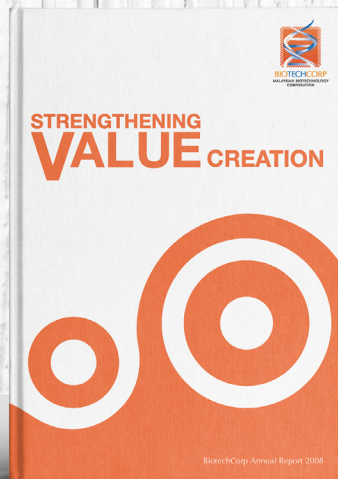


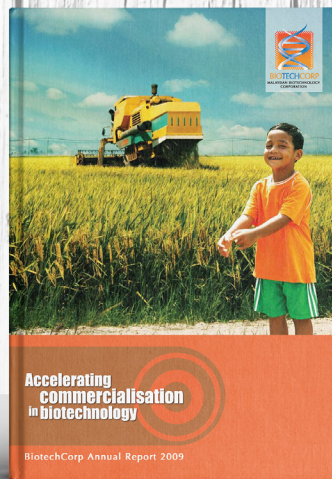
Bioeconomy Corporation 2018-2020 in Review



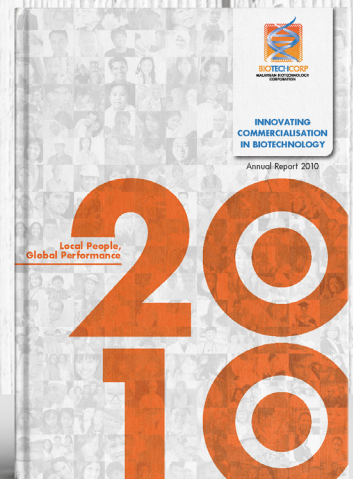
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2008



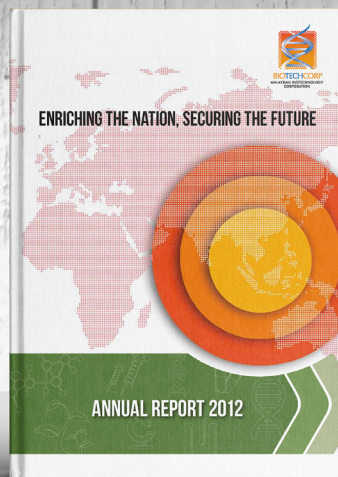
2009



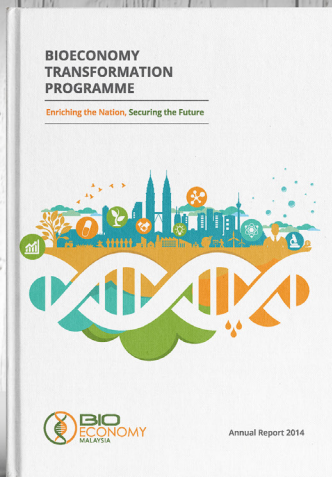
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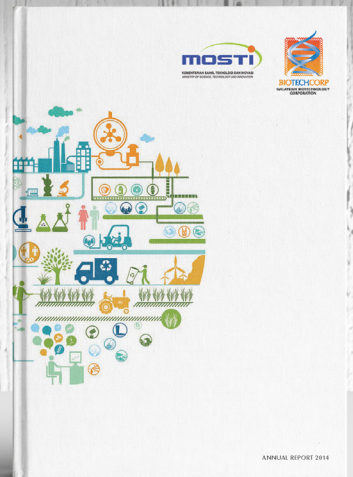
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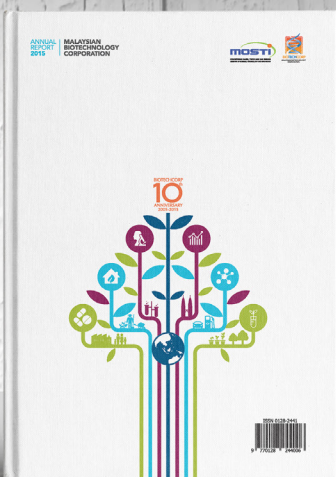
2012



