KERATAN AKHBAR-AKHBAR TEMPATAN
TARIKH: 20 OKTOBER 2013 (AHAD)

Bil	Tajuk	Akhbar
1.	Meneroka angkasa	Metro Ahad
2.	Kejayaan dua tokoh jadi inspirasi warga UMT	Mingguan Malaysia
3.	Implan gigi mini pertama di dunia	Berita Harian
4.	Bioeconomy is the way to go	Sunday Star
5.	Accelerating bioeconomy Malaysia	Sunday Star

KERATAN AKHBAR
METRO AHAD (EKSPRESI) : MUKA SURAT 1
TARIKH : 20 OKTOBER 2013 (AHAD)

EKSPRESI

Meneroka 'angkasa'

»E2

Michael kagum bangunan bersejarah

»E21

SAMBUNGAN...
METRO AHAD (EKSPRESI) : MUKA SURAT E2
TARIKH : 20 OKTOBER 2013 (AHAD)

PESERTA turut diuji kepetahan apabila perlu membentangkan hasil kerja.

FOTO

STAR WARS pencetus minat

Peserta NSC 2013 akui filem epik itu membangkitkan minatnya mengenai angkasa lepas

Oleh NURUL HUSNA MAHMUD
nurul_husna@mediaprima.com.my

Siapa sangka pengaruh filem epik angkasa lepas Star Wars arahan George Lucas mampu menjana minat seorang kanak-kanak kepada sains.

Malah, karakter antagonis Darth Vader mengenakan topeng hitam bersama pakaian perisai dan jubah hitam menjadi imej kuat membayangkan dirinya dapat meneroka pengalaman di angkasa lepas.

Itu antara sisi menarik dikongsi wakil pasukan Sekolah Kebangsaan (SK) Puteri Seremban Negeri Sembilan, Aliyyah Azreezal, 11, ketika ditemui di Planetarium iaitu lokasi rasmi pusingan akhir Cabaran Angkasa Lepas Trofi Perdana Menteri 2013 atau NSC 2013, baru-baru ini.

Dia bersama ahli pasukannya Hemavathy a/p Candrasekaran bersemangat memberi saingan kepada empat pencabar lain iaitu SK St Francis, Melaka; SK St George 1, Selama, Perak; Sekolah Jenis Kebangsaan (SKJC) Han Chiang Timur Laut Pulau Pinang dan SK Convent (2), Klang, Selangor.

Katanya, ilmu angkasa lepas adalah kecenderungannya dan sebarang aktiviti membabitkan cabang ilmu sains itu membuatkan dia teruja, dengan pencetusnya adalah filem popular Amerika Syarikat itu.

"Saya mula meminati ilmu angkasa lepas sebaik menonton filem Star Wars. Karakter Darth Vader bertarung dengan Yoda serta Luke Skywalker di angkasa lepas bersama pedang berwarna menarik perhatian saya. Sejak itu saya mula membaca mengenai angkasa lepas," katanya.

Aliyyah berkata, dia menjadi teruja selepas membaca mengenai ilmu angkasa lepas dan kini membelek koleksi ensiklopedia adalah rutinnya selain membabitkan diri dalam program berkaitan ilmu angkasa lepas.

"Saya mempunyai lebih 10 buku ensiklopedia angkasa lepas dan banyak masa saya peruntukkan untuk mentelaahnya.

"Menyertai NSC 2013 memang menyeronokkan. Banyak benda saya pelajari dan paling saya suka dalam pelbagai slot sepanjang di Planetarium ialah membuat satelit dan baju angkasawan. Mereka pakaian angkasawan mengikut cita rasa sendiri dan belajar membuat satelit sangat menyeronokkan.

"Selain itu, kemuncak program iaitu tiga pusingan terakhir paling menguji pengetahuan saya. Saya tetap gembira meskipun hanya menduduki tempat ketiga," katanya.

Rakannya, Hemavathy berkata, dia seronok dapat berada dalam kelompok pasukan yang layak bertanding merebut trofi Perdana Menteri.

"Memang soalan disediakan susah tetapi itu membuatkan pertandingan ini menarik. Tidak dapat saya lupakan ialah persembahan drama ketika pusingan awal. Biarpun tempohnya singkat, kami dapat menghiburkan penonton di dalam dewan," katanya.

