya SMART gagal berfungsi, ibu kota akan kembali tenggelam jika hujan lebat yang pernah dialami sebelum ini.	Berita Harian	Klik pada tajuk berita
27.	<u>2 pusat pemindahan banjir dibuka di Sungai Buloh</u> Seramai 124 mangsa banjir daripada lima kawasan ditempatkan di dua pusat pemindahan	Berita Harian	Klik pada tajuk berita

	sementara yang dibuka sejak malam tadi di daerah Sungai Buloh.		
28.	<u>Kelantan setuju kempen nyahguna plastik pakai buang</u> Kerajaan Pas Kelantan menyokong langkah Kerajaan Persekutuan merealisasikan Pelan Hala Tuju Sifar Penggunaan Plastik Pakai Buang 2018-2030 demi kelestarian alam dari ancaman kotoran dan sisa pejal.	Utusan Malaysia	Klik pada tajuk berita
29.	<u>Perang dagang, masa depan digital jadi fokus Tun Dr Mahathir</u> “Selain itu, berkait juga dengan tema APEC, masa depan digital yang mana Tun Dr Mahathir akan menyentuh berkenaan Revolusi Industri 4.0,” katanya pada sidang media bersama wakil media Malaysia sempena APEC 2018 di sini pada Jumaat.	Astro Awani	Klik pada tajuk berita

ANTARABANGSA

Bil	Berita	Media	Capaian Berita Penuh
19 NOVEMBER 2018 (ISNIN)			
30.	<u>Preparing companies for digital future</u> Are companies in Asean ready for the next digital transformation in IT Infrastructure.	NewStraitsTimes	Rujuk lampiran 13
31.	<u>Bina Matahari buatan dengan kepanasan 100 juta darjah Celsius</u> Beijing, China telah Berjaya membina matahari buatan yang mencecah suhu 100 juta Celsius sebagai sebahagian projek menjadikan gas hydrogen teknologi hijau dengan kos efektif	Kosmo	Rujuk lampiran 14

32.	<u>Cyclone death toll in southeast India hits 33</u> The death toll from a cyclone that battered India's eastern coast has reached 33, a disaster official said, as authorities assessed the damage caused by the powerfull storm.	The Star	Rujuk lampiran 15
18 NOVEMBER 2018 (AHAD)			
33.	<u>Conference on issues related to future of Asia</u> Eighty speakers presented papers on humanities, technological and scientific issues related to the future of Asia at the conference.	The Star	Rujuk lampiran 16
34.	<u>Wildfire missing toll soars past 1,000</u> The number of people listed as missing in a devastating northern California wildfire soared pass 1,000 as the remains of eight additional victims were found by rescuers.	The Star	Rujuk lampiran 17
35.	<u>Anak Concorde terbang 2021</u> Syarikat aeroangkasa Amerika Syarikat(AS), Lockheed Martin sedang membangunkan pesawat dikenali sebagai "anak concord" yang dapat mengembalikan 'nostagia' penerbangan penumpang supersonic.	Mingguan Malaysia	Rujuk lampiran 18
17 NOVEMBER 2018 (SABTU)			
36.	A.I. can help improve Patient Outcomes Benjamin Franklin once said, "An ounce of prevention is worth a pound of cure", an advise that has anticipated hundreds of years of healthcare best practices	NewStraitsTimes	Rujuk lampiran 19

LAMPIRAN 1
KOSMO (NEGARA): MUKA SURAT 18
TARIKH: 19 NOVEMBER 2018 (ISNIN)

Garis panjang di Kota Tinggi perkara biasa ketika musim tengkujuh

Awan pelik bukan petanda tsunami

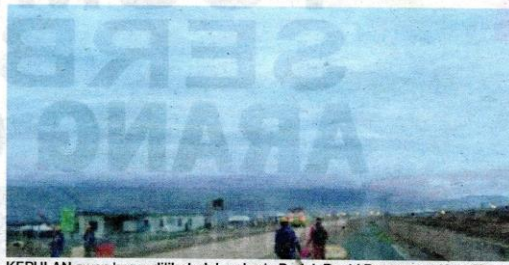
Oleh MOHD. IZUAN ROSELI

JOHOR BAHRU – Jabatan Meteorologi Malaysia (MetMalaysia) mengingatkan orang awam agar tidak panik dengan fenomena garis badai yang berlaku di sekitar kawasan Pengerang dekat Kota Tinggi pagi semalam.

Pengarah MetMalaysia Johor, Amirzudi Hashim berkata, fenomena kepulan awan dalam bentuk garis yang panjang itu dikenali sebagai garis badai dan ia adalah perkara biasa ketika berlakunya musim tengkujuh.

"Fenomena yang berlaku itu adalah perkara biasa kerana sejak 27 Oktober lalu, MetMalaysia telah mengeluarkan peringatan mengenai musim tengkujuh berikutan peralihan angin monsun timur laut.

"Garis badai merupakan ben-



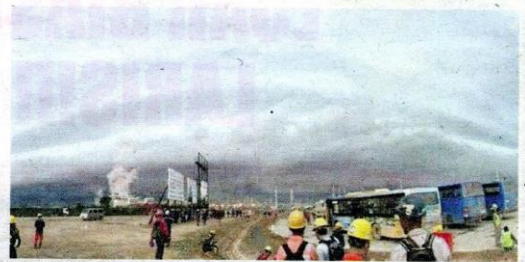
KEPULAN awan besar dilihat oleh pekerja Projek Rapid Pengerang, Kota Tinggi pagi semalam.

tuk kepulan awan yang berbentuk garis panjang menunjukkan hujan telah turun di satu-satu kawasan itu," katanya ketika dihubungi semalam.

Terdahulu, video berserta gambar menunjukkan kepulan awam pelik di Pengerang tular

di media sosial sekali gus mengusarkan banyak pihak yang mendakwa fenomena itu sebagai tanda awal tsunami.

Dalam pada itu, Amirzudi menasihatkan orang ramai agar sentiasa peka dengan setiap pengumuman yang dilakukan Met-



GARIS badai yang dilihat di Kota Tinggi semalam adalah perkara biasa ketika musim tengkujuh.

Malaysia dari semasa ke semasa melalui media sosial dan aplikasi yang telah disediakan pihaknya.

"Orang ramai yang mempunyai sebarang kemusykilan boleh menghubungi talian 1-300-22-1638 atau melayari laman web www.met.gov.my untuk

mengetahui informasi terkini mengenai ramalan serta amaran yang dikeluarkan.

"Mereka yang ingin mengetahui informasi terkini bolehlah memuat turun aplikasi Mycuaca yang telah disediakan pihak kami," katanya.

LAMPIRAN 2
UTUSAN MALAYSIA (DALAM NEGERI): MUKA SURAT 15
TARIKH: 19 NOVEMBER 2018 (ISNIN)

Tiada tsunami di Pengerang

JOHOR BAHRU 18 Nov. - Dakwaan berlaku tsunami di Pengerang dekat sini, hari ini adalah tidak benar sebaliknya hanya fenomena garis badai yang terhasil daripada kepulan awan dalam bentuk garis panjang.

Pengarah Jabatan Meteorologi Malaysia (MetMalaysia) negeri, Amirzudi Hashim berkata, fenomena tersebut merupakan perkara biasa ketika musim tengkujuh.

"Fenomena ini adalah perkara biasa kerana sejak 27 Oktober lalu, MetMalaysia telah mengeluarkan peringatan mengenai musim tengkujuh berikutan peralihan angin monsun timur.

"Garis badai merupakan kepulan awan yang berbentuk garis panjang menunjukkan hujan telah turun di satu-satu kawasan itu," katanya ketika dihubungi di sini hari ini.

Terdahulu, satu rakaman video berserta gambar menunjukkan kepulan awan pelik di Pengerang tular sekali gus merisaukan banyak pihak yang mendakwa fenomena itu sebagai tanda awal tsunami.

Dalam pada itu, Amirzudi menasihatkan orang ramai agar sentiasa peka dengan setiap pengumuman dilakukan MetMalaysia dari semasa ke semasa melalui media sosial dan aplikasi yang disediakan pihaknya.

LAMPIRAN 3 FOKUS MALAYSIA: MUKA SURAT 16 TARIKH: 19 NOVEMBER 2018 (ISNIN)

16

enterprise

FocusM | Nov 17-23, 2018

- **Technology Park** Malaysia aims to power up at least 70% of the park's requirements via solar energy

- **Savings** of between 10% and 15% in electricity expenses once the solar energy programme is completed



by Terence Tang

Renewable energy, particularly solar power, is coming into prominence again in Malaysia. More so with Energy, Science, Environment and Climate Change Minister Yeo Bee Yin announcing a revised Supply Agreement for Renewable Energy (SARE) programme.

This uses the process for consumers to install solar panels in their homes under a solar leasing concept, and a Net Energy Metering (NEM) mechanism that enables solar energy-producing users to receive improved rebates.

Technology Park Malaysia Corporation Sdn Bhd (TPM), a Finance Ministry incorporated company, has also been tasked to complete a solar energy initiative that could benefit the nation.

