



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

Bil	Berita	Media	Capaian Berita Penuh
1.	<u>Malaysian minister sets Parliament record for fastest ministerial replies</u> Yeo Bee Yin set a record in Parliament for the fastest ministerial replies.	Asia One	Klik pada tajuk berita
2.	<u>Bina loji rawatan air baharu</u> "Projek ini tidak memerlukan kajian penilaian kesan alam sekitar (EIA) kerana berdasarkan keperluan Jabatan Alam Sekitar hanya projek takungan yang melebihi 200 hektar sahaja memerlukan kajian EIA.	Sinar Harian	Klik pada tajuk berita
3.	<u>Musim banjir dan persediaan ke sekolah</u> LAPORAN Jabatan Meteorologi Malaysia menunjukkan bulan ini adalah fasa permulaan bagi Monsun Timur Laut dan dijangka berakhir sekitar Mac 2019.	Utusan Malaysia	Klik pada tajuk berita
4.	<u>31 orang masih di pusat pemindahan banjir di Pulau Pinang</u> Pihak kami masih membuat pemantauan dari semasa ke semasa bagi memastikan semua mangsa banjir dalam keadaan selamat dan menurut kenyataan daripada Jabatan Meteorologi Malaysia, keadaan cuaca di Pulau Pinang akan bertambah baik dan tidak akan berlaku hujan lebat berterusan dalam masa terdekat," katanya.	Kosmo!	Klik pada tajuk berita
5.	<u>Kita gagal majukan S&T</u> Malah perancangan kerajaan sejak tahun 1967 ini telah jauh tersasar dan keadaan semakin membimbangkan apabila kajian Akademi Sains	Utusan Malaysia	Rujuk lampiran 1



	Malaysia (ASM) mendapati hanya 20 peratus pelajar aliran sains dan 80 peratus pelajar aliran sastera.		
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TEMPATAN

Bil	Berita	Media	Capaian Berita Penuh
6.	<u>Going plastic-free by 2020</u> “We hope to come to a stage where consumers do not patronise shops that do not offer biodegradable products, as they are aware and understand the implications of plastic products on the environment.”	The Star	Klik pada tajuk berita
7.	<u>MAHA 2018 pameran inovasi terbaharu industri pertanian</u> Pameran Pertanian, Hortikultur dan Pelancongan Agro Malaysia (MAHA 2018) bermula hari ini hingga 2 Disember, menampilkan kelainan dengan mempamerkan inovasi terkini dalam industri pertanian.	Berita Harian	Klik pada tajuk berita
8.	<u>PETRONAS SEES ACQUISITION AS A MEANS TO JUMPSTART INNOVATION</u> TECHNOLOGICAL disruption is forcing companies into the deep end, pushing them to innovate and transform their businesses fast in a bid to stay afloat and relevant in this digital age. For Petrolia Nasional Bhd (Petronas), the Malaysian national oil and gas company, the need to adapt to industrial changes is all too real.	Digital News Asia	Klik pada tajuk berita
9.	<u>Rangka Kerja Keusahawanan Nasional perkukuh ekonomi negara</u> “MED juga telah mengenal pasti beberapa sektor strategik dengan potensi pendapatan	Berita Harian	Klik pada tajuk berita



	tinggi untuk pembangunan vendor seperti automotif, rel, aeroangkasa, peralatan perubatan, bioteknologi dan tenaga boleh diperbaharui,” katanya.		
10.	<u>Serba Dinamik rancang beli 10 peratus saham GSH</u> Kumpulan GSH terbabit dalam penyelidikan dan pembangunan, penyediaan perundingan kejuruteraan dan perkhidmatan reka bentuk proses dalam bidang bioteknologi industri, kawalan pencemaran dan tenaga boleh diperbaharui.	Berita Harian	Klik pada tajuk berita
11.	<u>Beef Valley labur RM250 juta penuhi permintaan daging</u> “Dalam tempoh tujuh hingga 10 tahun, ia menjadi tempoh penting kepada produk bioteknologi Beef Valley dikomersialkan untuk dipasarkan ke pasaran global.	Berita Harian	Klik pada tajuk berita
12.	<u>Graduan profesion teknikal gagal daftar boleh didenda</u> Antara pengisian bagi kedua-dua hari berkenaan ialah pertandingan Sains, Teknologi, Kejuruteraan dan Matematik (STEM) anjuran BEM, perkongsian kertas kerja teknikal panel penceramah jemputan, 50 buah gerai pameran berkaitan bidang teknikal dan industri kejuruteraan, serta pameran pelbagai jentera berat dan kenderaan siap siaga bencana. - Bernama	Sinar Harian	Klik pada tajuk berita
13.	<u>Govt to draft Agro Food Policy 2.0 to spur food sector development</u> The government is conducting a study to draft the Agro Food Policy 2.0 (2021 - 2030) in order to spur the agro food sector in line with technological development and Industrial Revolution 4.0, says Tun Dr Mahathir Mohamad.	New Straits Times	Klik pada tajuk berita



14.	<u>KLIMS 2018: Malaysian market too important to ignore for top marques</u> Another bright spot in KLIMS 2018 is the showcase of a new technology concept of artificial intelligence, connectivity and renewable energy.	New Straits Times	Klik pada tajuk berita
15.	<u>Consortium to jump-start self-sustaining beef industry in Malaysia</u> AiVerest, meanwhile, is a company that designs and develops artificial intelligence for drones, robotics and Internet of things for the agro industry.	The Edge Markets	Klik pada tajuk berita
16.	<u>Dasar Agromakanan Negara 2.0 dirancang</u> “Dasar Agromakanan 2.0 itu penting bagi menjadikan sektor makanan negara lebih berdaya saing seiring ledakan Revolusi Industri 4.0.	Utusan Malaysia	Klik pada tajuk berita
17.	<u>Malaysia To Use Blockchain Tech to Tackle Educational Degree Fraud</u> Malaysia’s Ministry of Education is all set to make use of blockchain technology to tackle the problem of fraudulent educational degrees in the country.	Cryptoground	Klik pada tajuk berita
18.	<u>Menteri sepatutnya kaji sebelum keluar kenyataan</u> “Silibus dalam mata pelajaran yang ada perlu penambahbaikan, contohnya belajar ‘coding’, ‘programming’ dan robotik.	Berita Harian	Klik pada tajuk berita
19.	<u>Strengthening innovation ecosystem requires support of all sectors – Manyin</u> “One such initiative is to encourage and support our students to participate in various innovation and invention competitions,” he added.	The Borneo Post	Klik pada tajuk berita



20.	<u>Banjir kilat landa Kuching</u> KUCHING: Beberapa lokasi di pusat bandar raya ini dilanda banjir kilat ekoran hujan lebat bermula jam 4 petang tadi.	Berita Harian	Klik pada tajuk berita
21.	<u>Banjir kilat landa Kuching [METROTV]</u> BEBERAPA lokasi di pusat bandar Kuching dilanda banjir kilat ekoran hujan lebat bermula jam 4 petang, hari ini.	Harian Metro	Klik pada tajuk berita
22.	<u>Dua kampung di Sepang dilanda banjir kilat</u> Hujan lebat kira-kira tiga jam hari ini menyebabkan beberapa rumah di Kampung Giching dan Kampung Salak Tinggi di sini, dinaiki air.	Berita Harian	Klik pada tajuk berita
23.	<u>Pekarangan Kompleks Pusat Islam Rantau ditenggelami air</u> REMBAU - Pekarangan Kompleks Pusat Islam Rantau yang menempatkan Masjid Imam Haji Kahar di Bandar Ekar Rantau di sini ditenggelami air sedalam hampir satu meter akibat banjir kilat kira-kira pukul 11 pagi ini.	Kosmo!	Klik pada tajuk berita
24.	<u>Banjir di Melaka: Penduduk tanggung kerugian teruk</u> Baru sembilan hari menyewa rumah di Kampung Belimbing Dalam, namun seorang ibu tunggal reda dan menganggap banjir yang berlaku di kawasan tempat tinggalnya itu satu ujian hidup biarpun terpaksa menanggung kerugian akibat kerosakan perabot dan perkakas elektrik.	Sinar Harian	Klik pada tajuk berita
25.	<u>Bah bawa rezeki</u> ALOR GAJAH: "Kami bukannya tidak bersimpati terhadap mangsa banjir, tetapi rezeki yang melimpah ruah ini harus diambil.	Harian Metro	Klik pada tajuk berita