SAMBUNGAN...
METRO AHAD (EKSPRESI) : MUKA SURAT E3
TARIKH : 20 OKTOBER 2013 (AHAD)


KHUSYUK mendengar soalan diutarakan

Bagi pasangan juara, Justin Peter Royan dan Muhammad Nazhif Mohd Shamsul, mereka gembira dapat merebut semula kejuaraan yang gagal dipertahankan musim lalu.

Kata Justin, dia tercabar untuk menyertainya selepas melihat abangnya mengambil bahagian dalam pertandingan sama.

"Abang sangat seronok menyertai pertandingan dan kemenangannya pada 2010 memberi motivasi kepada saya untuk turut menyertainya.

"Selain itu sokongan padu guru dan ibu bapa turut membakar semangat supaya berusaha merampas semula kejuaraan," katanya.

Rakannya, Nazhif berkata, cabaran terbesar dalam pertandingan ini ialah pusingan awal kerana dia perlu membuat persembahan di depan orang ramai.

"Saya pemalu dan pusingan pertama antara cabaran paling sukar kerana memerlukan saya beraksi di depan ramai orang. Namun saya tekad kerana memikirkan harapan pihak sekolah yang ingin merampas semula kejuaraan tahun ini," katanya.

Wakil SKJC Han Chiang, Bryan Ng Tung Chen, 11, tidak menyangka menjadi naib juara dalam pertandingan angkasa lepas peringkat nasional itu.

"Ini boleh dikatakan kejayaan terbesar buat saya dan rakan, Joel Tan En Zhe kerana sebelum ini sekolah kami tidak pernah berada dalam kelompok pasukan akhir.

"Kalau ada pun hanya menjadi pemenang peringkat daerah mahupun negeri. Ia memberi kepuasan kerana kami membuat persiapan sebulan saja di bawah bimbingan guru, Tan May Ai," katanya.

Sementara itu, wakil Timbalan Ketua Pengarah Agensi Angkasa Negara (ANGKASA), Azlee Abu Bakar berkata, penganjuran kali ke-16 ini mendapat sambutan luar biasa dengan kerjasama Kementerian Pendidikan, Pusat Sains Negara dan Pretro Sains.

"Dengan sambutan luar biasa iaitu 8,000 penyertaan tahun ini, ia diharap dapat merangsang minat pelajar dalam bidang ilmu astronomi.

"Dalam pada itu kita melihat ia berpotensi melahirkan keperluan tenaga mahir dalam bidang sains dan teknologi angkasa untuk masa depan," katanya.


GURU tidak terkecuali membuat persiapan


WAKIL Selangor mengenakan sut angkasawan


PESERTA membuat satelit ketika cabaran separuh akhir.

PERSEMBAHAN ceria dari Aliyyah dan Hemavathy

Profil

NAMA: Justin Peter Royan
UMUR: 11 tahun
ASAL: Ayer Keroh
SEKOLAH: SK St Francis, Melaka
PENCAPAIAN: Johan

Profil

NAMA: Muhammad Nazhif Mohd Shamsul
UMUR: 11 tahun
ASAL: Ayer Keroh, Melaka
SEKOLAH: SK St Francis
PENCAPAIAN: Johan

Profil

NAMA: Aliyyah Azreezal
UMUR: 11 tahun
ASAL: Seremban Jaya, Negeri Sembilan
SEKOLAH: SK Puteri
PENCAPAIAN: Tempat ketiga

KERATAN AKHBAR
MINGGUAN MALAYSIA (DALAM NEGERI) : MUKA SURAT 15
TARIKH : 20 OKTOBER 2013 (AHAD)

SULTANAH Nur Zahirah menyampaikan Ijazah Kehormat Doktor Pengurusan kepada Mohd. Yusof Noor dalam Majlis Konvokesyen Universiti Malaysia Terengganu Ke-11 di Kuala Terengganu, semalam.