In fact, TPM is already collaborating with South Korea's Green Planet Energy Co Ltd (GPE) in renewable energy (RE) solar farm and biomass projects. Both parties entered into a memorandum of understanding on Jan 3 this year.

Spearheading the solar farm project is its general manager, Centre for Technology Commercialisation, Mohamad Zailhairin Mohamed Basim. He is also general manager of TPM Engineering Sdn Bhd.

"We are in the midst of building up our 14-megawatt peak-capacity (solar energy facility) to power up at least 20% of Technology Park Malaysia's requirements," he tells *FocusM*.

Prior to joining TPM, he worked with multinational manufacturing corporations such as Motorola (M) Sdn Bhd and Sony Video (M) Sdn Bhd. After more than 21 years of experience in overseeing high-tech manufacturing systems, equipment and instruments for industrial and economic growth, he is currently managing this particular project, estimated to be worth RM17 million investment.

"With this system, we can power up 20% of the initial requirement and this will be a showcase to the (other) industries. And we can be easily emulated and thus provide almost the same concept to these industries," Zailhairin adds.

Working alongside GPE, TPM's team of engineers and

Solar doctor to the fore



TPM has also been tasked to complete a solar energy initiative that can benefit the nation

researchers plans to construct solar panels on approximately 70,000 sq m (seven hectares) of building rooftops and non-value added open spaces (such as underutilised valleys) in the technology park. This would involve 12 buildings and is expected to be completed within a year.

Savings from using solar energy

On the average savings that an office in the technology park will enjoy by using solar energy, Zailhairin says, "I estimate each office would save at least 10% to 15% (in electricity expenses). These savings tend to increase as we manage to set off the initial investment."

He reveals that his team is developing an intelligent energy storage control system.

"It's not the solar... Anybody can provide the solar, anybody can provide the inverter, the battery, but the optimisation lies in our algorithm to manage the

electricity that's coming directly from solar and at the same time manage our storage so that it can reduce the maximum demand (MD) at any point in time.

"If it's too much, the control system will automatically give instructions to the battery and the storage system to store the excess (rather than allow it to go to waste)," he explains.

The MD he refers to is measured in kilowatt (kW) and is the highest level of electrical demand monitored in a particular period, usually over a month. The MD for any month is twice the most kilowatt-hours (kWh) supplied during any consecutive 30 minutes in that month.

Malaysian-Korean collaboration

A testament of chivalry ignites when Zailhairin speaks of his team's experience working with the South Koreans of GPE.

Despite the language barrier between the Malaysian and South



The optimisation lies in its algorithm to manage the electricity that's coming directly from solar, Zailhairin says

Korean teams, they discovered a connection via their mutual understanding of engineering knowledge and figures.

"Well, number one is you need to speak in English, but then when you talk about technical things, it comes down to numerical figures. So everything will be firming up by having the numbers," he points out.

Asked about the selection of GPE as a partner, Zailhairin says: "They came with an attractive offer, they have the proven technology, and they offer us a very good technology transfer programme."

Other TPM projects

Established during Prime Minister Tun Dr Mahathir Mohamad's first term, TPM is part of the government's initiative to promote indigenous technology, Zailhairin explains.

"In the future, we can offer this technology transfer programme (with GPE) to other parties in the nation.

"We are developing technologies together with the other industries. Prior to this, we developed the Flexible Manufacturing System (FMS) to cater to the current Industry 4.0's requirements.

"We have also been tasked by our ministry to spearhead the system integration technology, which is the core pillar in the Industry 4.0 roadmap," he adds.

Around the fourth industrial revolution of manufacturing automation, cloud computing and cognitive computing, TPM also features a robotics section. In addition to FMS and its system integration technology development.

The ability to save between 20% and 25% in electricity expenditure is no small achievement especially for companies with high electricity usage. Imagine the savings Malaysians get to enjoy when TPM expands its technology beyond the technology park. **FocusM**

Maximising solar usage

To generate solar energy, captured sunlight is used to create photovoltaic power or concentrated solar power. And this energy can be utilised to power numerous entities and consumer items.

Remember the solar calculator that was a prerequisite for secondary school students in the 1990s? Now solar technology has been developed for mobile phones, music speakers, tablets and watches.

In China, solar-powered buses are used in densely populated cities like Beijing. This reduces the city's carbon footprint while maintaining an efficient public transportation system for its vast population. Solar Impulse 2, one of the world's first long-distance solar aircraft, soared across the Pacific Ocean in 2016. Progress in developing this technology

continues to be made.

The rooftop solar panel continues to gain popularity among homeowners worldwide, including in Malaysia. Reducing the electricity bill even while maintaining the same level of power usage has proven to be an attractive factor for owners who convert to solar energy.

Solar lighting has proven effective for the homes, offices and public spaces. It may not be as commonly found as rooftop solar panels, but just like the panels, this lighting technology can save you money in the long term. Imagine the lights blazing through the night without burning a hole in your wallet or company budget.

With promising case studies like these, the future of solar energy is bright indeed. We may yet live to see solar energy become a main source of power.

LAMPIRAN 4

THE STAR (NATION): MUKA SURAT 4

TARIKH: 17 NOVEMBER 2018 (ISNIN)

Clearly on the green track

Government makes clear its renewable energy agenda

By LEONG HUNG YEE
hungyee@thestar.com.my

THE country's aspiration for 20% of renewable energy (RE) in the power mix by 2025 has been made clear with a number of announcements recently, including large-scale projects, net metering and solar leasing.

Energy, Science, Technology, Environment and Climate Change Minister Yeo Bee Yin has announced that some RM2bil worth of projects will be up for bidding in January next year to produce 500MW (megawatt) of electricity via solar power.

The Large Scale Solar (LSS) Programme 3 projects, worth RM2bil, will be conducted through open tender in January next year. The projects are in addition to ongoing LSS projects to produce 958MW of electricity between the end of this year until 2020.

Another policy that the minister has announced to promote solar is the repair of the Net Energy Metering Programme (NEM). Under NEM, electricity users installing solar panels on the roof for their own use receive a rebate from Tenaga Nasional Bhd (TNB) for electricity generated.

In a reply to StarBizWeek, the Sustainable Energy Development Authority of Malaysia (Seda Malaysia) says the take-up rate was low - until October 2018, there was only an application for 17MW of the 500MW quota provided, which was only 3%.

"This is because consumers have previously sold surplus solar energy to TNB at an 'displaced cost' of 31 sen per kWh, but buy on existing tariffs, most of which are more than 50 sen per kWh.

"This makes the NEM non-feasible for most users - domestic, commercial or industrial," Seda says.

The ministry has reviewed the old policy of NEM and decided that beginning Jan 1, 2019, there will be no difference in the selling price and electricity purchase.

Basically, this means every 1kWh exported back to the grid will be offset against 1kWh consumed from the grid, instead of at the displaced costs previously.

Therefore, domestic and commercial users of solar power will enjoy cheaper electricity



Green energy: A solar power project in Sabah. Some RM2bil worth of projects will be up for bidding in January next year to produce 500MW of electricity via solar power. — Bernama

bills from Jan 1.

The government has also decided to improve and expand the Supply Agreement for Renewable Energy (SARE) programme to allow consumers to install solar panels in their homes under a solar leasing concept.

Under solar leasing, there will be zero upfront cost where individuals need not come out with any initial cost for installing solar panels.

TNB, through its unit, will be offering financing self-generation packages for solar PV panels for residential customers by year-end as the demand for green energy climbs.

These packages will be offered by TNB Renewables Sdn Bhd's unit GSPARX Sdn Bhd which has started offering packages to commercial and industrial customers.

Interestingly, customers do not have to make any upfront payment but pay a lease as GSPARX will bear the cost for purchasing and installing solar PVs.

Customers will benefit from saving and

hedging opportunities. Installers will benefit from the unlocking of business potentials of solar PV installation.

GSPARX targets to offer 1,500MW of self-generation for solar PV investment by 2025.

Its revenue stream comes from the sale of energy generated by the solar PV and utilised by the customers at a price agreed by both parties on a willing buyer and willing seller basis.

TNB has recently started supplying power from a part-completed 50MW solar power project in Kuala Langat, Selangor.

Analysts do not expect TNB to be hit but the investments for solar PV for residential consumers as TNB has the options to produce less electricity.

They say RE is also a way to tackle escalating global coal price. In July, the Australian thermal coal prices broke through the US\$120-per-tonne level for the first time since 2012, driven by strong consumption in

Asia.

Between July and October, the average coal price was US\$116.43 per tonne as compared with an average of US\$103.42 per tonne between January and June this year.

Spot prices for thermal coal from Australia's Newcastle were quoted at US\$104.15 per tonne on Friday.

Coal plays a big role in Malaysia's energy scheme, with some 62% being imported from Indonesia, another 24% from Australia and the remainder from Russia (11%) and South Africa (2%).

Solar accounts for 67% of Malaysia's RE capacity while biogas and biomass account for the second largest portion at 28%.

"Solar PV will be the main driver of growth and with the emerging renewable energy certificate (REC) market in Malaysia," an analyst says.

It is also worth noting that prices have fallen tremendously bringing solar PV close to grid parity in several countries.