26.	<u>Contractors urged to contact TNB before digging works</u> Tenaga Nasional Berhad (TNB) has urged contractors to get advice and maps showing the locations of its networks of underground electricity cables before undertaking digging works.	EdgeProp	Klik pada tajuk berita
27.	<u>Hubungi TNB sebelum kerja menggali, elak kabel pecah</u> Tenaga Nasional Berhad (TNB) menggesa para kontraktor agar mendapatkan nasihat dan peta yang menunjukkan lokasi rangkaian kabel elektrik bawah tanah sebelum melakukan kerja-kerja menggali.	Sinar Harian	Klik pada tajuk berita
28.	<u>Kontraktor dinasihat hubungi TNB sebelum menggali</u> Tenaga Nasional Berhad (TNB) menggesa para kontraktor agar mendapatkan nasihat dan peta yang menunjukkan lokasi rangkaian kabel elektrik bawah tanah sebelum melakukan kerja-kerja menggali.	Malaysiakini	Klik pada tajuk berita
29.	<u>Making Southeast Asian electricity grids smarter</u> Malaysian state power producer, Tenaga Nasional Berhad (TNB) has begun work on a Grid of the Future which introduces automation and smart solutions with lower grid costs	The Asean Post	Klik pada tajuk berita
30.	<u>KLIMS18 medan pengeluar kereta pamer produk terkini</u> Satu lagi daya tarikan KLIMS18 adalah pameran konsep teknologi baharu iaitu kepintaran buatan, sambungan dan tenaga boleh diperbaharui.	Berita Harian	Klik pada tajuk berita
31.	<u>Pasaran automotif dijangka kekal positif</u>	Berita Harian	Klik pada tajuk berita

	Aishah berkata, seiring dengan kehendak industri global yang bergerak ke arah teknologi baharu, KLIMS18 juga dijangka mengubah teknologi ke arah kepintaran buatan (AI), rangkaian dan tenaga boleh diperbaharui.		
32.	<u>Tiga sekolah dinobat sebagai 'johan'</u> Sekolah Menengah Kebangsaan (SMK) TTDI Jaya dinobat johan Kategori Sekolah Menengah dalam Pertandingan Kempen Kitar Semula Peringkat Negeri 2018.	Sinar Harian	Klik pada tajuk berita
33.	<u>We need to change perception of TVET</u> A proposed framework for national Technical Vocational Education and Training (TVET) was presented by the National Movement of TVET Empowerment on Nov 13 to representative from many industries.	The Star	Rujuk lampiran 2
34.	<u>Rasullah pencetus teknologi maju</u> Perkara pertama dilakukan oleh Nabi Muhammad SAW apabila tiba di Madinah selepas berhijrah dari Makkah pada 662 Masihi ialah membina sebuah masjid.	Sinar Harian	Rujuk lampiran 3
35.	<u>TNB WALKS TIGHROPE TO MANAGE COSTS</u> Over the past three months, some Malaysians may have been cautiously smiling on the quiet when crude oil prices surged past the US\$80 (RM335.20) a barrel mark.	New Straits Times	Rujuk lampiran 4
36.	<u>Termenung tak dapat balik rumah</u> Fenomena 'banjir termenung' menyukarkan penduduk di Kampung Belimbing Dalam, di sini, kembali ke kediaman masing-masing bagi menjalankan kerja pembersihan.	Harian Metro	Rujuk lampiran 5
37.	<u>In line with green city initiative</u>	The Star	Rujuk lampiran 6



	An integrated recycling centre is Petaling Jaya City Council's (MBPJ) next step towards dealing with waste in the city.		
38.	<u>Public involvement in separating waste vital for greener M'sia</u> The public needs to play a bigger role to enable the Government to take recycling efforts to the next level.	The Star	Rujuk lampiran 7
39.	<u>Digitalising Manufacturing Industry</u> Training and upskilling employees can be a cost-effective way of managing staff resourcing, which will ultimately boost a company's productivity.	New Straits Times	Rujuk lampiran 8

ANTARABANGSA

Bil	Berita	Media	Capaian Berita Penuh
40.	<u>Google labur RM2.9 bilion</u> Google juga bakal menandatangani perjanjian pembelian tenaga (PPA) untuk pusat data Denmark baharu bagi memastikan ia dikuasakan oleh tenaga boleh diperbaharui (RE).	Utusan Malaysia	Klik pada tajuk berita
41.	<u>Hujan tingkat risiko banjir</u> Chico: Hujan pertama dalam tempoh beberapa bulan di utara California membantu anggota bomba mengawal kebakaran terburuk dalam sejarah kelmarin, namun risiko mungkin berlaku banjir semakin meningkat.	Berita Harian	Rujuk lampiran 9
42.	<u>Australian wine becoming more alcoholic due to climate change</u> Canberra: The alcohol content of Australian wine is on the rise as a result of climate change,	The Star	Rujuk lampiran 10

	according to experts.		
43.	<u>Vanuatu seeks to sue culprits behind climate change</u> Wellington: Low-lying Vanuatu is considering suing fossil fuel companies and industrialised countries that use them for their role in creating catastrophic climate change, the foreign minister of the Pacific island nation said.	The Star	Rujuk lampiran 11
44.	<u>Vanuatu threatens to sue over climate change</u> Wellington- Low-lying Vanuatu is considering suing fossil fuel companies and industrialised countries that use them for their role in creating catastrophic climate change, the foreign minister of the Pacific island nation said yesterday.	Malay Mail	Rujuk lampiran 12
45.	<u>First rain in months douses California wildfire</u> Chico (California): The first significant rain in months in northern California all but extinguished the deadliest wildfire in the state's history but also raised risks of flash flooding that could hinder teams searching for human remains.	The Star	Rujuk lampiran 13
46.	<u>Dust storm blows into Sydney</u> Sydney: Brown haze engulfed Sydney, and authorities are advising residents to take precautions.	The Star	Rujuk lampiran 14

LAMPIRAN 1

UTUSAN MALAYSIA (MEHA SAINS): MUKA SURAT 30 & 31

TARIKH: 23 NOVEMBER 2018 (JUMAAT)



BUDAYA pemupukan sains dan alam sekitar perlu bermula pada peringkat generasi muda. - GAMBAR HIASAN

Ralat & Rawat
Bersama
DR. AHMAD ISMAIL



Kita gagal majukan S&T

SETELAH lebih 60 tahun merdeka Malaysia terus mencari jalan bagaimana mempromosikan sains dan teknologi (S&T) bagi memenuhi permintaan sebuah negara maju. Keperluan ahli sains sudah dirancang sejak lama dahulu menerusi berbagai program yang berstruktur dan sistematis seperti melatih guru-guru untuk mengajar sains, menggunakan khidmat sukarelawan luar negara dan meningkatkan pelajar dalam aliran sains.

Penubuhan sekolah berasrama, sekolah menengah sains, Maktab Rendah Sains Mara (MRSM) dan sekolah vokasional serta teknikal juga antara usaha kerajaan dalam menyediakan tenaga manusia dalam bidang sains.

Namun sehingga hari ini, Malaysia masih membincangkan strategi ke arah meningkatkan ahli sains negara dan nisbah pelajar sains berbanding sastera 60:40 pada peringkat sekolah menengah.

Malah perancangan kerajaan sejak tahun 1967 ini telah jauh tersasar dan keadaan semakin membimbangkan apabila kajian **Akademi Sains Malaysia (ASM)** mendapati hanya 20 peratus pelajar aliran sains dan 80 peratus aliran sastera. Tugas menyempurnakan matlamat kerajaan sejak 1967 ini bukanlah terletak pada Kementerian Pendidikan dan Kementerian yang terlibat dengan sains dan teknologi sahaja tetapi semua kementerian.