SEBAHAGIAN graduan bersama ijazah yang diterima mereka sempena Majlis Konvokesyen Universiti Malaysia Terengganu Ke-11 di Kuala Terengganu, semalam. - MINGGUAN/SHAIFUDIN MOHD. NOR

Kejayaan dua tokoh jadi inspirasi warga UMT

KUALA TERENGGANU 19 Okt. - Universiti Malaysia Terengganu (UMT) hari ini menganugerahkan Ijazah Kehormat Doktor Sains kepada Prof. Emeritus Datuk Dr. Zakri Abdul Hamid sebagai pengiktirafan atas sumbangannya dalam bidang sains dan teknologi negara khususnya Sains Biologi dan Sains Kelestarian.

DR. ZAKRI

Pemilihan Penasihat Sains kepada Perdana Menteri itu seiring dengan pencapaian tingginya di peringkat antarabangsa sehingga dilantik menganggotai Lembaga Penasihat Sains kepada Setiausaha Agung Pertubuhan Bangsa-Bangsa Bersatu, Ban Ki-Moon.

Zakri juga merupakan Pengerusi kepada beberapa pertubuhan dan agensi korporat antaranya Majlis Sains dan Penyelidikan Kebangsaan, Majlis Profesor Negara (MPN) dan Malaysian Biotechnology Corporation (Biotechcorp).

Dalam Majlis Konvokesyen UMT Ke-11 yang disempurnakan oleh Sultanah Nur Zahirah selaku Canselor UMT, seorang lagi tokoh, Tan Sri Dr. Mohd. Yusof Noor dianugerahkan Ijazah Kehormat Doktor Pengurusan.

Tokoh Maal Hijrah Kebangsaan bagi 2009 itu memberi sumbangan besar dalam hal ehwal agama Islam di dalam dan luar negara di samping pembangunan akademik dan pengembangan korporat dengan pelbagai peranannya termasuk selaku Pengerusi Majlis Universiti Islam Malaysia dan pernah menjadi Pengerusi Felda.

Naib Canselor UMT, Prof. Emeritus Datuk Ibrahim Komoo ketika berucap pada majlis itu berkata, kejayaan cemerlang dan sumbangan besar kedua-dua tokoh terbabit wajar dijadikan inspirasi oleh ahli-ahli akademik dan para pelajar.

Yang turut hadir, Yang Dipertua Dewan Undangan Negeri Terengganu, Mohd. Zubir Embong; Pro Canselor UMT, Tan Sri Samsudin Osman dan Pengerusi Lembaga Pengarah UMT, Datuk Dr. Ahmad Zaharudin Idrus.

UNIVERSITI MALAYSIA TERENGGANU

Pada majlis kali ini yang diadakan selama dua hari, seramai 1,962 graduan menerima pelbagai ijazah iaitu seramai 15 orang menerima ijazah doktor falsafah, 114 ijazah sarjana, 1,727 ijazah sarjana muda dan 106 orang penerima diploma.

"UMT yang dulunya dikenali sebagai Kolej Universiti Sains dan Teknologi Malaysia (Kustem) kini mempunyai sekitar 7,700 pelajar prasiswazah, 647 pelajar pasca siswazah serta 360 orang pelajar diploma," ujarnya.

Katanya, dalam usaha untuk terus melahirkan graduan yang berkualiti dengan penguasaan ilmu dan nilai-nilai murni, mereka juga perlu dilatih dan dididik oleh ahli-ahli akademik berkualiti tinggi selain prasarana yang mencukupi.

"Maka, di sinilah terletaknya cabaran bagaimana kualiti, potensi dan tahap kecemerlangan ahli-ahli akademik ini perlu dipertingkatkan agar mereka mampu menyumbang secara lebih berkesan dalam konteks di UMT dan mengukuhkan kewibawaan institusi ini dan 'mengantarabangsakannya'.

"Bagi tujuan ini, UMT menubuhkan Pusat Pengurusan Bakat Akademik untuk memberikan perhatian yang serius dalam membangun potensi ahli akademik kerana mereka merupakan sumber kepakaran yang menjadi nadi kepada kecemerlangan akademik," katanya.