"Solar electricity generation is gearing towards grid-parity. This is because solar technology is becoming more mature with increasingly competitive costs, PV panel prices have fallen 80% since 2009," Seda says, adding that since 2017 quota for solar PV is no longer offered under the Feed-in-Tariff (FIT) mechanism.

When asked if grid parity is seen in Malaysia, Seda says the winning bid tariffs for LSS programs are very close to the gas plant tariffs.

In other words, solar has the potential to be a competitive alternative source of electricity compared to conventional sources.

Some players say the push for solar PV will also provide a boost to the solar PV panel industry.

Malaysia is one of the largest solar panel producing countries.

Some local companies have been impacted due to safeguard tariffs imposed by the US and India on the import of solar cells and modules from Malaysia.

It has been reported that Malaysia's solar industry will be hit by another blow after India became the second country to impose safeguard duties on solar panel imports after a 30% tariff imposed by the United States.

LAMPIRAN 5
THE STAR (BIZ NEWS): MUKA SURAT 3
TARIKH: 19 NOVEMBER 2018 (ISNIN)

Leader to bid for federal government's solar projects next year

GEORGE TOWN : Leader Solar Energy (LSE) Sdn Bhd will take part in the upcoming federal government's third large scale solar tender totalling 500MW to be launched in 2019.

Its chief executive officer Ian Fox said the new round of solar tender will provide another exciting opportunity for Leader to further grow its solar footprint in the country.

"Apart from Malaysia, we seek to expand our presence in other high growth markets in South-East Asia," Fox said.

Leader Solar Energy Sdn Bhd (LSE) is officially launching the commercial operation of its net 29 MWac Solar Power Plant in Kedah today.

LSE is the first solar power project executed by Leader Energy Group, which is a wholly owned subsidiary of the home-grown HNG Capital Group.

Fox said the project was awarded to LSE in December 2016 through competitive bidding conducted by the Energy Commission of Malaysia.

LSE will sell power generated to Tenaga Nasional Bhd (TNB) under a 21-year power purchase agreement (PPA) that was signed in March 2017.

The solar plant occupies a 49 ha freehold site and has a gross installed capacity of 38MWp and net export capacity to the grid of 29 MWac.

The plant's net energy output is up to the maximum of 61 million kilowatt-hours (kWh) annually and is sufficient to supply electricity to about 11,000 homes.

The LSE solar power project will save the environment from approximately 40,000 tonnes of CO2 emission annually that might otherwise be created from fossil fuel power

generation.

The total project cost including land acquisition is approximately RM180 million and was financed with support from HSBC Bank and Alliance Bank.

Leader Energy owns and operates a diverse portfolio of power and transmission assets in South-East Asia.

Currently the company owns and operates more than 333 MW of power plants, consisting of 235 MW of coal power plants in Cambodia, 49.5 MW of hydro power plants in Vietnam and 49 MWac of solar power plants in Malaysia.

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Power generation: Leader Energy's RM180mil solar power project in Kedah

LAMPIRAN 6
THE SUN TIMES (SPEAK UP): MUKA SURAT 08
TARIKH: 19 NOVEMBER 2018 (ISNIN)

Digital twist to biopiracy



LAW SPEAK

BY GURDIAL SINGH NUAR

FOR long, corporations plundered the resources of developing countries and created high-value products without sharing the benefits with the providers. From the diversity of plants and animals and nature – nurtured largely by indigenous communities and their traditional knowledge. Huge profits were made from products created from the plunder of these resources and the knowledge. Three-quarters of all modern medicines, for example, came from leads provided by such traditional knowledge. Indeed it is now freely acknowledged that it is this knowledge of indigenous peoples that has fed, clothed and healed the world.

The developing world cried foul over this theft or “biopiracy”.

Finally after a long and arduous struggle, developing countries succeeded in adopting an international treaty – the 2010 Nagoya Protocol on Access and Benefit Sharing of Genetic Resources. It established a regime which requires the prior consent of the provider country or community's consent for any access to biological or genetic resources and traditional knowledge; and for benefits arising from their use to be shared

fairly and equitably. Countries, including Malaysia, have enacted national access and benefit sharing (ABS) laws to implement this treaty. Developing countries thus expect to generate considerable wealth from the use of their rich biodiversity.

However, a new technology makes it possible to bypass access to the actual physical resource – through digital sequence information (DSI). Now the sequencing of the genetic make-up of a biological resource can be done and stored digitally in data bases. This DSI can then be accessed by corporations and manipulated to create high economic value products such as vaccine viruses. And exchanged across borders without the physical biological material changing hands. This circumvents the mandatory prior informed consent of the country of the original resource; as well as the mandatory obligation to share benefits with the country or the indigenous community supplying the traditional knowledge of the use of the material.

A 2018 study on the use of DSI on genetic resources in Germany noted that a majority of researchers said that it was not fair to give benefits in exchange for access to DSI or data; and opted for having “free, easy and unrestricted access to DSI”. Most

respondents disagreed strongly with the idea of paying for access. Most respondents disagreed strongly with the statement that “countries that provide genetic resources should get something when DSI/data from those genetic resources are used for basic research”.

Because most parties assumed that the treaty was based on physical access, most countries enacted laws and policies predicated on the physical transfer of the material. These laws are clearly in danger of becoming irrelevant as more and

more users access DSI. This seriously undermines the international protocol as well as national laws. And poses an existential threat to international, regional and national laws and policies. Exacerbated by the accelerated speed with which sequencing can be accomplished; as well as the reduced cost of such sequencing.

Developing countries have flagged this as a serious issue that needs to be addressed – since 2012 at every meeting of the international ABS-related meetings.

This issue has assumed a particularly urgent importance at the ongoing UN Biodiversity Conference at the Egyptian resort city of Sharm El Sheikh.

The Like Minded Megadiverse Countries

(LMMC) representing the 17 developing countries holding the world's greatest biodiversity, and presently chaired by Malaysia, have taken a strong stand against DSI being accessed to subvert international and national ABS laws.

In this context LMMC will be strongly advocating in the DSI negotiations, the following:

- ▶ That the creation of DSI requires initial access to a physical genetic resource;
- ▶ Therefore benefits arising from the utilisation of DSI should be shared fairly and equitably in accordance with the imperatives of international treaties;
- ▶ The sharing must be done such as to benefit indigenous peoples and local communities conserving biological diversity; to serve as an incentive for conservation and sustainable use of biodiversity.

Unless this issue is resolved satisfactorily to ensure fairness and equity in the use of genetic resources and traditional knowledge accessed from developing countries, the ugly spectre of biopiracy will be resurrected. Reminiscent of the time when colonial powers, through conquest and manipulation, plundered our resources. This time through technology.

Gurdial is part of the Malaysian delegation at the UN Biodiversity Conference in Egypt. Comments: letters@thesundaily.com

A new technology makes it possible to bypass access to the actual physical resource – through digital sequence information (DSI).

LAMPIRAN 7
NEWSTRAITSTIMES (OPINION): MUKA SURAT 15
TARIKH: 19 NOVEMBER 2018 (ISNIN)



ZAKRI ABDUL
HAMID

RESEARCH COLLABORATION

WHERE ARE THE MALAYSIAN SCIENTISTS?

They should initiate
and lead research
on local and
regional issues

ONE of the most exhilarating global news headlines last week announced the discovery of the world's oldest known animal drawing deep inside a cave in Kalimantan, Indonesia.

Experts believe the drawing is at least 40,000 years old, edging out the cave drawings in France and Spain that historians had previously assumed to be oldest.

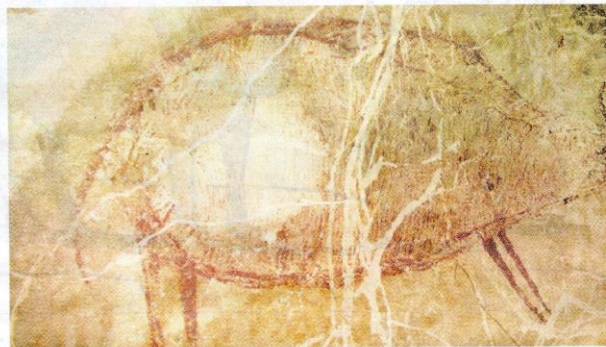
The large (about 1.5m wide) red image depicts the silhouette of an unidentified animal but probably a species of wild cattle still found in the jungles of Borneo. The animal could be the "banteng", well known to the people living in our part of the world.

Said Maxime Aubert, an archaeologist and geochemist at Griffith University in Australia and lead author of the study, published in the journal, *Nature*: "It is now the earliest known figurative artwork." Cave paintings are a fascinating part of human history, revealing the first attempts at artistic expression, and the things that were most important to our earliest ancestors. Cave paintings and drawings have been discovered all over the globe, and studying this primitive art has revealed surprising similarities worldwide.

Until recently, the common belief was that cave painting originated in Europe, where some of the best known and oldest examples of the form have been discovered, and that this skill then travelled around the globe.

This new discovery in Borneo may tell a very different story.