2014



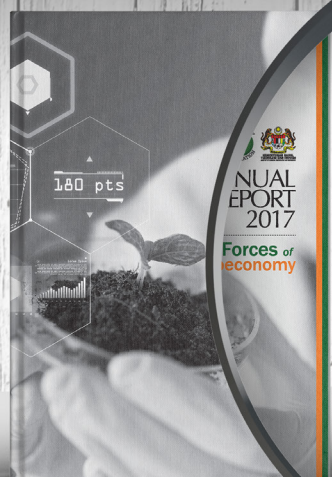
2014



2015



2016-17



2017



2018-20

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Biotechnology on the Global Landscape

Biotechnology has experienced phenomenal growth rates in the past few years across the globe; a trend further punctuated by the COVID-19 pandemic.

Drug development and supporting biotechnology services boomed as the race to create diagnostics, therapeutics, and vaccines became a top priority and ray of light for nations worldwide. Fueled by investments in biotechnology from government and private sectors alike, vaccines have rolled out in record time across the globe.

During the process of rebuilding and healing from the pandemic, the world at large has become much more aware of the importance and potential of biotechnology. As new discoveries scratch the surface of what's possible, two certainties are evident.

The first is that today's successes in biotechnology would not have been possible without the strong foundation built by past biotechnology investments, research, programmes, and initiatives. Without question, the seeds planted yesterday have become the fruits we benefit from today.

“The seeds planted yesterday become the fruits of today; the seeds planted today become the hope of tomorrow.”

The second certainty is that the efforts to invest, develop, and accelerate the fields of biotechnology must not stop, for the seeds we plant today will become the hope of tomorrow.

A person wearing glasses and a dark sweater is standing in a server room, leaning over a blue rolling cart and working on a laptop. The room is filled with rows of server racks, and the floor has a pattern of dark and light squares. The lighting is cool and blue-toned.

Accelerating in the Fourth Industrial Revolution

The Fourth Industrial Revolution has poised biotechnology for its next transformation.

Although critical, responding to the pandemic is in actuality just a small component of how big and intertwined the role of biotechnology plays in our lives. In the larger scheme of things, as the Fourth Industrial Revolution is spurred by an estimated 50-fold growth of data between 2010 and 2020, biotechnology is poised for its next transformation.

Access to big data opens up incredible opportunities in the coming decade that could shape the global biotechnology landscape even further than we can imagine today—from pharmaceuticals to agriculture, bioinformatics, genomics, food innovations, energy and environment, and more.

Now more than ever, it's important to understand how to take advantage of these opportunities so we can plant the seeds that will shape a better future.



Propelling the Engines of Biotechnology in Malaysia

Malaysia has long recognised the promising future of biotechnology and how its biodiverse natural resources, skilled human resources, and excellent R&D infrastructure can positively contribute to the discoveries and innovations of biotechnology.

Since the 1990's, Malaysia has committed to making bioeconomy as part of its engines of economic growth. The nation's bioeconomy vision is to bring beneficial biotechnology products and services to the global landscape while propelling the country's social and economic development in pursuit of the status of a developed nation.

To achieve this vision, the government has played a significant role in establishing research and development centres, as well as providing the funding that encourages private industries to forge collaboration with the public sector.

“
Malaysia's bioeconomy propels the nation's social and economic development in pursuit of the status of a developed nation.

A key engine driving forward the innovations of biotechnology in Malaysia is the National Biotechnology Policy (NPB), which was launched in 2005 by the then Prime Minister of Malaysia, Datuk Seri Abdullah Ahmad Badawi.

National Biotechnology Policy

Malaysia's National Biotechnology Policy (NBP) intensifies the nation's transformation to a global high-income country.