KERATAN AKHBAR
BERITA HARIAN (NASIONAL): MUKA SURAT 30
TARIKH: 20 OKTOBER 2013 (AHAD)

Dr Kai Foo menunjukkan ***contoh gigi palsu dan implan mini.*** [FOTO MIOR AZFAR MIOR KAMARUL-BAID/BH]

"Negara kita masih kekurangan pakar dalam bidang implan pergigian. *Justeru, pengenalan teknologi ini sekali gus mampu menambah peluang pekerjaan dalam bidang pergigian di negara ini"*

Dr Chow Kai Foo, *Ketua Pegawai MOSTDI Innovations Sdn Bhd*

Implan gigi mini pertama di dunia

» *Teknologi baru The Buddy System lebih murah, kecil*

Oleh Suhaila Shahrul Annuar
bhnews@bh.com.my

Kuala Lumpur

Bidang pergigian di Malaysia maju setapak lagi dengan pengenalan teknologi implan gigi mini dipercayai pertama di dunia, ciptaan rakyat negara ini.

Ketua Pegawai MOSTDI Innovations Sdn Bhd, Dr Chow Kai Foo, berkata teknologi terbaru dinamakan 'The Buddy System' itu lebih mesra doktor dan pesakit berbanding teknologi implan konvensional.

Katanya, implan gigi bermaksud penggantian akar gigi menggunakan implan dibuat daripada titanium yang boleh sebati dengan tulang dan berfungsi sebagai pemegang gigi.

Kurang sakit

"Perbezaan ketara antara 'The Buddy System' dengan implan konvensional adalah daripada segi harganya yang lebih rendah, saiz lebih kecil, kurang menyakitkan, pembedahan kecil dan rawatan segera," katanya di sini.

Teknologi yang dibangunkan setahun lalu itu akan diperkenalkan pada Persidangan dan Pameran BioMalaysia dan Bioekonomi Asia Pasifik 2013, anjuran Biotechcorp Sdn Bhd, yang akan berlangsung di Pusat Konvensyen Antarabangsa Persada Johor, selama tiga hari bermula Isnin ini.

Dr Kai Foo berkata, implan mini itu memberi peluang kepada semua individu yang kehilangan gigi untuk mendapatkan rawatan implan tanpa perlu risau dengan kos yang tinggi, pembedahan besar dan masa rawatan yang panjang.

Katanya, kira-kira 1,000 individu di negara ini sudah mendapatkan rawatan implan dan mereka amat berpuas hati dengan hasilnya.

"Ukur lilit implan mini lebih kecil iaitu 2.5 milimeter dan 3.5 milimeter berbanding implan konvensional yang biasanya berukuran 4.5 milimeter. Faktor itulah yang menyebabkan implan mini tidak memerlukan pembedahan besar untuk memasukkan implan ke dalam gusi.

"Selain itu, ia juga dihasilkan di kilang di negara ini menyebabkan kosnya lebih murah kerana tidak perlu diimport," katanya.

Beliau berkata kos rawatan bagi implan konvensional agak mahal, antaranya disebabkan kos mengimport implan dan kekurangan pakar implan gigi di negara ini.

KERATAN AKHBAR
SUNDAY STAR (FOKUS) : MUKA SURAT 27
TARIKH : 20 OKTOBER 2013 (AHAD)

Bioeconomy is the way to go

Biotechnology has the potential to cut across various industries and transform Malaysia into a high income nation, with an inclusive and sustainable economy.

BY LISA GOH
lisagoh@thestar.com.my

FANCY having a bug-patty burger for a meal? It might sound gross, but bugs and creepy crawlies may be the ultimate solution to reducing world hunger.

It is out-of-the-box ideas and solutions like this that BiotechCorp, an agency under the Science, Technology and Innovation Ministry (Mosti), is looking for under its Bioeconomy Transformation Programme (BTP).

Launched last October by Prime Minister Datuk Seri Najib Tun Razak, the BTP is a platform provided by the Government for the private sector to channel and maximise commercial opportunities in bio-based industries.

According to BiotechCorp, the BTP also aims to "promote a knowledge-based bioeconomy through the establishment of a sustainable ecosystem of research and development (R&D) and commercialisation in the areas of agriculture, healthcare and industrial biotechnology".

"In Asia, we are the second country after China to have announced a bioeconomy initiative. Among the Asean countries, we are the first to do so.