Archaeologists have been discovering cave paintings and ancient sculptures for centuries, but it was only in the mid-20th century that it became possible to determine their age with any



The drawing discovered by archaeologists in a cave in Kalimantan, Indonesia. Experts believe the drawing is at least 40,000 years old. NYT PIC

precision.

Traces of radioactive carbon are present in some types of art, and scientists gauge their age by measuring how long the carbon has been breaking down.

Scientists suspected that older art dating back thousands of years was still out there, but radiocarbon dating has limits. Many cave paintings lack the carbon required to date them. Moreover, the half-life of radioactive carbon is only 5,730 years. In a sample that's 40,000 years old or older, all of the carbon required to date it may be long gone.

In recent years, scientists have developed a new dating method. When water trickles down cave walls, it can leave behind a translucent curtain of minerals called a flowstone. If a flowstone contains uranium, it will decay steadily — and at a predictable rate into thorium.

Aubert was invited to participate in the research by two Indonesian colleagues: Pindi Setiawan, an archaeologist at Institut Teknologi Bandung and Adhi Agus Oktaviana, of the Indonesian National Centre for Archaeological Research, both of whom spent years studying drawings in remote mountain caves there.

The story above is also a fine example of international research collaboration deserving of applause and encouragement.

However, it also suggests that

researchers in the developing world continue to be led by colleagues from the advanced countries, as well as the low priority accorded to scientific research in our national setting.

This is not unique to Indonesia; we in Malaysia have our own share of experiences. In 2009, a team of British scientists led by Professor Chris Thomas from the University of York conducted a study of moths on Mount Kinabalu. This was actually a repeat of a similar study of the same sites conducted four decades earlier by a group of visiting students from the United Kingdom.

The group of six, including a member of the original trip, found that on average, the insects had raised the altitude of their range up to 67m as temperatures rose. This seminal study, published in the prestigious journal, *Proceedings of the US National Academy of Sciences*, suggests that global warming is forcing tropical species to relocate to a higher elevation at a rate of more than a metre a year.

The results are also supported by other studies of tropical species in Madagascar, Monte Verde and Costa Rica, and temperate species in North America and Europe.

The question is, where are the Malaysian scientists who should be doing this kind of research in our own backyard?

Southeast Asia is one of the earth's greatest centres of biodiversity. Indeed, it is one of the grandest living biology labs on earth and a field experiment station for many illustrious naturalists who have made tremendous contributions to science in the past. These include Alfred Russel Wallace, co-discoverer with Charles Darwin of the "Theory of Evolution by Natural Selection". The latter did his observations in South America, in particular the Galapagos Islands. Wallace conducted his fieldwork in the Malay Peninsula and Borneo, finely documented in his classic book, *The Malay Archipelago*, published in 1869.

While we should continue fostering research collaboration on a global scale, we should revisit the notion of initiating and leading research on local and regional issues ourselves. In that light, the recent remarks by Prime Minister Tun Dr Mahathir Mohamad, during his acceptance speech of an honorary doctorate from the National University of Singapore (NUS), that there should be more research collaboration between NUS and the University of Malaya, are worth serious elaboration and pursuit.

The writer is a board member representing Asia in the Global Research Council and a recipient of the 2018 Midori Biodiversity Prize

Cave paintings are a fascinating part of human history, revealing the first attempts at artistic expression, and the things that were most important to our earliest ancestors.

LAMPIRAN 8

BERITA HARIAN (LAPORAN KHAS): MUKA SURAT 52

TARIKH: 19 NOVEMBER 2018 (ISNIN)



Aktiviti pembalakan tidak terancang di hulu Sungai Lembing menyebabkan hakisan tanah memenuhi anak sungai dan menjadi punca banjir lumpur setiap kali musim tengkujuh.

Kerakusan manusia jejas keindahan El-Dorado Timur

➔ Aktiviti pembalakan tak terancang punca banjir lumpur di pekan Sungai Lembing setiap kali musim tengkujuh

Oleh Mohamad Azim Fitri
abdazim@nstp.com.my

Kuantan

Lima sungai yang melalui kawasan pelancongan di Sungai Lembing atau yang turut dikenali sebagai El-Dorado Timur, di sini, kini terjejas akibat kerakusan tangan manusia.

Air Sungai Terpai, Sungai Kelu, Sungai Pasir Kubur, Sungai Jin dan Sungai Daguk yang mengalir dari kawasan hulu Sungai Lembing ber-

tukar warna menjadi keruh dan kekuningan. Lebih menyedihkan warna air sungai berkenaan dapat dilihat dengan jelas oleh kumpulan pelancong dari dalam dan luar negara apabila berkunjung ke kawasan rekreasi Air Terjun Pelangi dan Gunung Tapis, yang menjadi tarikan eko pelancongan ke pekan itu yang dahulunya popular dengan persembakan banyan banyan.

Kerosakan ekosistem sungai dalam kawasan tadahan hujan yang memberi manfaat kepada hampir semua penduduk di Kuantan itu di-



Aktiviti pembalakan tidak terkawal turut menjejaskan kawasan rekreasi di Gunung Tapis dan Air Terjun Pelangi.

Sejak aktiviti pembalakan dijalankan di hulu Sungai Lembing secara besar-besaran pada 2014, ia menjejaskan kehadiran pelancong.

Operator pelancongan

kesan terjejas disebabkan aktiviti pembalakan tidak terkawal di hulu Sungai Lembing.

500 hektar hutan ditebang

Siasatan yang dijalankan wartawan NSTP baru-baru ini mendapati kira-kira 500 hektar hutan di hulu Sungai Lembing ditebang secara berleluasa tanpa mengambil kira impak alam sekitar dan kesan kepada masyarakat.

Infrahikman, terdapat dua kontraktor pembalakan yang mempunyai permit untuk membawa keluar balak secara sah dan ia diluluskan



Air sungai bertukar warna menjadi keruh dan kekuningan akibat hakisan tanah di sekitar Sungai Lembing.



Air sungai yang keruh menjejaskan kawasan ekopelancongan sekitar Sungai Lembing.

sejak 2013 sebelum permit itu diperbaharui setiap tahun.

Tinjauan NSTP mendapati jarak kawasan pembalakan dari pekan Sungai Lembing mengambil masa 15 minit perjalanan menggunakan kenderaan pacuan empat roda iaitu kira-kira tujuh kilometer.

Hakisan tanah penuh sungai

Sebaik memasuki kawasan tanah merah dan berbatu, pelancong dan penduduk kampung dapat melihat dengan jelas kawasan menghempakan balak.

Kawasan yang dinamakan 'Matau

Balak' itu adalah kawasan yang dikongsi operator pelancongan yang membawa orang ramai ke kawasan Air Terjun Pelangi serta Gunung Tapis.

Aktiviti pembalakan tidak terancang menyebabkan hakisan tanah memenuhi anak sungai, dan akibatnya menjadi punca banjir lumpur di pekan Sungai Lembing dan beberapa kampung berhampiran setiap kali musim tengkujuh.

Sekarang, operator pelancongan yang enggan dinamakan memberikan, sejak aktiviti pembalakan dijalankan di hulu Sungai Lembing

secara besar-besaran pada 2014, ia menjejaskan kehadiran pelancong. Katanya, Gunung Tapis dan Air Terjun Pelangi yang menjadi pilihan pengikat aktiviti pendakian turut berasa kurang senang selepas kawasan rekreasi mereka diganggu.

"Dahulu pelancong suka datang ke Sungai Lembing, nak tengok Air Terjun Pelangi tapi apabila mereka datang ke sini, laluannya tidak seperti mereka jangkakan.

"Ranyak jalan balak dibuka hingga ada pelancong yang bertanya mengenai perkara itu kepada kami. Kami malu," katanya.

'Tiada pihak endah, ambil tindakan aduan penduduk'



Aktiviti keluar masuk lori balak di jalan utama ke Sungai Lembing menimbulkan rasa tidak selesa kepada penduduk setempat.

Kuantan: Penduduk Sungai Lembing sudah puas membuat aduan mengenai aktiviti pembalakan yang tidak terkawal tetapi tiada sebarang tindakan diambil oleh mana-mana pihak.

"Sudah berbuih mulut kami sukar rakan mengenai permasalahan ini, tetapi tiada hasil dan tindakan diambil malah aktiviti pembalakan semakin rancak berlaku," kata Ahli Jawatankuasa Bahagian Keselamatan Persatuan Pelancongan Sungai Lembing, Muhammad Ridzal Sukimi.

Pemandu pelancong berusia 42 tahun itu mendakwa aktiviti pembalakan di hulu Sungai Lembing sebagai barah yang menjejaskan industri pelancongan dan ekosistem di kawasan itu.

Katanya, setiap kali operator pelancongan membawa orang ramai ke kawasan Air Terjun Pelangi, pasti ramai akan bertanya mengenai aktiviti pembalakan yang menjejaskan kawasan hutan serta kebersihan sungai.

"Saya bimbang jika aktiviti ini tidak dikawal ia akan jeaskan kehadiran pelancong," katanya.

Pendapatan operator pelancongan terjejas teruk

Muhammad Ridzal yang menjalankan perkhidmatan membawa pelancong di sekitar Sungai Lembing sejak 10 tahun lalu, turut mengesahkan lima sungai yang melalui Sungai Lembing terjejas teruk akibat aktiviti pembalakan.