Bahagian khusus dan diuruskan oleh bahagian dan kakitangan yang membawakan



KAEDAH pembelajaran menggunakan teknologi robotik boleh membantu memupuk minat pelajar dalam bidang sains. - GAMBAR HIASAN

meesti ditubuhkan dan sebaiknya diletakkan di bawah pengawasan Perdana Menteri.

Malaysia bernasib baik mempunyai sejarah ekonomi yang baik bermula daripada hasil bijih timah, getah, kelapa sawit, minyak dan gas, industri pembuatan dan sekarang pelancongan. Peluang pertumbuhan ekonomi yang baik ini perlu diselenggarakan dengan pembangunan sains dan teknologi serta kefahaman masyarakat tentang kerja dalam bidang sains dan menggalakkan rakyatnya berinovasi.

Wawasan 2020 yang diilhamkan oleh Perdana Menteri, Tun Dr. Mahathir Mohamad bertujuan menjadikan Malaysia menjadi negara perindustrian dan

negara maju sepenuhnya menjelang 2020.

Sekarang kita bercakap tentang Revolusi Industri 4.0 (IR4) yang memberi cabaran baharu terutama kekuatan dalam bidang sains dan teknologi.

IR4 yang memerlukan sistem robotik menjalankan kerja seharian terutama dalam industri pembuatan. Pengetahuan dari segi penyediaan data, pemrosesan data, perkongsian data dan mengintegrasikan dalam pelaksanaan menjadi cabaran baharu.

Bidang automasi, robotik, pengkomputeran awan (*cloud*), kepintaran buatan (AI), kemajuan komunikasi dan Internet merupakan perkembangan baharu yang tidak boleh ketinggalan.

“Sekarang kita bercakap tentang Revolusi Industri 4.0 yang memberikan cabaran baharu terutama kekuatan dalam bidang sains dan teknologi.”

Modul kehidupan seharian dalam suatu ekosistem boleh ditafsir dalam penggunaan teknologi dalam revolusi industri baharu ini. Pendekatan berkesinambungan sangat diperlukan bagi menarik minat generasi muda menguasai bidang sains dan teknologi.

Dana dan komitmen semua agensi kerajaan, swasta dan pertubuhan bukan kerajaan (NGO) amat diperlukan dalam menajayakan hasrat kerajaan menanganai Industri Revolusi 4.0.

Salah satu pendekatan untuk menarik minat pelajar dalam bidang sains ialah menerusi pendidikan alam sekitar atau alam semula jadi. Menerusi pendidikan alam semula jadi pelajar diajar tentang keperluan hidup dan cabaran-cabaran dalam kehidupan yang berjaya.

Dalam pendidikan banyak membincangkan tentang kemahiran berfikir, kreativiti dan inovasi. Sekarang dalam abad ke-21, pendekatan untuk pelajar berfikir aras tinggi dan memberikan pendedahan alam sekitar dalam memberikan

peluang pelajar mempraktikkan atau berfikir melalui amalan mereka. Pendidikan di luar bilik darjah akan dapat memenuhi matlamat ini.

Persatuan Pencinta Alam Malaysia (MNS) misalnya mengambil inisiatif menyokong hasrat kerajaan meningkatkan minat pelajar dalam sains dan teknologi dan memahami kerja mereka dalam bidang sains. Kerja dalam bidang sains bukan sahaja terhad kepada jurutera dan doktor atau ahli sains. Pegawai pentadbiran dan pengurusan profesional juga memerlukan pengetahuan sains dalam kerja mereka.

Pendedahan semua pelajar dalam hal berkaitan sains sangat perlu agar mereka dapat berfikir secara saintifik dalam kehidupan seharian dan membuat keputusan. Melalui program pendidikan alam sekitar MNS, pelajar didedahkan dengan perkara asas berkaitan alam semula jadi, kelestarian dan kepentingannya kepada manusia, kualiti alam sekitar dan sebagainya.

Setelah lebih 60 tahun merdeka pelajar masih lebih mengetahui zirafah, kuda belang, singa, burung kutub, dan gajah Afrika yang bertelung besar berbanding seladang, harimau Malaya, tapir, burung matahari dan gajah Asia. Sebagai negara yang kaya kepelbagaian biologi seharusnya ilmu ini dipertingkatkan di sekolah

TAHUKAH ANDA

- MNS mempunyai 14 cawangan di seluruh negara dan hampir 500 sekolah sebagai ahli Kelab Pencinta Alam (KPA)
- MNS sewajarnya mendapat pengiktirafan kerajaan sebagai NGO yang paling aktif dan berkesan.
- Daripada 500 sekolah KPA-MNS, maklumat tentang pendidikan alam sekitar dapat disampaikan secara efektif kepada lebih 1.5 juta rakyat Malaysia berkaitan sesuatu isu.
- Sekiranya kita mengambil contoh setiap bulan rakyat Malaysia menyambut Hari Tanah Lembab, Hari Bumi, Hari Hutan Sedunia, Hari Alam Sekitar Sedunia, Hari Habitat Sedunia, Hari Penyu Sedunia, Hari Tapir Sedunia, Hari Gajah Sedunia, Hari Harimau Sedunia, maka 5,000 aktiviti setahun mencapai 1.5 juta penduduk Malaysia.
- Aktiviti KPA-MNS antara yang sangat efektif dalam mendidik masyarakat Malaysia dan sepatutnya diberikan pengiktirafan sewajarnya.

terutama dalam kalangan guru-guru.

Lebih 30 tahun dahulu, MNS telah aktif menjalankan aktiviti pendidikan alam sekitar. Pendidikan alam sekitar dijalankan dengan kerjasama Kementerian Pendidikan dan agensi-agensi kerajaan lain serta swasta.

Aktiviti menerusi Kelab Pencinta Alam (KPA) yang ditubuhkan di sekolah-sekolah sejak 1991 mendapat kerjasama sepenuhnya oleh kementerian.

Kerjasama Kementerian dan MNS ini mendapat sokongan swasta yang menaja aktiviti sebagai sumbangan tanggungjawab sosial korporat mereka kepada masyarakat. Sokongan korporat ini telah mengizinkan MNS meneruskan aktiviti KPA.

LAMPIRAN 2
THE STAR (VIEWS): MUKA SURAT 44
TARIKH: 23 NOVEMBER 2018 (JUMAAT)

We need to change perception of TVET

A PROPOSED framework for national Technical Vocational Education and Training (TVET) was presented by the National Movement of TVET Empowerment on Nov 13 to representatives from many industries.

The movement highlighted that the main setback to TVET in Malaysia was fragmentation as it is under the purview of seven ministries and many more government agencies that were mostly working in silos.

Shrinking from seven ministries to one would minimise overlapping and reduce the government's total budget on TVET.

Representatives of various industries voiced their concerns after the presentation, one of which was the public's perception that vocational schools are for weak students.

There was consensus that TVET should be re-branded, but it is critical to recognise that the issue goes very deep, starting with the fundamentals.

For example, if students were asked why they chose to study in a college or university, they would say that a diploma or degree is needed for their future.

Many Malaysians seem oblivious to the huge number of unemployed or underemployed graduates in the market, with many unable or struggling to service their study loans.

If they are truly interested in carving a career for themselves,



they should learn how to perform well in a particular job. But general courses approved by the Malaysian Qualifications Agency (MQA) are largely academic and have little relevance to the world of work.

Those who pursue licensed professions such as doctors, accountants, architects, engineers and lawyers have a much better chance of achieving success in their careers than those enrolled in easier general studies like tourism and hospitality programmes.

These students were told that the tourism industry is very wide and offers them huge opportunities, but most undergraduates have no

career plans and upon graduation will apply for any vacancies available in any tourism sector or other industries.

During the job interview or upon starting work, they would begin to realise that they were not trained to perform well in any job. They may have studied a course but have learned little of the skills required in the workplace.

TVET students in general would at least would have the skills to get some physical work done.

Political will is also needed for TVET to make a quantum leap in Malaysia. The federal government should decide and announce a time

frame for skilled jobs such as electricians, mechanics and plumbers to be certified and licensed. This will give added impetus in raising the competency and income of skilled workers and attract more Malaysians to these jobs long dominated by foreign workers.

Highly skilled Malaysians also have the option to work in foreign countries and enjoy 10 times higher income.