"Even the United States has only just announced their National Bioeconomy blueprint last April," says Zurina Che Dir, senior vice-president of BiotechCorp's Bioeconomy Development Division.

When it was first launched, the BTP had set a target to increase Malaysia's gross national income (GNI) by RM3.6bil by 2020, attract investments of about RM10bil, while creating 16,300 jobs opportunities.

This would be achieved via its 10 Entry Point Projects (EPPs) - Bio-based Farm Inputs, High Value Bioingredients, High Value Food Varieties, Biosimilars, Drug Discovery and Preclinical Services, Molecular Screening and Diagnostics, Stem Cells and Regenerative Medicine, Industrial Bio Inputs, Bio-based Chemicals, and Biomaterials.

These 10 EPPs kicked off 20 trigger projects.

A year on, Zurina says BiotechCorp has an additional 13 trigger projects in the pipeline.

"Our new target is to increase Malaysia's GNI by RM43bil, draw in investments of RM15bil and to create 160,000 job opportunities," she says.

Currently, she says, participation is slightly skewed towards the AgBiotech (agriculture) and BioIndustrial (industrial) sectors.

"We need more participation for the BioMedical (healthcare) sector," says Zurina.

How do these projects work?

Among the on-going trigger projects are the stevia trigger project, mushroom project, mangosteen project, and insects as a sustainable protein source.

"Take the stevia project, for example. The biotech company works with the Rural Development Corporation (KPD), who will identify farmers who are able to plant the stevia plants.

"These farmers will be provided with the seeds so that they can plant the raw material, which will be sold back to the company. The company will then use the extract to turn it into an alternative sweetener to sugar. This is the crux of bioeconomy – to convert biological resources into a higher value product," she explains.

How will this benefit the public?

"If you look at the healthcare sector, for the EPP on Biosimilars, this project will enable drugs to be produced at 40% cheaper than that of innovative drugs. Lower prices mean more people can have access to these drugs.

"As for Molecular Screening and Diagnostics, it will be able to provide early detection for non-communicable diseases. All these will contribute to reducing the healthcare cost for the public," she says.

So how can a company be a part of the BTP?

"Interested parties can fill in the application form available on our website (*http://www.bioeconomy.my*). We will then evaluate if the project is within the parameters and definition of bioeconomy. If we are satisfied, we will then contact the company involved to provide us with their project template, as well as how their proposal will contribute significantly to the Malaysian economy.

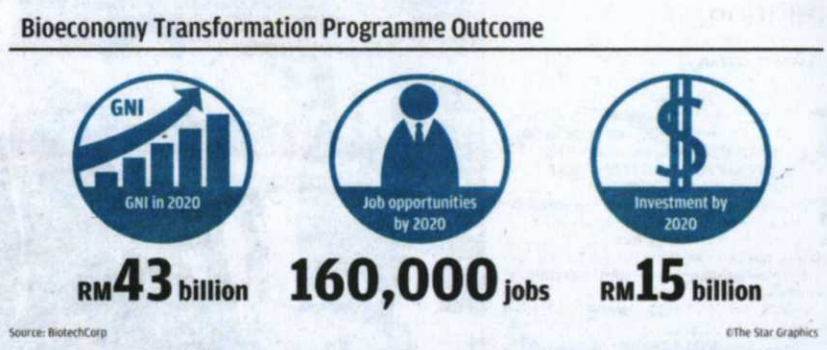
"Once we are satisfied, there will be a site visit. If everything is in order, we will submit the application to the BTP Technical Working Committee, who will then make the recommendation to the Steering Committee for approval and acceptance to the BTP," Zurina explains.