"Sebelum ini, kami ada berjumpa dengan pihak kontraktor untuk cari jalan penyelesaian, tetapi tidak kata putus diperoleh malah aktiviti berjalan seperti biasa. Saya harap ada campur tangan daripada pihak berkuasa," katanya.

Sementara itu, operator pelancongan mahu dikenali sebagai Akde,

45, memaklumkan pendapatannya terjejas sebanyak 30 peratus akibat aktiviti pembalakan itu.

Katanya, jika dibiarkan kehadiran pelancongan akan merosot sekali gus menjejaskan perniagaan mereka.

"Air Terjun Pelangi ialah ikon kepada Sungai Lembing. Apabila pelancong ke sini, mereka pasti akan singgah ke kawasan air terjun berkenaan kerana keunikannya," katanya.

Penduduk Kampung Kuala Renau, Abdullah Mat, 69, aktiviti keluar masuk lori balak di jalan utama ke Sungai Lembing membuatkan penduduk berasa kurang selesa.

"Waktu paling banyak lori keluar masuk adalah pada Jumaat iaitu ketika ramai penduduk keluar untuk pergi bersolat Jumaat.

Penduduk rasa tak selesa

"Ini menimbulkan rasa tidak selesa kepada penduduk kerana bukan sahaja lori balak ini boleh merosakkan jalan raya malah menimbulkan keselamatan pengguna jalan raya lain," katanya.

Sementara itu, Ahli Dewan Undangan Negeri (ADUN) Sungai Lembing, Datuk Sohami Mohamed Shah, ketika dihubungi, mengakui menerima aduan daripada pengikat industri pelancongan di kawasan pelancongan itu berkaitan isu pembalakan.

"Insya-Allah dalam sidang Dewan Undangan Negeri (DUN) minggu hadapan saya bangkitkan masalah ini. Sungai Lembing adalah kawasan tarikan pelancong yang perlu dijaga dan dipelihara.

"Saya juga sudah memaklumkan permasalahan berkenaan kepada Jabatan Perhutanan negeri dan meminta mereka mencari jalan penyelesaian terbaik," katanya.

LAMPIRAN 9 THE STAR (CAMPUS): MUKA SURAT 08 TARIKH: 18 NOVEMBER 2018 (AHAD)

campus

Platform to print

By REBECCA RAJAENDRAM
educate@thestar.com.my

TWO students used to sleep in their car or nap in quiet corners on campus when they first started pitching their product to potential partners.

This was how Justin Wong Zi Ning, 23, and his friend Thony Chwa Kia Way, 22, spent the nights before they spoke to printing kiosks in universities to join their online platform, Sprintla.

The online platform is meant to make the printing process much easier for both students and printing partners.

Now just after two years, Sprintla is present in about 30 universities throughout Peninsular Malaysia and plans to continue expanding their business.

Their concept was "to print from anywhere at any time" and aim to become the number one most trusted online printing platform in Asia.

Wong, the chief executive officer, says he, together with his friend Chwa would approach printing kiosks in universities and pitch their product.

Later on, their lecturer Aaron Pook Sow Yee also came on board as their advisor.

"In the early days, even with the website looking so basic, we would tell them that this is how the process works, this is how we're going to build and improve on it," Wong explains.

He believes that Sprintla is the way forward because the future lies with technology, and this was how they would convince their printing partners.

"A lot of our printing partners say they want to embrace technology but there hasn't been any for the basic printing industry itself," he says.

Wong says Sprintla was born in 2016, after they were given an assignment for their cyberpreneurship course where they had to come up with an online business.

The Multimedia University (MMU) accounting students were stumped at first. That is until they had to print another set of assignments that were already due.

"It's always a problem because we have to queue up to do so, sometimes for more than 30 min-

utes," says Chwa.

"It takes a long time because students are editing their documents at the computers when they are supposed to be printing," he adds.

Chwa says the frustration could build up, especially when they needed to rush to class. "Even when you just want to print one page, you have to wait a long time."

From there, he says, they decided to create an online printing service platform.

Now, all you have to do is finish editing your document, send it through the website or app, head to the printing shop and pick it up, says Wong.

He says that customers will select the number of pages to be printed and could even choose the type of binding they would like on the platform.

One of the advantages of Sprintla is that students can send their documents any time they like, even after the shop has closed.

Wong says that the convenience factor is how they secured the loyalty of the students.

Payments are done online



(From left) Pook, Wong and Chwa collecting the printouts at the Sprintla kiosk at Universiti Malaya.

through an e-wallet with pre-purchased credit, which is more convenient and safer, he says, adding that customers can compare prices online before choosing which printing shop or kiosk they want to use.

Sprintla now has around 3,500 registered users since it officially started business in early 2018.

Operation costs are also cut down because a printing partner does not need to provide so many computers for the students to edit and upload their documents.

For example, Sprintla has helped reduce the number of staff from three to one at their

Universiti Malaya (UM) printing partner.

"We have gotten approval to partner with another eight at UM itself," adds Wong.

The prices, he adds, are determined by the printing partners and not by Sprintla as they act as a platform.

Naturally, the students' university in Melaka was the first to employ Sprintla's services.

Among the institutions where Sprintla can be found are UM, Universiti Putra Malaysia, UCSI University and SEGi University.

The team aims to have a presence in 50 higher learning institutions by the end of the year.

LAMPIRAN 10
THE STAR (NEWS) MUKA SURAT 03
TARIKH: 1 NOVEMBER 2018 (AHAD)



Lim receives the Legend in Innovation Award from Moran (left).

Award for innovation

LIMKOKWING University of Creative Technology founder and president Tan Sri Lim Kok Wing is the first Asian to receive the Legend in Innovation Award from the World Confederation of Businesses (WORLDCOB).

The university is also the first Asian university to receive the Diamond Award from the confederation.

Its vice-president (brand, creativity and talent development) Datuk Tiffanee Marie Lim accepted the award on her father's behalf.

"This is a tremendous recognition. I believe he is a legend in this field and has paved the way for so many people in education.

"Thank you for this honour," Tiffanee told reporters after accepting the award from WORLDCOB co-founder and president Jesus Moran at the varsity on Monday.

The WORLDCOB is an international organ-

isation that encourages business development across the world. Moran said Lim deserved the award for his "vision and stunning innovation" spanning over four decades. "The award highlights his lifelong dedication in creating opportunities across the world," Moran said in his citation.

Describing the Diamond Awards as one of the world's most important business excellence awards, he said it is awarded to companies that have been recognised by the confederation for 10 years.

"We feel that Limkokwing University of Creative Technology changed the education landscape not only in Malaysia but around the world," he added.

Also present at the ceremony was Lim's son and the varsity's vice-president IT Systems and Integration, Datuk Seri Timothy Lim Kok Wing Jr. — **By SANDHYA MENON**

LAMPIRAN 11
THE STAR (NATION): MUKA SURAT 8
TARIKH: 18 NOVEMBER 2018 (AHAD)

50,000 personnel ready for floods

500 boats and seven copters also on standby

By NELSON BENJAMIN
and FARIK ZOLKEPLI
newsdesk@thestar.com.my

JOHOR BARU: All parties involved in rescue work are on high alert as the country braces for the onset of the year-end flood season.

Leave for some 10,000 members of the Fire and Rescue Department has been frozen since Thursday, said its director-general Datuk Mohammad Hamdan Wahid.

As for the police, more than 40,000 personnel are on standby to assist emergency responders during the period, according to Comm Datuk Seri Acryl Sani Abdullah Sani, director of the Bukit Aman Internal Security and Public Order Department.

Mohammad Hamdan said their preparations included opening up at least 16 flood operation rooms to coordinate rescue efforts with all states.

"We have deployed assets of some 500 boats, amphibious vehicles, trucks and at least seven helicopters to areas prone to floods.

"Our focus will be Pahang, Kelantan and Terengganu in the east coast, Kedah and Penang in the north, and Johor, Melaka and Negri Sembilan in the south," he said when contacted.

His department will be working closely with the police and National



Ready for the worst: Comm Acryl Sani (left) and Mohammad Hamdan.

Disaster Management Agency (Nadma), especially in evacuating flood victims to relief centres.

He urged local community leaders to be the "eyes and ears" of the authorities, especially in alerting them about rising water levels or having a database of the number of residents in their villages, including the disabled.

Mohammad Hamdan reminded the public to suspend recreational activity such as fishing, diving and mountain-climbing and parents to not let their children play next to drains, ponds or rivers during the rainy season.

Those living near hillslopes are also urged to be cautious.

In Petaling Jaya, Comm Acryl said some 31,000 police personnel were

ready to be deployed to flood-prone areas.

"Another 10,000 from the federal police headquarters are on reserve should extra manpower be needed," he said when contacted.

Nadma operations director Datuk Azizan Abu Taat said the agency, which coordinates response during natural disasters, had completed their nationwide training for district-level officials late last month. Emergency emphasis, he added, was given in states like Terengganu, Kelantan, Pahang, Johor, Sabah and Sarawak.