Apart from making TVET sexy and appealing to school leavers, it is equally important to upskill and reskill the existing workforce. But first, the definition of skilled workers in Malaysia needs to be revised.

TVET should be an open modular concept for both apprentices and current practitioners. A career path should also be charted and displayed to show that anyone starting as an apprentice can reach the top of his career with the right training and determination.

The chart could also illustrate that many blue-collar jobs are paid much more than normal white-collar jobs. In fact, you don't have to look far. We have a shortage of good trailer drivers who could easily earn RM5,000 to RM8,000 monthly.

All said, the main challenge in promoting TVET is the ignorance and mindset of both parents and students.

YS CHAN
Kuala Lumpur

LAMPIRAN 3
SINAR HARIAN: MUKA SURAT 48
TARIKH: 23 NOVEMBER 2018 (JUMAAT)

Rasulullah pencetus teknologi maju

Ilmu kejuruteraan
dari al-quran

DR MUHIJUN ARIFFIN



Perka pertama dilakukan oleh Nabi Muhammad SAW apabila tiba di Madinah selepas berhijrah dari Makkah pada 622 Masihi ialah membina sebuah masjid.

Menurut riwayat dan bukti sejarah, Masjid Quba' siap tidak sampai sebulan. Hal ini membuktikan betapa Rasulullah sangat menitikberatkan soal kejuruteraan dan pembinaan.

Soalnya kenapa aspek masjid dan kejuruteraan pembinaan dijadikan agenda penting ketika Rasulullah berhijrah ke Madinah? Atau selepas 1,400 tahun wafatnya Rasulullah, aspek kejuruteraan dan pembinaan bukan lagi menjadi satu perkara yang penting kepada kehidupan seseorang manusia?

Rasulullah telah memberikan satu pedoman dalam kehidupan manusia. Jika mahu maju, kita harus menguasai dan mendominasi aspek kejuruteraan dan pembinaan.

Lihatlah apa yang sedang berlaku di China sekarang. China adalah sebuah negara yang sangat menitikberatkan aspek kejuruteraan dan pembinaan. Lihatlah di manakah kedudukan China ketika ini? China kini dianggap sebagai 'naga terbesar' di dunia, selain Amerika Syarikat dan Jepun.

Dalam hal ini, penulis memuji tindakan Malaysia yang memberi keutamaan kepada aspek pembangunan kemahiran tenaga kerja. Dua hari lalu, Institut Pengurusan Pembangunan (IMD) mengeluarkan sebuah laporan World Talent Ranking 2018.

Laporan tersebut menunjukkan Malaysia menduduki tempat ke-22 di dunia mendahului Britain, Perancis, Taiwan, Jepun dan China daripada segi aspek pelaburan pendidikan untuk membangunkan kemahiran tenaga kerja. Hal ini membuktikan kerajaan telah memberikan satu penekanan sangat serius terhadap soal pembangunan kemahiran tenaga kerja.

Penulis menemukan dua hadis yang diriwayatkan Abu Hurairah dalam kitab Shahih Al-Bukhari bermaksud "Tidak akan ada peng-

hakiman sehingga bangunan-bangunan yang sangat tinggi dibina."

Dan "Tidak akan datang hari kiamat, sehingga manusia berlumba-lumba meninggikan bangunan." Maka bermulalah era kemajuan umat Islam yang dipelopori Rasulullah dalam bidang teknologi pembinaan dari sekecil-kecil sehingga setinggi bangunan pencakar langit.

Sekiranya kita mengkaji sejarah teknologi seni bina dan kejuruteraan, kita melihat bahawa bangunan bertingkat telah mula dibina pada penghujung abad ke-19. Perkembangan penggunaan teknologi keluli yang semakin meningkat dan penggunaan lif telah mempercepatkan pembinaan struktur yang dipanggil pencakar langit.

Kamus Oxford menjelaskan maksud teknologi 'aplikasi' pengetahuan sains untuk tujuan praktikal, terutamanya dalam industri untuk faedah manusia dan alam semesta. Ini memberi keyakinan kepada penulis bahawa Rasulullah adalah pencetus kepada pembangunan teknologi setiap zaman yang sejajar dengan apa yang telah ALLAH SWT jelaskan di dalam Su-

rah Al-Anbiyaa' [21:104-107] yang maksudnya,

"Pada hari Kami gulung langit sebagai menggulung lembaran-lembaran kertas. Sebagaimana Kami telah memulai penciptaan pertama begitulah Kami akan mengulangnya. Itulah suatu janji yang pasti Kami tepati; sesungguhnya Kami lah yang akan melaksanakannya; Dan sungguh telah Kami tulis di dalam Zabur sesudah (Kami tulis dalam) Lohmahfuz, bahawasanya bumi ini dipusakai hamba-hamba-Ku yang soleh; Sesungguhnya (apa yang disebutkan) dalam (surat) ini, benar-benar menjadi peringatan bagi kaum yang menyembah ALLAH; Dan tiadalah Kami mengutus kamu (Muhammad), melainkan untuk (menjadi) rahmat bagi semesta alam; Katakanlah: "Sesungguhnya yang diwahyukan kepadaku adalah: "Bahawasanya Tuhanmu adalah Tuhan Yang Esa, maka hendaklah kamu berserah diri (kepada-Nya)!"

Rekod sejarah menunjukkan bahawa, ketika al-Quran diturunkan, masyarakat Arab tidak mempunyai teknologi untuk membolehkannya melaksanakan penyelidikan tentang dunia atau pun alam se-

mesta. Oleh itu, terdapat perbezaan yang penting antara tahap sains dan teknologi pada ketika itu, adapun ketika zaman Rasulullah ataupun zaman kita sekarang ini.

Bukti yang jelas tentang ini adalah bahawa beberapa inovasi teknologi yang namanya tidak dapat disangkal hanya beberapa dekad yang lalu menjadi elemen sangat penting dalam kehidupan kita hari ini seperti teknologi pengangkutan, komunikasi, pendidikan, perubatan, pembinaan dan sebagainya.

Kesimpulannya, umat Islam dan dunia secara khususnya mesti berterima kasih kepada Rasulullah kerana telah memberi peringatan tentang pentingnya aspek kejuruteraan dan pembinaan. Namun, pada masa sama, apakah jurutera muda di negara ini bersedia untuk menyelami apa telah dilontarkan Nabi Muhammad kira-kira 1,400 lalu. Jawapannya ialah tepuk dada tanyaiah selera.

* Penulis adalah Pengarah Institut Kejuruteraan Sukan Pusat Kecemerlangan Universiti Selangor (Unisel)

LAMPIRAN 4

NEW STRAITS TIMES (BUSINESS / NEWS): MUKA SURAT 22

TARIKH: 23 NOVEMBER 2018 (JUMAAT)

RELIABLE ENERGY SUPPLY

TNB WALKS TIGHTROPE TO MANAGE COSTS

Govt has implemented ICPT mechanism to cushion fuel price fluctuations

KUALA LUMPUR

OVER the past three months, some Malaysians may have been cautiously smiling on the quiet when crude oil prices surged past the US\$80 (RM335.20) a barrel mark.

Their elation could have stemmed from their belief that higher oil prices could also mean better revenue from petrodollars. Therefore, more money for the government's coffers to spur greater development in the country from 2020 and beyond.

From another standpoint, higher fuel prices translate into higher costs for power producers, who rely mostly on fossil fuel to generate electricity, primarily coal and gas, in the case of Malaysia. And having a reliable and sustainable power supply is also part and parcel of development.

But thanks to the geo-political manoeuvring, crude oil has temporarily fallen off the cliff to below US\$70, thus providing some brief respite to power producers. That has also put LNG prices on a bearish tone amid ample supplies and poor demand, where prices have dipped to US\$9.925/MMBtu from US\$12 last month. That's only one part of the equation.

Coal prices have risen to past

US\$100 a tonne, especially the higher quality types with lower pollution, compared with US\$50 a tonne two years ago. Demand for coal in Asia, particularly China and Japan, will remain steady. That could make coal prices stay on the high side.