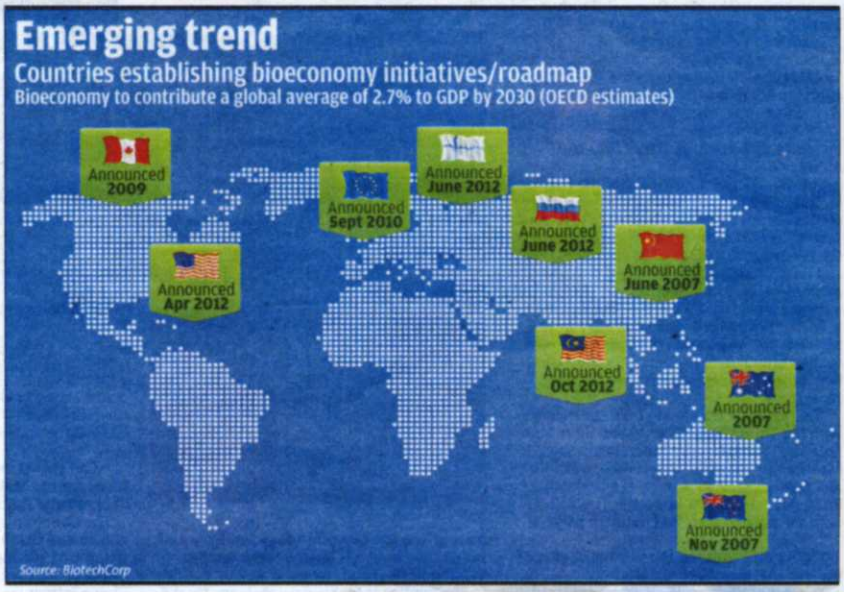
Alternatively, interested parties can also contact BiotechCorp directly for more information.

One of the benefits of being a part of the BTP is that the respective companies will gain endorsement from the Government, she says.

The Prime Minister has also just recently announced an allocation of RM85mil for the BTP fund for the period of 2013 to 2015.

"However, companies have to realise that the Government can only fund as much as 10% for the projects. The private companies will have to fund the other 90%... the projects have to be driven by the private sector," she says.





KERATAN AKHBAR
SUNDAY STAR (FOKUS) : MUKA SURAT 28
TARIKH : 20 OKTOBER 2013 (AHAD)

Accelerating bioeconomy Malaysia

It is all systems go for Malaysia's biotech ambition.

By HARIATI AZIZAN
sunday@thestar.com.my

THE recent Biotechnology International Advisory Panel (Bio-IAP) meeting in San Francisco affirmed bioeconomy's key role in Malaysia's aspiration of becoming a high-income developed nation by 2020.

The Malaysian Biotechnology Corporation (BiotechCorp), the agency tasked with driving biotechnology forward in Malaysia, has been working hard to turn it into a game-changing engine for the country's economy.

Given the right focus and strategy, the Bioeconomy Transformation Programme (BTP) will catapult the bioeconomy contribution to Malaysia's Gross Domestic Product from 2% - 3% currently to 8% -10% by 2020.

Sunday Star did an interview with BiotechCorp Chief Executive Officer Datuk Dr Mohd Nazlee Kamal, who talked about their efforts to accelerate its implementation.

Meeting of experts: BiotechCorp CEO Datuk Dr Mohd Nazlee Kamal with biotech experts at the Bio-IAP meeting in San Francisco recently.

> What is the Biotechnology International Advisory Panel (Bio-IAP) meeting?

The Bio-IAP was formed out of the National Biotechnology Policy (NBP) launched in May 2005. Comprising biotechnology experts, academics and experienced industry players, the advisory panel's role is to advise Malaysia and help shape the direction and development of its biotechnology sector. The Bio-IAP meeting is held to discuss the development of Malaysia's biotechnology industry from research & development (R&D) initiatives, human capital development, commercialisation, business development to its funding ecosystem.

This year, we decided to hold the meeting with the Third Global Science and Innovation Advisory Council (GSIAC) meeting in San Francisco to converge government officials and related agencies as well as the very busy Prime Minister Datuk Seri Najib Tun Razak with the right experts and industry players.

> What are some of the key highlights of the Bio-IAP meeting?

The gist of the meeting was the current outlook of the industry and the development worldwide, and how Malaysia is shaping up in the bio-based industry and should move forward. That covers R&D, financial and the issue of socio-economic development - how bio-based economy can close the socio-economic gap between the rural and urban folks. One of the things that we mutually agreed on was the need to have access to global innovation and capital along the entire value chain. It is important to have the support of private investments, and to achieve that we need to have in place strong financial structures, policies, regulations and incentives.