"We have enough manpower involving multiple agencies while emergency relief supplies such as food have been stocked up.

"We have also conducted community-based disaster management training in flood-prone areas," he said.

More than 5,000 relief centres have been set up for flood victims, Azizan said.

According to the Malaysian Meteorological Department, the monsoon is expected to make landfall in Kelantan and Terengganu early next month, followed by Pahang and Johor before shifting to Sabah and Sarawak.

The department expects four to six episodes of heavy rains during this period, with the monsoon expected to last until March next year.

LAMPIRAN 12
NEWSTRAITSTIMES (LETTERS): MUKA SURAT 19
TARIKH: 19 NOVEMBER 2018 (ISNIN)

Tackling food wastage with innovation

NOT many realise that World Food Day is celebrated on Oct 16. Organisations that mark the occasion include the World Food Programme and the International Fund for Agricultural Development.

This could be due to the fact that the food security level in Malaysia is high. In recent years, based on studies by the Economist Intelligence Unit, Malaysia ranks 41 out of 113 countries on the Global Food Security Index. Malaysia ranks second in Southeast Asia, just behind Singapore in terms of food security.

Unfortunately, in Malaysia, there is the ugly culture of food wastage.

According to Solid Waste Corporation Management (SWCorp), Malaysians generate 16,687.5 tonnes of food waste daily. This

amount could feed 12 million individuals three times a day.

If all this goes into landfills, it can fill the 88-storey Petronas Twin Towers to the brim in just a month or two. That is the amount of avoidable food waste generated by Malaysians.

The reality is, space is running out. Malaysia had 170 waste disposal sites in 2016. Only 14 had sanitary landfill status. When the amount of waste increases, managing costs increase.

When food waste goes into landfills, it will disintegrate and emit greenhouse gases, which have an adverse impact on the climate and contribute to global warming.

Thus, food waste management systems should be reengineered.

Food waste is most often associated with the behaviour of

consumers, retailers and the food service sector, but food waste and losses take place across the food supply chains.

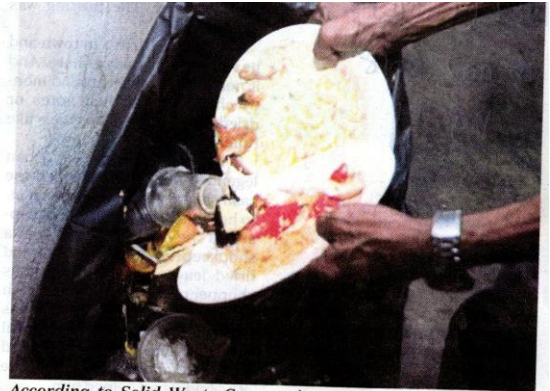
Food waste has repercussions on hunger and poverty alleviation, nutrition, income generation and economic growth.

A more efficient food supply system that can reduce waste would result in reduction of greenhouse gas emissions.

Less wastage is associated with more efficiency. However, solutions to reduce losses will often lead to an increased use of energy, especially for preservation of food products.

Despite a high food security index, Malaysia should not be complacent, especially as we are reliant on imports.

On a micro scale, in responding to this issue, the undergraduates



According to Solid Waste Corporation Management, Malaysians generate 16,687.5 tonnes of food waste daily. This amount could feed 12 million individuals three times a day. FILE PIC

of Universiti Teknologi Mara Segamat in Johor started a programme to tackle food waste.

Grounded on the theory of social entrepreneurship, this creative way of salvaging food waste has won them a Silver Award in

the Digital International Invention Innovation and Design competition recently.

OSWALD TIMOTHY EDWARD

Senior Lecturer, Faculty of Business and Management, UiTM Johor

LAMPIRAN 13

NEWSTRAITSTIMES (INNOVATION): MUKA SURAT 51

TARIKH: 19 NOVEMBER 2018 (ISNIN)

HAVING the latest technology is key if companies want to stay relevant and give the best services to their customers as well as the best work environment for workers.

As customers are getting more sophisticated and advanced, with more people doing their transactions via mobile and wireless means, companies need to be more responsive and stay competitive.

But how ready are they for the digital transformation of their IT infrastructure?

According to a study conducted by Cisco, Asean companies are the most confident about their digital readiness across Asia-Pacific.

The study, conducted by a third party research company, interviewed 1,325 senior IT managers in companies with more than 500 employees from manufacturing, education, retail, financial services, government, and healthcare, in Australia, China, Indonesia, India, Japan, South Korea, Malaysia, the Philippines, Singapore, Thailand and Vietnam.

GAME-CHANGING TECH

Ready for digital transformation here means companies have implemented some latest game-changing technologies that will shape the next business landscape.

These technologies include cloud, cybersecurity, big data and analytics and automation.

The study is titled *Ready, Steady, Unsure — A Technology Perspective into Asia-Pacific's Readiness for Digital Transformation*. It shows that the majority of companies in the six largest Asean bloc economies are confident that their current digital transformation strategy can help them stay competitive (94 per cent), and that they are adequately prepared to adopt relevant technologies to accelerate digital transformation (93 per cent).

And the confidence among Asean companies is higher than the rest of the Asia-Pacific region (84 per cent).

While companies in Asean are prepared to accelerate digital transformation, confidence levels vary across companies.

The study also shows 19 per cent of IT leaders in large organisations (more than 10,000 employees) do not think they are ready for digital transformation, compared with 7 per cent in smaller companies.

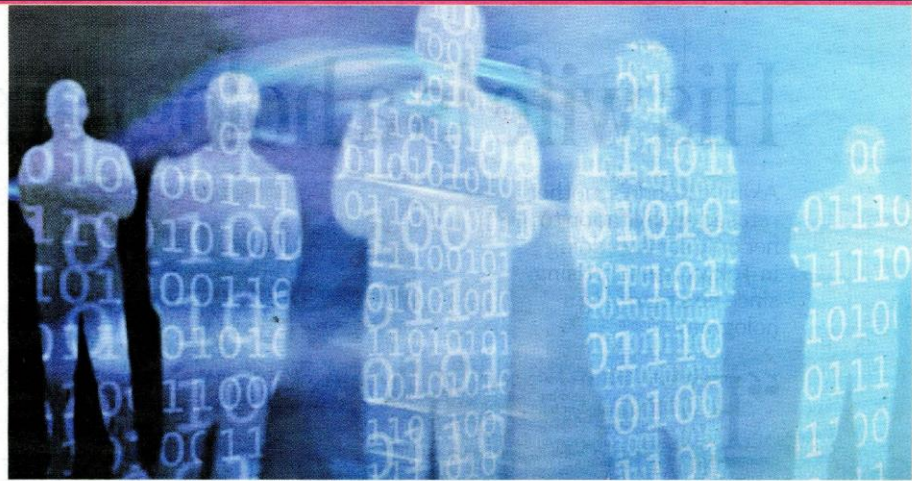
Unburdened by legacy systems and a large user base, younger and smaller companies have a unique opportunity to leapfrog their IT development.

SURVEY RESULTS

The results of the survey highlight that IT managers in Asean rate cloud, cybersecurity, big data and analytics and automation as the top technologies that are shaping the digital future of their business.

According to Cisco Asia-Pacific, Japan and China, vice president, architectures, Vish Iyer, modernisation of IT infrastructure is a necessity to succeed in a digital world.

"Today, 95 per cent of IT operations are still done manually, which means it is very hard and time-consuming for IT to keep up with the business demands and growing number of users and devices," he said.



Asean companies are the most confident about their digital readiness across Asia-Pacific. PIC CREDIT: NIKITABUJDA - FREEPIK.COM

Preparing companies for digital future

Are companies in Asean ready for the next digital transformation in IT infrastructure? Izwan Ismail writes

Cisco is helping companies make the foundational aspects — their networks, private and public clouds, and cybersecurity framework — much simpler to not just upgrade, but also manage, consume and protect. "This way, we are able to help companies shift their focus from IT management to the realisation of new value, innovation and new business models," says Iyer.

The study shows that despite the high confidence and awareness of technologies shaping business's digital future, adoption rates are relatively low across the region.

DRIVERS

Vish said most of the companies that are willing to invest in these new technology are driven by business goals, increasing revenue, reacting to cost-sensitive markets, catering to the mobile workforce, improving customer experience and boosting innovation.

However, Asean companies still lag in the adoption of IoT and AI. IoT and AI see highest adoption in manufacturing but less in public sector. 5G, meanwhile, is on the radar but still not perceived as an important success.

Among the respondents in the Asean region, only 60 per cent have adopted cloud,

cybersecurity solutions (59 per cent), big data and analytics (55 per cent) and automation (48 per cent).

Even in cybersecurity, which is highly critical to the success of digital transformation, almost half of the respondents (47 per cent) admitted to having a reactive approach and implementing security solutions and upgrades only after a breach.

The IT leaders attribute low adoption rates to budget constraints (47 per cent), lack of adequate talent (43 per cent) and unfit IT infrastructure (42 per cent).