Taking all these factors into consideration, power producers can rest easy in the immediate term. But as soon as oil producers get their act together and agree on their proposed production cuts to shore up prices after the first week of next month, any upward price movement could mean higher costs again. And this is exactly where Tenaga Nasional Bhd (TNB), the country's major power producer, is walking a tightrope to manage costs.

Thanks to the government's foresight in anticipating situations, where fuel prices may go sky-high or even rock bottom, it had implemented the imbalance cost pass-through (ICPT) mechanism to manage fuel price fluctuations.

Resulting from these adaptive measures, Malaysia has been able to cushion the price impact and provide reliable energy supply. This has seen the country having a more sustainable electricity sector for greater development to benefit both commercial and residential consumers.



Malaysian power producers mostly depend on gas and coal for 90 per cent of their power generation needs.

Its working mechanism calls for ICPT to be assessed and adjusted every six months on January 1 and July 1 each year to ensure that electricity prices can adapt to changing fuel prices. It is an essential tool for TNB to ensure continued economic sustainability for the power.

It must be emphasised that the ICPT is not a ploy to boost TNB revenue, but it is primarily for the energy provider to adjust tariffs based on the changing prices of fuel required for electricity generation. So far, these ICPT price adjustments have seen total rebates amounting to RM6.3 billion being enjoyed by power consumers in the last four years.

On July 1, there was an increase of 1.35 sen/kWh for business users, but not residential consumers. The current ICPT adjustment, which will last until December 31, had not impacted residential consumers, about 80 per cent of TNB's nine million consumers.

Come January, there will be another price adjustment to reflect the current scenario in the energy and power supply industries. Singapore and the Philippines have raised electricity prices while Vietnam and Indonesia are grappling with challenges in the absence of price increases.

In the case of Malaysia, the anticipatory or impending picture has been factored in because of the six-month interval of the ICPT mechanism. It has put in place a scheduled and flexible way to adjust prices to contribute

to a conducive, efficient and competitive environment to help in the continued development of the country. That implies no sudden increases in electricity rates to shock the business and non-business community.

Malaysian power producers mostly depend on gas and coal for 90 per cent of their power generation needs. Adapting to price changes for these fuels is exactly what the ICPT is designed for. In the last few months, we have seen the price of coal going up to a six-year high and by more than 32 per cent year-on-year. Natural gas prices have also been trending up as mirrored by crude oil prices, compared to last year.

In Malaysia, we have seen that the changing natural gas prices have been influenced by a steady shift towards market prices from a previously subsidised fuel cost. The liberalisation of the gas supply market is set to support a more competitive price scenario by next year. Under such a scenario, any short-term cost rises will be balanced by offsetting with a more sustainable and competitive market.

To meet Malaysia's growing energy needs, a fair pricing framework is therefore needed to reflect the changing costs for electricity. This also requires consumers to pay for their part for a sustainable and reliable electricity supply industry. We have to anticipate that likely scenario emerging not too long from now. **Bernama**

NINE-MONTH RESULTS

Allianz posts 5.2pc rise in gross written premiums

KUALA LUMPUR: Allianz Malaysia Bhd Group has posted a 5.2 per cent increase in gross written premiums (GWP) to RM3.41 billion from January to September this year, compared with RM3.24 billion last year.

Its total assets grew 7.2 per cent to RM17.50 billion in the first nine months, compared with RM16.33 billion last year.

"Despite market challenges, Allianz Malaysia has remained resilient for the first nine months, closely maintaining our GWP to RM1.63 billion with new car sales soaring in July and August during the tax holiday," said Allianz Malaysia chief executive officer Zakri Khir in a statement yesterday.

Allianz Malaysia's general insurance operation, Allianz General Insurance Company (Malaysia) Bhd, maintained a GWP of RM1.63 billion for the first nine months, the same earnings as of last year despite a slight ease of 0.2 per cent.

Total assets rose 3.4 per cent to RM6.25 billion in the third quarter from RM6.04 billion in the previous year, contributed by better expense ratio.

Allianz Life Insurance Malaysia Bhd continues its strong growth, recording a 10.8 per cent rise in GWP to RM1.77 billion in the first nine months from RM1.60 billion last year.

Its annualised new premiums improved by 16.2 per cent to a total of RM377.5 million in the third quarter from RM324.8 million in the same corresponding period last year.

LAMPIRAN 5
HARIAN METRO (SETEMPAT): MUKA SURAT 30
TARIKH: 23 NOVEMBER 2018 (JUMAAT)



ASLINA (kanan) meninjau air yang bertakung di dalam rumahnya yang menjadi masalah untuk kerja pembersihan di Kampung Belimbing Dalam.

JALIL Omar menjemur tilam dan bantal sambil dibantu isterinya, Semahau Ishak di Kampung Belimbing Dalam dekat Durian Tunggal.

Termenung tak dapat balik rumah

■ Penduduk sukar kembali kediaman berikutan air banjir belum surut



KEADAAN limpahan banjir yang masih bertakung selepas naik sedalam tiga kaki akibat hujan lebat pada Isnin lalu di Kampung Belimbing Dalam dekat Durian Tunggal.

Nurul Fhatihah Zakinan
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Alor Gajah

Fenomena 'banjir termenung' menyukarkan penduduk di Kampung Belimbing Dalam, di sini, kembali ke kediaman masing-masing bagi menjalankan kerja pembersihan.

Penduduk, Aslina Ramli, 48, berkata, dia sekeluarga masih berkampung di pusat pemindahan sementara (PPS) di Sekolah Kebangsaan (SK) Belimbing Dalam sejak Isnin lalu berikutan air banjir di kawasan rumahnya masih lagi tidak surut.

Katanya, sehingga semalam dia masih tidak dapat pulang mencuci rumah.

"Saya tidak tahu berapa lama lagi perlu berada di sini. Dinding rumah pula adalah separa batu dan kayu, termasuk pintunya juga kayu.

"Jika dibiarkan terlalu lama, bahagian kayu itu akan mereput, jadi kami terpaksa membaikpulih dan tampal selepas membersihkan rumah," katanya yang tinggal

di kawasan itu sejak 30 tahun lalu.

Aslina berkata, rumahnya pernah dinaiki air setinggi paras leher menyebabkan banyak perabot dan barangan elektrik rosak.

"Saya juga bimbang dengan keselamatan diri dan keluarga kerana banyak haiwan liar seperti lintah dan ular akan muncul selepas bencana ini," katanya.

Penghulu Dewan Undangan Negeri (DUN) Durian Tunggal, Mohd Marhakim Hasan berkata, fenomena air

termenung bukan saja memburukkan keadaan di beberapa kawasan, malah berisiko tinggi dilanda banjir setiap tahun.

"Fenomena ini kita hadapi setiap kali banjir. Paling lama (surut) pun seminggu. Bagaimanapun, pihak kita kini berusaha mencari jalan bagi membiarkan aliran air ke kawasan kolam takungan air berhampiran Kampung Pulau," katanya.

Sementara itu, Sekretariat Pengerusi Pengurusan Bencana Negeri, Leftenan Ko-

lonel (PA) Effendy Ali, berkata SK Belimbing Dalam masih dibuka sehingga hari ini dengan penempatan 262 mangsa daripada 72 keluarga setakat jam 4 petang tadi.

"Hanya SK Belimbing Dalam masih kekal beroperasi sejak dibuka Isnin lalu.

"Penduduk belum pulang berikutan kediaman mereka dilanda air termenung di kawasan masing-masing," katanya.

Pada Isnin lalu, beberapa kawasan di Alor Gajah dilanda banjir kilat berterusan selama lima jam sejak jam 1.30 pagi menyebabkan hampir 1,000 penduduk terjejas.



ASLINA menunjukkan air yang masih bertakung di dalam rumahnya.