This meeting was also the first time we launched our bioeconomy agenda or the Bioeconomy Transformation Programme (BTP), which is basically an extension of the BNP but with more focus and a stronger direction. We know the bio-based industry is going to be an important pillar in our economic development but we need to change the current conventional bio-based industry from commodity to higher value products.

If we want to be a developed nation by 2020, the bio-based industry today must step up to the changes and development in technology and innovation to drive the bio-based industry forward. So, the discussion at the IAP meeting revolved basically on how we can mobilise it and accelerate the bioeconomy.

> The PM announced a US$27mil (RM85mil) allocation at the meeting to strengthen the biotechnology industry and boost the country's bioeconomy further. What will the funds be used for?

The funding is for convertible loans for the development of bio-economy projects. The fund will also be used for commercialisation activities in the implementation of the BTP.

> One of the initiatives to propel the BTP is the Bioeconomy Accelerator Programme. Can you tell us what the programme is and why we need it?

With around seven years to go to 2020, we have made good progress in achieving the investment target. We have achieved around RM13.8bil to date and passed the five-year target of RM9bil investment. The number of jobs created has also surpassed our five-year target of 80,000 as we have created close to 85,000 jobs in biotechnology.

The only aspect that we might see lagging is revenue generation. So how can we close the gap?

Our revenue target is RM17bil by 2015 but we may see a lag in the revenue because the investment today can only start generating revenue in three years.

Due to the possible lag, our revenue target can only be achieved in 2018, and that's why we wanted an acceleration programme to boost revenue generation and achieve it by 2015 and be on track for our 2020 target.

BiotechCorp has identified four flagship agendas under the Bioeconomy Malaysia Accelerator Programme that will be given priority to drive the success of Bioeconomy Malaysia. These are the Community Development Programme, Technology Development and Innovation, Bio-Entrepreneurship Programme and BioNexus Go Global.

The Bioeconomy Malaysia Accelerator Programme links stakeholders from the Economic Corridors, universities, research institutions, finance institutions and ministries to ensure the efforts undertaken are comprehensive, deliver a multiplier effect on the economy and have a positive impact on the income and welfare of the people.

> Can you elaborate more on the Bioeconomy Malaysia Accelerator Programme flagship agendas?

The Community Development Programme will ensure that technology reaches the community, for example farmers - so that they can get better strains of certain plants and improve their yield and consequently their income. We are also looking at contract farming for farmers to supply raw materials to big companies and finding new business models such as setting up farmer cooperatives to cut out the middleman and increase their income.

Technology Development and Innovation is leveraging on foreign technology and locally developed technology to bridge the gap and give us a more level playing field. We can't rely on organic products alone, we need to incorporate the latest technology in our work. The Prime Minister also wants technology and innovation to be part of a company's DNA so we are looking at the possible incentives for companies to reinvest a portion of their revenue into their R&D.

The Bio-Entrepreneurship Programme is something we are doing with the California Institute for Quantitative Biosciences (QB3). During the Bio-IAP meeting, the PM launched the QB3-Malaysia Programme, which saw the establishment of the Malaysian Space in QB3, making San Francisco a satellite for Malaysia in the US.

The satellite programme will allow Malaysia to collaborate and tap into the vast experience, knowledge and innovation of the San Francisco BioInnovation Ecosystem, which will subsequently accelerate the technology development and know-how of Malaysian companies.

Through this programme, Malaysian bio-entrepreneurs will also have direct access to international funding, partnerships and gain a solid foothold to enter the US market, enabling them to translate discovery into positive economic contribution.

Bionexus Go Global is for our companies to start thinking about going global and making market access an important strategy. We have been going overseas to showcase local biotech products and by 2016, more companies need to expand into regional and global markets to increase their revenue. Currently there are 225 BioNexus Status companies.

We hope that all these four programmes can be implemented by 2014 to reduce the lag time of generating revenue and accelerate our bioeconomic achievements.

> What other collaborations were formed at the Bio-IAP meeting?

The PM also witnessed the exchange of collaboration between BiotechCorp and Michigan State University to strengthen and support the US-Malaysia Bioeconomy business and research communities.

The collaborative arrangement will provide opportunities for local universities to share existing know-how and tap innovation potential for the development of new bio-based products, processes and technologies.