ISSUES

While the majority of Asean IT leaders (92 per cent) say their companies have modernised the IT infrastructure — including networks, data centres and cybersecurity — in the last three years, almost half (46 per cent) admit to ignoring innovation and post-sales support to lower overall pricing. These cost-based decisions, however, have led to regret among more than one-third (37 per cent) of IT leaders and help to explain the lack of confidence in their IT infrastructure to support new technologies.

Meanwhile, Cisco Asean president Naveen Menon said over the next decade,

technological innovation will accelerate the pace of change across industries.

"The Asean region, and companies operating here, have a unique opportunity to leapfrog the more developed nations on this front as they don't have legacy IT infrastructure encumbering them," he said.

"However, without the right resources, especially budgets and talent, companies will be limited in their ability to lay the right foundation to adopt and develop technologies needed to accelerate their transformation," he said.

"This is the perfect opportunity for policymakers, academia and businesses to collaborate, to groom future talent that can transform entire economies. At Cisco, we are proud of the role that our Networking Academy has been playing on this front. Since its inception, the Networking Academy has trained more than 885,000 professionals across Asean," he added.

The study's recommendations include the adoption of an integrated cybersecurity framework, optimisation of the network for cloud and the recognition of the long-term business value of a strong IT foundation defined by scalability, automation and security capabilities.



Iyer says companies that are willing to invest in the new critical technology areas are driven by their business goals.



Menon feels over the next decade, technological innovation will accelerate the pace of change across industries.

LAMPIRAN 14
KOSMO (DUNIA): MUKA SURAT 47
TARIKH: 19 NOVEMBER 2018 (ISNIN)

Bina matahari buatan dengan kepanasan 100 juta darjah Celsius

BEIJING – China telah berjaya membina matahari buatan yang mencecah suhu 100 juta darjah Celcius sebagai sebahagian projek menjadikan gas hidrogen tenaga hijau dengan kos efektif.

Suhu reaktor matahari buatan itu direkodkan enam kali ganda daripada teras bintang paling hampir

Pelik

dengan Bumi itu. Projek itu mencapai kejayaan minggu ini apabila ia mencecah suhu tersebut buat kali pertama yang dipercayai suhu di mana percantuman nuklear berlaku.

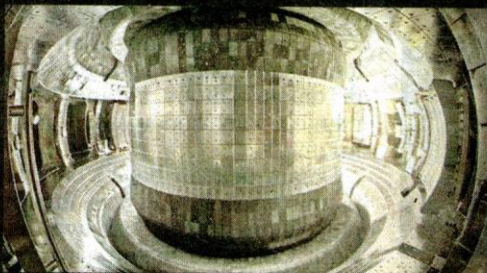
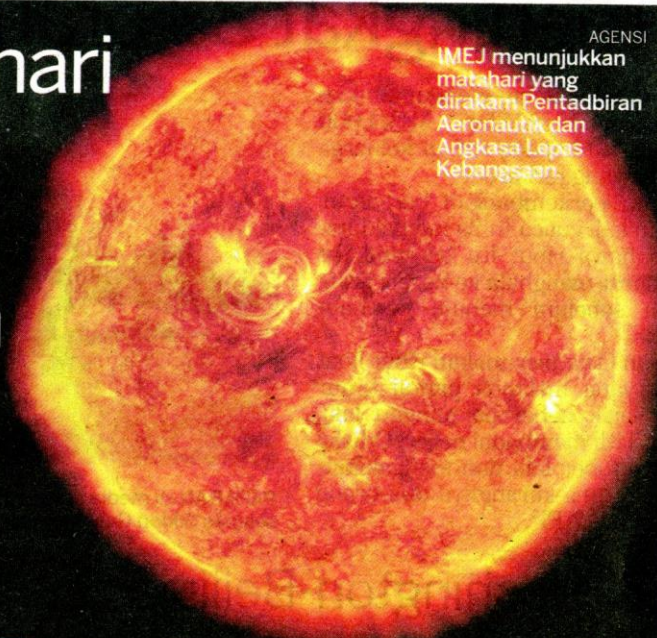
Saintis di Institut Sains Fizikal Hefei mengumumkan pencapaian mesin pelakuran itu pada Selasa lalu.

Digelar Eksperimen

Advanced Superconducting Tokamak (EAST), projek itu bertujuan untuk lebih memahami proses gabungan tenaga nuklear sebelum membina reaktor penuh.

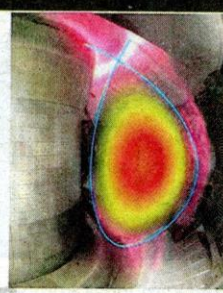
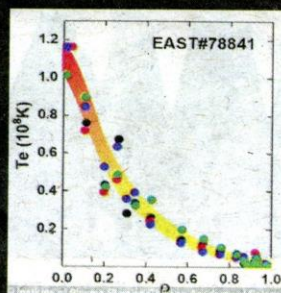
Saintis di seluruh dunia kini berlumba-lumba untuk membina reaktor operasi pelakuran pertama di dunia yang dipercayai mampu menyelamatkan planet ini daripada krisis perubahan iklim. – Agensi

AGENSI
IMEJ menunjukkan matahari yang dirakam Pentadbiran Aeronautik dan Angkasa Lepas Kebangsaan.



AGENSI

PROJEK yang digelar EAST ini bertujuan untuk menjadikan gas hidrogen sebagai tenaga hijau dengan kos efektif.



AGENSI

IMEJ menunjukkan reaktor ini direkod mencecah suhu 100 juta darjah Celcius.

LAMPIRAN 15 THE STAR (WORLD): MUKA SURAT 25 TARIKH: 19 NOVEMBER 2018 (ISNIN)

Cyclone death toll in southeast India hits 33

NEW DELHI: The death toll from a cyclone that battered India's eastern coast has reached 33, a disaster official said, as authorities assessed the damage caused by the powerful storm.

Cyclone Gaja, which packed winds of up to 120kph, had barrelled into Tamil Nadu state after hitting the coast last Friday.

Thousands of trees were felled by winds that destroyed homes and hundreds of thousands were forced to flee to shelters.

"So far 20 men, 11 women, and two children have died due to the cyclone," said an official with the state disaster management authority yesterday, who asked not to be named as he was not authorised to speak to media.

"As of now, 177,500 people are housed in over 351 camps. Thousands of trees have been uprooted and livestock has also been badly affected," he said.

Chief Minister Edappadi Palaniswami, who has announced compensation of US\$14,000 (RM58,700) each to the families of victims, said most deaths were caused by flooding, house collapses and electrocution.

Hundreds of emergency workers have been pressed into service to restore roads and power cables, as the full scale of the disaster becomes clear.



Powerful storm: A fallen pole and a damaged motorbike are seen on a road after Gaja hit Velankanni in Nagapattinam district in Tamil Nadu, India. — Reuters

A navy helicopter and two ships have joined relief efforts in the state, the local government said.

India's weather department said the cyclonic depression had moved westwards on Saturday

into the neighbouring Kerala state before continuing into the Arabian Sea.

Gaja is the second major storm to hit India's east coast in recent weeks.

Cyclone Titli battered Odisha state in October, killing at least

two people.

Storms regularly hit southern India between April and December.

Last year, Cyclone Ockhi left nearly 250 people dead in Tamil Nadu and Kerala states.

— AFP

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LAMPIRAN 16

THE STAR (NEWS): MUKA SURAT 08

TARIKH: 18 NOVEMBER 2018 (AHAD)

IN line with Malaysia's strategic direction of maintaining a strong international relationship with its Asian neighbours, the Asia Pacific University of Technology & Innovation (APU) organised the First International Conference on Humanities, Technology & Science (ICHTS2018) with the theme of Contemporary research on the future of Asia today.

This one-day event was co-organised by the Sri Ramakrishna College of Arts & Science of Coimbatore, India, and featured about 80 speakers from notable academic institutions from Malaysia, India and St Eugene University of Zambia, who presented papers on humanities, technological and scientific issues related to the future of Asia.

Conference on issues related to future of Asia

The conference was co-sponsored by Malik Streams Corporation and Lhoist group of companies.

According to the chair of the Conference and Organising Committee, Assoc Prof Dr Mudiarsan Kuppasamy of the Faculty of Business Management, APU, the conference was mooted after a visit by a team of academic members from SNR College of Arts & Science, India.

"We organised the conference to explore potential collaborations between scholars from Malaysia and India.

"We have achieved that, with



Eighty speakers presented papers on humanities, technological and scientific issues related to the future of Asia at the conference.

many more academic (and economic) cooperation in the pipeline. Students and academicians

from Malaysia and India will be engaging in more academic exchange programmes and

research and development activities, in the next few months," he said.

The success of the conference was made possible thanks to the strong organising committee, both from APU and SNR. The leadership of Prof Dr G Agila of SNR College enabled the gathering of Indian participants. APU will be embarking on more strategic collaborations in the coming months.

Prof Dr Rajah Rasiah from the Asia Europe Institute in Universiti Malaya, delivered a keynote speech entitled "Growth and Sustainable Development" at the conference.

LAMPIRAN 17
THE STAR (NEWS): MUKA SURAT 28
TARIKH: 18 NOVEMBER 2018 (AHAD)

Wildfire missing toll soars past 1,000

PARADISE: The number of people listed as missing in a devastating northern California wildfire soared past 1,000 as the remains of eight additional victims were found by rescuers.