“Dinding rumah adalah separa batu dan kayu, termasuk pintunya juga kayu. Jika dibiarkan terlalu lama, bahagian kayu itu akan mereput, jadi kami terpaksa membaikpulih dan tampal selepas membersihkan rumah”

Aslina Ramli

LAMPIRAN 6

THE STAR (STAR METRO): MUKA SURAT 2 & 3

TARIKH: 23 NOVEMBER 2018 (JUMAAT)



Nothing goes to waste: Petaling Jaya City Council currently recycles durian skin and coconut husks into bio-charcoal at the PJ Eco Recycling Plaza, the council's integrated recycling centre in Sungai Way. — SAM THAM/The Star

A taste for waste

The country's first-of-its-kind recycling hub run by a local council aims to reduce the amount of recyclable rubbish in landfills by turning it into useful items. >2&3



Bulky polystyrene from electronic goods packaging are being compressed to be made into useful items at the centre. — Photos: SAM THAM/The Star

By SHEILA SRI PRIYA
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AN INTEGRATED recycling centre is Petaling Jaya City Council's (MBPJ) next step towards dealing with waste in the city.

Named the PJ Eco Recycling Plaza, the centre is possibly the first of its kind started by a local council.

MBPJ is focusing on recycling polystyrene into plastic pallets and turning discards such as durian and coconut husks into bio-charcoal at the city council's integrated recycling centre in Sungai Way.

Its main aim is to reduce the amount of waste going to landfills. Petaling Jaya mayor Datuk Mohd Azizi Mohd Zain launched the

In line with green city initiative

MBPJ will invite NGOs, companies to take part in activities at recycling centre

centre which will be fully operational by the third quarter of next year.

"We aim to work towards a sustainable and low-carbon city through the 3R concept which is reduce, reuse and recycle."

"This is in line with MBPJ's sustainable development goal and part of the new urban agenda requiring local councils to aspire towards a green city."

"We must also tackle local

problems and in our case, we are looking into the waste management issue," said Mohd Azizi.

Located in SS8 Petaling Jaya, the PJ Eco Recycling Plaza is a hub with various environment-related activities such as enzyme-making, upcycling of waste and the recycling of polystyrene, coconut husks and durian skin.

The centre also aspires to be an eco-educational hub for students, the public and other local councils

to learn on recycling. Petaling Jaya Solid Waste Management and Public Cleansing Department director Lee Lih Shyan said the centre was formerly a supermarket.

He said the idea to set up such a centre started from the "good waste" he witnessed being dumped by Petaling Jaya residents during festival spring cleaning.

"We provide free bulk waste collection, four times a year, and we have seen good condition cupboards and other household items thrown out."

"Instead of sending them to landfills which will cost the city council money, we decided to upcycle and sell them to the public for a minimal price."

"We have city council workers who are talented in upcycling waste and such activities are carried out here," said Lee, who



(From left) Three plants grown using chemical fertiliser, without any compost, and with liquid compost made from recycled material, respectively. The one grown with liquid compost has more leaves and looks healthier.

was inspired by first world countries such as Sweden which has malls selling upcycled waste.

He added that items such as bulky polystyrene from electronic goods packaging were rarely recycled due to logistics issues.

However, these items can be recycled into small plastic pallets and turned into items such as picture frames, furniture and even solid walls.

"To create 1m cubic compressed plastic block, we require 10kg of polystyrene."

"Polystyrene is lightweight but a bulky item. It is costly to transport this as it takes up space in the lorry and this puts off recycling efforts."

"As a responsible city council, we want to advocate polystyrene recycling and we have a machine that can recycle it."

"We can show the public how we do it here and welcome such trash to be sent to the centre," said Lee.

As for durian skin and coconut husks recycling, Lee said there was a lot of such waste in the city.

"These wastes were turned into bio-charcoal at the centre."

"The bio-charcoal functions like a conventional charcoal used for cooking during outdoor camping activities."

"However, charcoal is also used to absorb moisture and is placed in clothes cupboards," said Lee.

adding that the centre also carried out food composting and harvest bins used to light up the PJ Eco Recycling Plaza building itself.

In a statement Mohd Azizi said the city council was in collaboration with F&N, Tetra Pak, Spark Foundation, INTCO Malaysia Sdn Bhd dan GH Green for the project.

Non-governmental organisations and private sector companies promoting green living would be invited to showcase their efforts and engage in activities related to the environment at the PJ Eco Recycling Plaza, he said.

He added that the centre also had a rainwater harvesting and vertical garden corner to promote eco living.

"About RM450,000 was spent on the two-storey building facade as well as the exterior renovation."

"About RM1mil will be spent to ensure the building is fully operational and RM840,000 was approved to complete the waste treatment facility here," he said.

The Selangor State Economic Planning Unit (Upen) has allocated RM100,000 for this project.

In addition to the centre, the city council has engaged with 9,238 houses where 65 tonnes of waste had been separated for recycling.

MBPJ also created a Smart PJ Waste Solution Lab in SS2, Petaling Jaya that gathers the market waste for composting purposes.



Rohani Kasim (left) taking home a discarded cupboard purchased from the PJ Eco Recycling Plaza for RM30. The cupboard was among items thrown away and was collected by MBPJ. She is seen here speaking with Lee about the centre's purpose.



Coconut husks that are thrown away can be recycled to make various items.

A total of 10kg of polystyrene waste is needed to create a 1m cubic compressed plastic block.



The vertical garden at the PJ Eco Recycling Plaza is watered using rainwater while the fertiliser used are from food composts.



Bulky polystyrene from electronic goods packaging can be recycled into small plastic pallets and turned into picture frames, furniture and even solid walls.

LAMPIRAN 7
THE STAR (STAR METRO): MUKA SURAT 2
TARIKH: 23 NOVEMBER 2018 (JUMAAT)

Public involvement in separating waste vital for a greener M'sia



Malarvanan standing in front of a mound of aluminium cans at his scrap metal yard in Taman Cheras Jaya. — Photos: LOW BOON TAT/The Star

By ELAN PERUMAL
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THE public needs to play a bigger role to enable the Government to take recycling efforts to the next level.

Through concerted efforts to recycle, the cost incurred on processing waste and maintenance of the landfills can significantly reduce the Government's financial burden.

Malaysian Indian Metal Traders and Recyclers Association is urging the public to adopt the habit of separating domestic waste from recyclables.

Its honorary secretary Datuk V. Malarvanan said from its observation, a substantial amount of domestic waste thrown out by the public were recyclables.

He said up to 50% of the domestic waste contained recyclables such

as metal, plastic, paper and glass.

"We are not just throwing garbage but money out of the window.

"We can help to boost the country's economy by separating recyclable waste by turning them into money," he said.

Malarvanan said it was time the public played a role in environment conservation as well as helping the Government in its recycling efforts.

He said the public must start separating domestic waste by putting aside recyclables like used batteries, broken glass, paper and plastics.

These items should not be disposed with domestic waste, he said.

The practise of waste separation, Malarvanan said would create a chain effect in the long run for both the Government and the public with regards to the environment and economy.



Recyclables disposed of as domestic waste can be turned into something useful and sold for a profit.

Those who practised recycling would be able to benefit monetarily by selling recyclables to recycling centres.

"It is not difficult to find buyers for recyclables as there are many recycling centres around," he said.

This way, the Government would be able to reduce its expenditure on looking for areas to set up landfills as well as maintaining them especially in the Klang Valley where there is a shortage of land, Malarvanan said.

"The Government should also

hold more campaigns to educate the public on the need to recycle waste," he said.

Malarvanan said there was an increase in the amount of recyclables disposed by the public compared to the past, based on feedback from the association's more than 400 members.

He said residents could sell unwanted items to those who collect them from households in residential areas.

"Some even send the items directly to recycling centres," he said.

Malarvanan said while the Government was supportive of the scrap metal industry, the biggest challenge faced was lack of workers.

"We need foreign workers to do the job of segregating items as well as crane operators and manual workers. Even those in the recycling business need workers too.

"The association has been holding a series of discussion with the Human Resources Ministry, and we hope the issue will be resolved soon," he said.

LAMPIRAN 8
NEW STRAITS TIMES (OPINION): MUKA SURAT 16
TARIKH: 23 NOVEMBER 2018 (JUMAAT)

41R

DIGITALISING MANUFACTURING INDUSTRY

Training and upskilling employees can be a cost-effective way of managing staff resourcing, which will ultimately boost a company's productivity, writes
VINCENT TANG

AS digital transformation gains momentum, the manufacturing industry is challenged to a bold rethink of old business and operating models. Yet, Malaysia is considered to be lagging behind in terms of the rapidly changing technology-driven innovation.