The collaboration will support and encourage the utilisation of Malaysian-based feedstock in bio-industrial processes, while building the human capital for the US-Malaysia bio-based business and research communities.

> Can you give an example of the high value products that Malaysia bioeconomy wants to explore?

One is the product of Verdezyne, a leading biochemical producer that has successfully created the first renewable nylon fibre. Their bio-based diacid chemical product from non-food, vegetable oil-derived feedstock has high potential growth and multiple added values to Malaysia's palm oil sector and biochemical market as a whole. It will create a multiplier effect where the raw material can be used to create various products that can be commercialised into the market.

With Verdezyne, Malaysia will house its first bio-based chemical production facility in Asia Pacific. It is an example of BiotechCorp's

> SEE NEXT PAGE

SAMBUNGAN...
SUNDAY STAR (FOKUS) : MUKA SURAT 29
TARIKH : 20 OKTOBER 2013 (AHAD)

Clinching the deal: (From left): BiotechCorp CEO Datuk Dr. Mohd Nazlee Kamal, Science, Technology and Innovation Minister Datuk Dr. Ewon Ebin, BiotechCorp chairman Professor Emeritus Datuk Seri Dr Zakri Abdul Hamid and Datuk Seri Najib Tun Razak with Verdezyne president and CEO Dr. E. William Radany at the Bio-IAP meeting in San Francisco recently.

Exposing the young to new technologies

> FROM PREVIOUS PAGE

strategy to demonstrate the fine balance between bringing in foreign direct investment and creating world-class, innovative local companies.

> What are the new products or research that we can look forward to?

A local company is working on the Stevia crop, which is becoming popular as a sweetener or sugar alternative globally. It has the potential of becoming an important crop and our climate seems to be suitable for it. Through genome editing and traits technology, this Malaysian company is working to enhance the sweetness of the crop and get higher quality products.

Another R&D project is on disease-resistant gene for bananas and papayas without making them genetically modified organisms. The improved strain will move the crop production to another level.

> What is the challenge for our biotechnology companies now?

Commercialisation - to make business out of our science. For this, we need to get corporate Malaysia to take the risk to invest in local biotech products. Unfortunately, many of our corporate Malaysia players do not know the market potential of our new biotech products.

> Do we have enough trained graduates to meet the needs of bioeconomy?

It's all about exposure. The Bio-Entrepreneurship programme hopes to expose as many Malaysians as possible to the biotech industry in San Francisco, which is the birthplace of modern biotech. Now, there are even start-up companies there bridging IT and biotech.

It's a strategy used by the South Koreans who have satellite offices around the world to expose their young to new technologies and innovations.

After San Francisco, we hope to set up satellite officers in other countries. Malaysia's advantage is that we are rich in natural resources and traditionally an agriculture-based country, and we are working towards merging the two for our bioeconomy future.

> What other segments and niche areas in the biotech industry have the best opportunities for growth and development in Malaysia?

We need to get corporate Malaysia to take the risk to invest in local biotech products.

– DR MOHD NAZLEE

Nutra-pharmaceutical is an interesting focus area with a big growth potential. The use of raw material to a high value product such as the utilisation of oil palm will be another focus as well as R&D to create a higher yield for existing crops.

One crop we are interested in now is *Camelina Sativa* for biojet fuel. We will be working with Mardi and Airbus next year. It is an interesting crop that can grow within 60 to 90 days, while its waste material can be used for animal feed.

And the plant is also good for the soil, producing nitrogen to enrich it. That is why in some parts of the world, they are growing it in between rice seasons to supplement the rice farmers' income while increasing the country's food production.

> What do you hope to achieve with the coming BioMalaysia and Bioeconomy Asia Pacific Conference and Expo?

The BioMalaysia and Bioeconomy Asia Pacific Conference and Expo is BiotechCorp's first regional bioeconomy conference and we hope to create a platform for the Asia Pacific region to converge to discuss bioeconomy and build a synergy for further collaborations in the field. Potentially, local companies can promote their products and technology while networking with the biotech industry leaders and stakeholders as well as find out more about the new technologies of the field and secure some investment.

Malaysia aspires be a regional leader in bioeconomy and we hope this conference will put Malaysia on the map.