Butte County Sheriff Kory Honea told reporters that the number of people unaccounted for had jumped from 631 to 1,011 in the last 24 hours as authorities receive more reports of people missing and as emergency calls made when the fire broke out are reviewed.

"I want you to understand that this is a dynamic list," he told reporters.

He said that on a positive note, 329 people who had been listed as missing since the fire broke out had so far been accounted for.

"The information I am providing you is raw data and we find there is the likely possibility that the list contains duplicate names," he said, adding that some people who had



Hazy days: Smoke shrouds the TransAmerica building in San Francisco, California. — Bloomberg

escaped may also be unaware that they have been listed as missing.

Smoke from the fire forced the closure of public schools in San Francisco on Friday and the shut-

down of the city's iconic cable cars as the Air Quality Index soared to 271, comparable to Dhaka, Bangladesh and worse than Kolkata, India. "San Francisco's air quality has

moved from red or 'unhealthy' purple or 'very unhealthy' due to local wildfires and weather patterns," the SFMTA transport authority said on its website. — AFP

LAMPIRAN 18
MINGGUAN MALAYSIA (LUAR NEGARA): MUKA SURAT 72
TARIKH: 18 NOVEMBER 2018 (AHAD)

'Anak Concorde' terbang 2021?

■ WASHINGTON 17 NOV.

SYARIKAT aeroangkasa Amerika Syarikat (AS), Lockheed Martin sedang membangunkan pesawat dikenali sebagai 'anak Concorde' yang dapat mengembalikan 'nostalgia' penerbangan penumpang supersonik.

Menurut laporan *Daily Mail*, pesawat X-59 itu dibina dengan kerjasama Pentadbiran Aero-nautik dan Angkasa Lepas Kebangsaan (NASA) bagi menyempurnakan 'kuasa supersonik'.

Pengurus Program Demonstrasi Penerbangan Lockheed Martin, Peter Iosifidis berkata, permulaan pembuatan projek itu menandakan lonjakan ke depan untuk X-59 dan masa depan perjalanan pesawat komersial supersonik yang lebih senyap.

"Ketika kami memasuki fasa



PESAWAT X-59 bakal mengembalikan nostalgia kegemilangan pesawat supersonik Concorde. - AGENSI

pembuatan, struktur pesawat mula terbentuk, membawa ke satu langkah lebih dekat bagi membolehkan perjalanan supersonik untuk penumpang di seluruh dunia," katanya.

Awal tahun ini, NASA memilih Lockheed Martin untuk mereka bentuk, membina dan menguji penerbangan supersonik.

X-59 akan memulakan pener-

bangannya pertamanya pada 2021.

Pesawat itu juga akan digunakan bagi pengumpulan data tindak balas komuniti terhadap gelombang bunyi yang dihasilkan pesawat selain membantu

NASA mewujudkan standard bunyi yang boleh diterima mengikut peraturan semasa.

Baru-baru ini, NASA memulakan ujian pesawat untuk melihat bagaimana penduduk Texas bertindak terhadap bunyi bising pesawat ujian itu yang secara dramatik dapat mengurangkan masa perjalanan.

Concorde sebuah pesawat ciptaan bersama Perancis dan Britain menutup tirai kegemilangannya pada akhir 2003 dan mendapat gelaran sebagai pesawat supersonik.

Perkhidmatan pesawat supersonik itu terjejas teruk ekoran nahas jet Concorde milik Air France di bandar Gonesse di luar Paris pada 25 Julai 2000 yang terhempas tidak lama selepas berlepas dari Paris dan meragut nyawa semua 113 penumpang dan anak kapal.

LAMPIRAN 19
NEWSTRAITSTIMES (OPINION): MUKA SURAT 16
TARIKH: 17 NOVEMBER 2018 (SABTU)

A.I. CAN HELP IMPROVE PATIENT OUTCOMES

One of the approaches to global healthcare challenge is the application of technology, writes
KAMAL BRAR

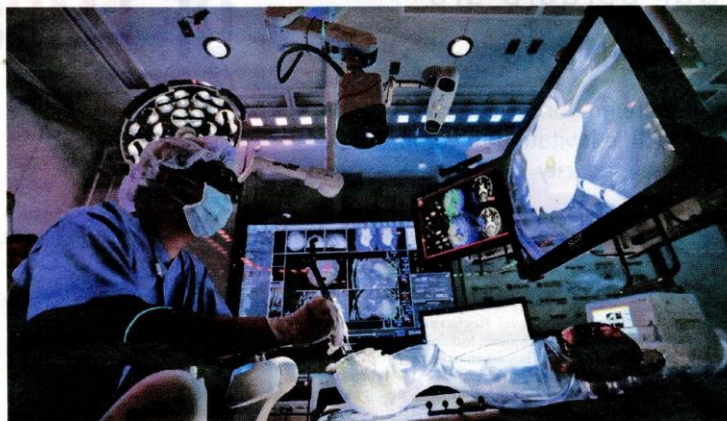
BENJAMIN Franklin once said, "An ounce of prevention is worth a pound of cure", an advice that has anticipated hundreds of years of healthcare best practices.

Spotting and preventing medical problems early on is far cheaper and more efficient than catching them late. Artificial intelligence in healthcare is helping to fill in the gaps by diligently mining as much data as possible and making helpful suggestions that can lead to potential medical problems being identified earlier.

Globally the healthcare sector is experiencing staff shortages as well as pressure on costs. In Southeast Asia, cost and quality are the two key concerns for the health care providers. With medical costs increasing due to demographic change and the rise in chronic disease population, governments are starting to evaluate the true cost effectiveness of medical treatments.

Malaysia is no exception. According to Deloitte's Voice of Asia report (2017), Malaysia's population is expected to grow by more than 75 per cent from 19 million as recently as a quarter of a century ago to nearly 34 million in 2022. Meanwhile, the population aged 65 and above is projected to more than triple over that time, from 700,000 to more than 2.5 million, accounting for 7.5 per cent of the total population.

One of the most promising approaches to the global healthcare challenge is the application of technology, and a key element of this approach is artificial intelligence. The processes of healthcare generate huge quantities of data that, when correctly analysed, can help treat patients



Artificial intelligence could take on some hospital tasks and free doctors to focus on surgery and other important work. REUTERS PIC

faster and more effectively, and also avoid errors.

Detecting patterns in data can be a tedious process for which machines are better suited, particularly when there are lots of variables or scenarios to reference. Artificial intelligence in healthcare can help by surfacing signals that well-meaning physicians may otherwise miss.

AI does this by processing vast amounts of historical data using statistical models that identify patterns. It can then process new data against the historical model to look for similarities that may not be immediately evident to a human physician. Hospitals might experiment with this technology to scan medical images and evaluate possible diagnoses based on a large selection of similar pictures.

Around the world, AI solutions are being developed to help with everything from oncological scan analyses to the predictive capability of alerting nurses to a patient's risk of falling.

Earlier this year, Malaysia introduced the Stetho Pro, the world's first stethoscope with artificial intelligence (AI) capabilities built in. It allows users to listen to patients' hearts and lungs with sophisticated amplification and filtering technology. The recordings can then be

transmitted to a smart device, such as a smartphone or a tablet, via Bluetooth, and analysed to build a personal biometric signature for each patient to detect the presence of heart or lung diseases.

The benefits of AI are clearly visible in the areas of healthcare where doctors and patients meet. However, machine-learning algorithms also have a part to play at other stages along the healthcare value chain, as they help hospitals improve their processes behind the scenes.

For example, in some hospitals, data about treatment times is being gathered and processed to help predict how long a particular surgical procedure will take, or how long an imaging device may be in use. This helps to avoid waste and improve patient outcomes by developing treatment schedules that maximise the use of scarce human talent and technology resources.

None of these advances would be possible without data: today's machine-learning systems depend on it. The existence of huge volumes of historical and real-time data holds out the promise of more accurate AI models and better preventative care. The challenge for hospitals lies in processing that data, which is often delivered in high volume thanks

to high-resolution medical imaging, and deriving meaningful insights from it. This is the fundamental challenge that the healthcare industry must overcome before all the promises of AI can be realised.

From responding to outbreaks of new diseases, to managing increasing numbers of elderly patients, to improving operational efficiency, AI can provide healthcare professionals with exceptional support – so long as there is a solid bedrock of data management.

Many hospitals around the world are already using tools that help manage these huge volumes of data as well as controlling access to them, as they begin to take advantage of the benefits AI brings to medical care. It is essential to put in place effective platforms to securely manage medical data today, in order to create a solid and reliable foundation for AI developments in the future.

Tomorrow's doctors will be more informed, more confident, and far less stressed, thanks to a digital ecosystem that supports their decision-making processes and reduces the probability of error.

The writer is Vice-President and General Manager Hortonworks, Asia Pacific, a data software company

From responding to outbreaks of new diseases, to managing increasing numbers of elderly patients, to improving operational efficiency, AI can provide healthcare professionals with exceptional support – so long as there is a solid bedrock of data management.