But, with the recently announced 2019 Budget we can see that Malaysia signals an increasing strength in its manufacturing sector. Finance Minister Lim Guan Eng said the government will allocate RM210 million from 2019 to 2021 to support the transition and migration of the country's industries to Industry 4.0.

This transition will undoubtedly require a large number of talents with the relevant skills.

Challenging and training employees to acquire new expertise can be a cost-effective way to manage staff resourcing, provide a boost to employee engagement, and ultimately have a positive impact on a company's productivity.

There are several areas manufacturers should consider when reviewing the training needs of their workforce and providing opportunities for upskilling.

One, by breaking down barriers between departments. With the current trend for automation and data exchange in manufacturing technologies, it is time to re-imagine work practices and stop

relying on working in operational silos that have been created around job descriptions.

Manufacturers, instead, need to review tasks — including labelling, packaging, and shipping — rather than job roles, to reap the benefits of digital data sharing. Software platforms, such as modern enterprise resource planning (ERP), provide employees across departments with real-time information and a 360-degree picture of what's happening in the business.

By allocating tasks to both machines and people, manufacturers can ensure an efficient level of automation, freeing up employees' time to focus on new, less manual and more skilled tasks that deliver greater value to the business.

Two, identifying where upskilling needs to happen. Beefing up engineering talent on the shop floor is, without a doubt, vital; however, skills gaps higher up in the business are just as pressing. Manufacturers should, therefore, think about technical knowledge and skills gaps, but also consider potential gaps in management and leadership skills.

In fact, Stanton Chase's 2017 Global Industrial Executive Survey shows that for 30 per cent of companies, the biggest challenge in implementing industrial innovation is a lack of technical skills, but 20 per cent say the same of leadership skills such as change management. Bringing in a development and training specialist can help manufacturers perform a skills gap analysis to ensure that any training plan is not only going to address the current pressure points, but also future-proof the company.

Three, aligning training to the overarching business strategy. Forward-thinking leadership teams are developing their workforce upskilling strategy — a task that has historically been the responsibility of human resource — as an integral part of their strategic business planning process. This planning process includes a comprehensive review of how ex-



Upskilling of the workforce needs to happen. The biggest challenge in implementing industrial innovation is a lack of technical skills. FILE PIC

ternal trends are affecting existing structures, jobs and skills across the business.

It considers which roles are strategic and core to the business, which ones will appear, and which will change or disappear completely.

Technology can play a key role in this strategic planning process, using real-time, data-driven insight to analyse and review where training is required across an entire manufacturing business.

Specifically, software such as modern enterprise resource planning (ERP), customer relationship management (CRM), and manufacturing execution systems (MES), can deliver actionable insight on a company-wide scale — from core business processes, to interactions with customers and manufacturing operations.

By using the insights that data from these systems can offer, businesses can uncover opportunities to educate the workforce at every level.

Four, understanding the scale and time frames. Helping employees to upskill in this fast-changing world of work also needs to happen at speed and to scale. The skills revolution that we are seeing goes hand-in-hand with innovations, and as new technologies

emerge, the skills requirements will change. In order to keep pace with changes in the sector, manufacturers need to consider upskilling an ongoing long-term investment and develop strategies for continuous upskilling, or "lifelong learning" of their employees.

As the pace of technological change increases, manufacturers need to act to ensure they are not constrained by an increasing gap between supply and demand for talent.

Technologies like modern ERP and MES solutions are fast becoming the foundation for digital transformation in manufacturing by functioning as the fabric that connects people, processes, data and things in an intelligent and strategic manner.

A skilled and agile workforce that can successfully use these technologies can enable manufacturers to rise to the challenges presented by 4IR.

These companies will then, in turn, be in a strong position to navigate the ever-changing economic and international business environment, improve productivity, and drive future business growth.

The writer is Asia's regional vice-president of Epicor, a global business software company

With the current trend for automation and data exchange in manufacturing technologies, it is time to re-imagine work practices and stop relying on working in operational silos that have been created around job descriptions.

LAMPIRAN 9
BERITA HARIAN (DUNIA): MUKA SURAT 64
TARIKH: 23 NOVEMBER 2018 (JUMAAT)

**KEBAKARAN HUTAN
CALIFORNIA**

Hujan tingkat risiko banjir

Chico: Hujan pertama dalam tempoh beberapa bulan di utara California membantu anggota bomba mengawal kebakaran terburuk dalam sejarah kelmarin, namun risiko mungkin berlaku banjir semakin meningkat.

Hujan sehingga 15 sentimeter dijangka melanda sekitar kawasan Paradise, penempatan hampir 27,000 penduduk, 280 kilometer di utara San Francisco yang dilanda kebakaran hutan dikenali sebagai 'Camp Fire'.

Sherif Butte County, Kory Honea dalam satu taklimat media berkata, kebakaran besar itu meragut sekurang-kurangnya 83 nyawa manakala 563 lagi dilaporkan masih hilang.

"Hujan ini membimbangkan kami dan ada kemungkinan ia akan menyebabkan banjir lumpur," kata Honea sambil menambah, beliau akan mengarahkan penyelamat untuk menghentikan usaha mencari mangsa jika mereka berdepan sebarang risiko terperangkap dalam banjir itu.

Hujan lebat juga menambah penderitaan mangsa yang terpaksa berkhemah di parkir Walmart berhampiran Chico, sambil dibantu penduduk setempat menerusi sumbangan palet kayu dan kain untuk melindungi mereka daripada suhu sejuk.

REUTERS

LAMPIRAN 10
THE STAR (WORLD): MUKA SURAT 23
TARIKH: 23 NOVEMBER 2018 (JUMAAT)

Australian wine becoming more alcoholic due to climate change

CANBERRA: The alcohol content of Australian wine is on the rise as a result of climate change, according to experts.

Rob Geddes, one of Australia's leading Masters of Wine (MW), said that grapes being grown for wine are being harvested earlier every year because of hotter, drier conditions, resulting in riper wines with higher alcohol content.

"The climate change issue is one of sudden heat spikes as well as continuing heat and high temperatures and that is an issue," Geddes, who in 2017 became the first Australian MW to set up an office in China, told the Australian Broadcasting Corporation (ABC) yesterday.

"We are seeing higher alcohols and this is the result of ripeness and also the result of some berry shrivel, depending on the grower.

"We were tasting one day and the wines that were 14.5% alcohol ... a lot of them were actually 15.5%."

Wine Australia revealed earlier in November that China remained the biggest export market for Australian wine by a wide margin with the total value of exports to the country up 24% in the 12 months to September 2018 to A\$1.06bil (RM3.2bil).

Almost 50 exhibitors showcased 90 Australian wine brands from 20 regions at ProWine China 2018 in Beijing in mid-November.

Bruce Redman, co-owner of South Australia's Redman wines and chief winemaker, said that the alcohol by volume (ABV) of his products had risen by between 0.5% and 1% since 2000.

"If we get too much warm weather and we start harvesting too early then the grapes are going to be riper with different characteristics in the wine," he told the ABC.

"What we are finding is we are getting similar characteristics in terms of aromas and flavours, but we are tending to find that in the past 20-odd years the alcohols have probably tended to creep up from around 13% to 13.5% to 14% by volume." — Xinhua



LAMPIRAN 11
THE STAR (WORLD): MUKA SURAT 23
TARIKH: 23 NOVEMBER 2018 (JUMAAT)

Vanuatu seeks to sue culprits behind climate change

WELLINGTON: Low-lying Vanuatu is considering suing fossil fuel companies and industrialised countries that use them for their role in creating catastrophic climate change, the foreign minister of the Pacific island nation said.

Vanuatu, with an estimated population of 280,000 people spread across roughly 80 islands, is among more than a dozen Pacific island

nations that already face rising sea levels and more storms that can wipe out much of their economies.

Foreign Minister Ralph Regenvanu said it was time that some of the billions of dollars of profit fossil fuel companies generate every year goes towards the damage they cause in countries like "desperate" Vanuatu.

"This is really about claiming for the damages," he said.

Speaking at the Climate Vulnerable Forum's Virtual Summit earlier in the day, Regenvanu announced the legal options Vanuatu was considering.

"My government is now exploring all avenues to utilise the judicial system in various jurisdictions – including under international law – to shift the costs of climate protection back on to fossil fuel compa-

nies, the financial institutions and the governments that actively and knowingly created this existential threat to my country," he said.

About 64% of Vanuatu's GDP was wiped out in a single cyclone in 2015, causing economic losses of US\$449.4mil (RM1.88bil), he said.

Samoa, on behalf of the 18 Pacific island forum members, including Vanuatu, on Saturday called on

leaders of the Asia-Pacific Economic Cooperation (Apec) to pay more attention to climate change.

Regenvanu said Vanuatu was also pursuing the idea of joining hands with other nations to pursue legal action.

"We are looking for climate vulnerable countries who are willing to step up and be involved in such a case," he said. — Reuters

LAMPIRAN 12
MALAY MAIL (WORLD): MUKA SURAT 14
TARIKH: 23 NOVEMBER 2018 (JUMAAT)

Vanuatu threatens to sue over climate change

WELLINGTON — Low-lying Vanuatu is considering suing fossil fuel companies and industrialised countries that use them for their role in creating catastrophic climate change, the foreign minister of the Pacific island nation said yesterday.

Speaking at the Climate Vulnerable Forum's Virtual Summit, Ralph Regenvanu said the impact of climate change is felt first and hardest by those who are least responsible for it.

"Vanuatu is on the front lines of climate change and yet we have benefitted least from the exploitation of fossil fuels that has caused it," Regenvanu said.

"My government is now exploring all avenues to utilise the judicial system in various jurisdictions — including under international law — to shift the costs of climate protection back on to fossil fuel companies, financial institutions and governments that actively and knowingly created this existential threat to my country," he said in a video of the summit posted online.

Vanuatu, with an estimated population of 280,000 people spread across roughly 80 islands, is among the more than a dozen Pacific island nations that already face rising sea levels and more regular storms that can wipe out much of their economies.

Samoa, on behalf of the 18 Pacific island forum members, including Vanuatu, called on leaders of the Asia-Pacific Economic Cooperation (Apec) on Saturday to pay more attention to climate change.

Samoa's prime minister said he wanted to see more done by Australia and the United States.

"Vanuatu's brave announcement today is part of a global wave of legal action against oil, gas, and coal companies and laggard governments," Jennifer Morgan, executive director of Greenpeace International, said in a statement.

"Communities impacted by climate change are standing up and demanding that those responsible finally be held to account."

Climate change lawsuits against big corporations and governments are on the rise.

The US city of Baltimore filed a lawsuit in June against 26 oil and gas companies and entities, including BP Plc, Chevron Corp and Exxon Mobil Corp, for knowingly contributing to what the city called the catastrophic consequences of climate change. — Reuters

LAMPIRAN 13
THE STAR (WORLD): MUKA SURAT 36
TARIKH: 23 NOVEMBER 2018 (JUMAAT)

First rain in months douses California wildfire

CHICO (California): The first significant rain in months in northern California all but extinguished the deadliest wildfire in the state's history but also raised risks of flash flooding that could hinder teams searching for human remains.

Between 102mm-152mm of rain was expected to fall through the weekend in areas around the town of Paradise, the community of nearly 27,000 people 280km northeast of San Francisco that was largely incinerated by the so-called Camp Fire.

The blaze killed at least 83 people and 563 remain unaccounted for, Butte County Sheriff Kory Honea told a news briefing.

"The rain is a concern for us and there is the potential for mudflows," Honea said. Searchers would be pulled out of areas threatened by mudslides, he said.

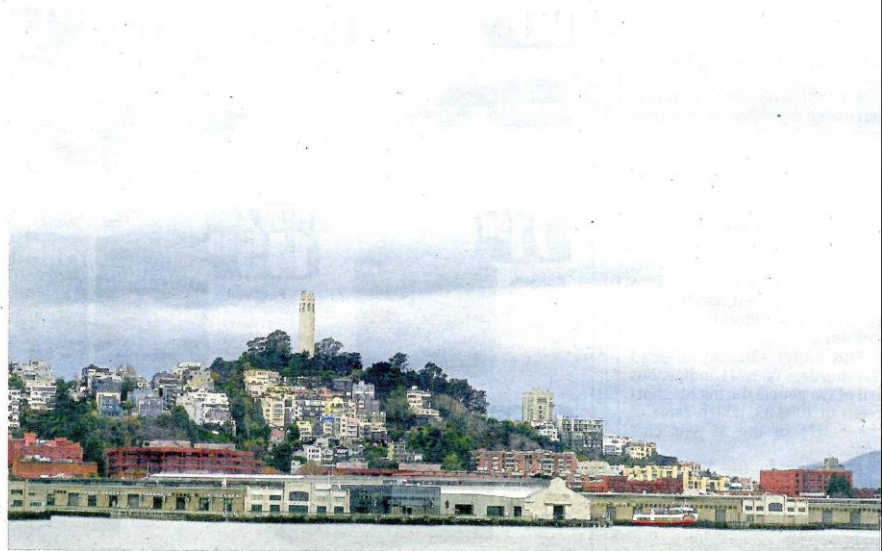
The storm added to the misery of evacuees camped out in a Walmart parking lot in nearby Chico.

Mitchell Manley was cold and wet but thankful he persuaded his elderly mother to evacuate. He said most of the dead were retirees who thought they could ride out the flames in their homes.

"I was lucky to get her out, she was going to sit it out," said Manley, who was camping at Walmart while he waited to go back to his home.

Warehouses were opened in Chico to provide evacuees protection from the cold and rain as celebrity chef Jose Andres prepared to cook hundreds of Thanksgiving meals for evacuees.

Some 830 people had signed up to spend their Thanksgiving combing through ash and rubble in forecast



Good and bad: A weather front bringing rain moves in behind Coit Tower on Telegraph Hill in San Francisco. Light rain falling in some areas of northern California could aid crews fighting a deadly wildfire while raising the risk of flash floods and complicating efforts to recover the remains of those killed. — AP

heavy rain, searching for human remains, Honea said.

The rains, which in some areas were likely to be accompanied by winds of up to 72kph, raised risks of ravines turning into rivers of mud.

The fire has burned across 62,000ha of the Sierra foothills and is 85% contained.

"There's no vegetation to hold the earth and there's a risk it could just start moving, with mud carrying

everything in its path," National Weather Service forecaster Johnnie Powell said in Sacramento.

Firefighters installed straw tubes known as wattles to stop hillsides being washed away.

"With the heavy rains, the fire activity is practically nothing," said Cal Fire Operation Section Chief Josh Bishop.

The death toll has been gradually rising, with two more names added

to the list on Wednesday to bring the total to 83 people, with 58 of them tentatively identified, Honea said.

The number of people unaccounted for, which has fluctuated widely over the past week, declined by 307.

The Camp Fire incinerated 13,503 homes in and around Paradise. The cause of the fire remains under investigation. — Reuters

LAMPIRAN 14
THE STAR (WORLD): MUKA SURAT 38
TARIKH: 23 NOVEMBER 2018 (JUMAAT)

Dust storm blows into Sydney

SYDNEY: Brown haze engulfed Sydney, and authorities are advising residents to take precautions.

The New South Wales Department of Health has issued a warning stating that tiny dust particles can penetrate deep into people's lungs, suggesting those with respiratory conditions stay indoors for the duration of the event which is expected to dissipate by today.

"Some of the dust particles in the dust storm will be very small and can get deep into your lungs and that's why we're concerned about people's health," Director of Environmental Health Richard Broome said.

"Dust may aggravate existing heart and lung conditions and cause symptoms like eye irritation and cough.

"If possible, staying in air-conditioned places where filtration systems can help to reduce dust particles in the air," the director said.

Adam Morgan of the Bureau of Meteorology said a low pressure system over South Australia and Victoria states had pushed strong winds across areas of western New South Wales that have experienced one of the worst drought seasons in years. — Xinhua/AFP



Hazy contrast: Clouds and blue sky above the dust storm as it descends upon the city of Sydney in Australia. — Reuters