The National Biotechnology Policy (NBP) was launched to develop nine thrusts, of which the first three thrusts are focused on specific applications of biotechnology in agriculture, healthcare, and industry sectors.

Malaysian Bioeconomy Development Corporation (Bioeconomy Corporation)'s industry development, support, and commercialisation projects and initiatives are focused around these three key areas, specifically to:



Transform and enhance the value creation of the agricultural sector through biotechnology.



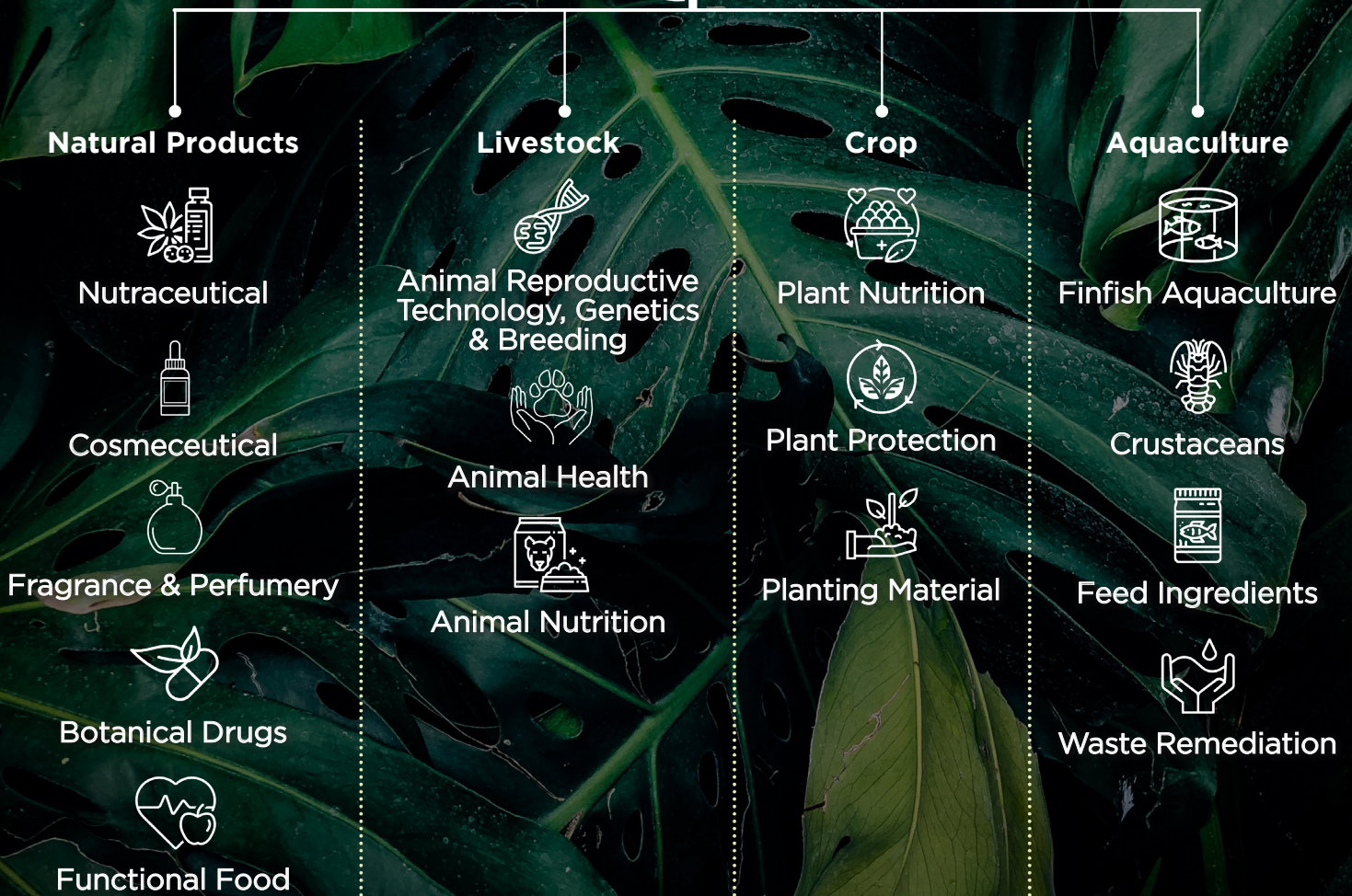
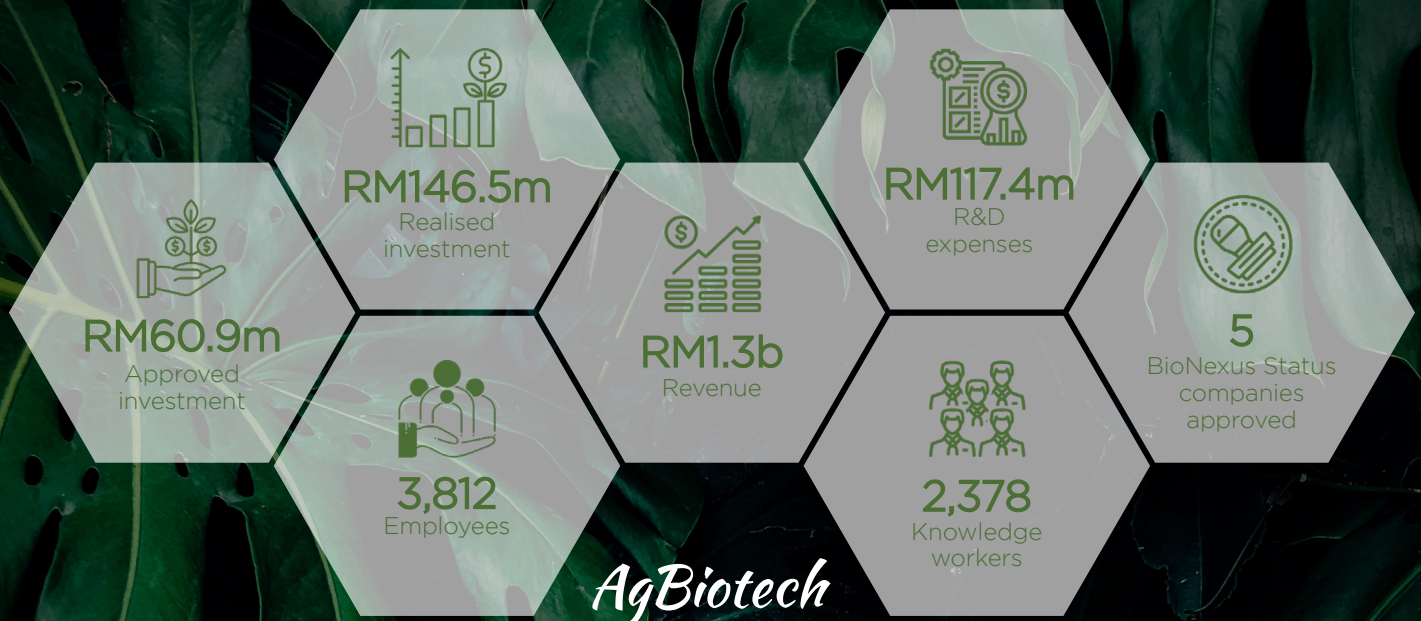
Capitalise on the strengths of biodiversity to commercialise healthcare biotechnology discoveries in natural products as well as position Malaysia in the bio-generics market.



Ensure industrial biotechnology growth opportunities in the application of advanced bioprocessing and biomanufacturing technologies.

2018-2020 Facts & Figures: AgBiotech

The AgBiotech division of Bioeconomy Corporation is designed to support the development of agriculture biotechnology.

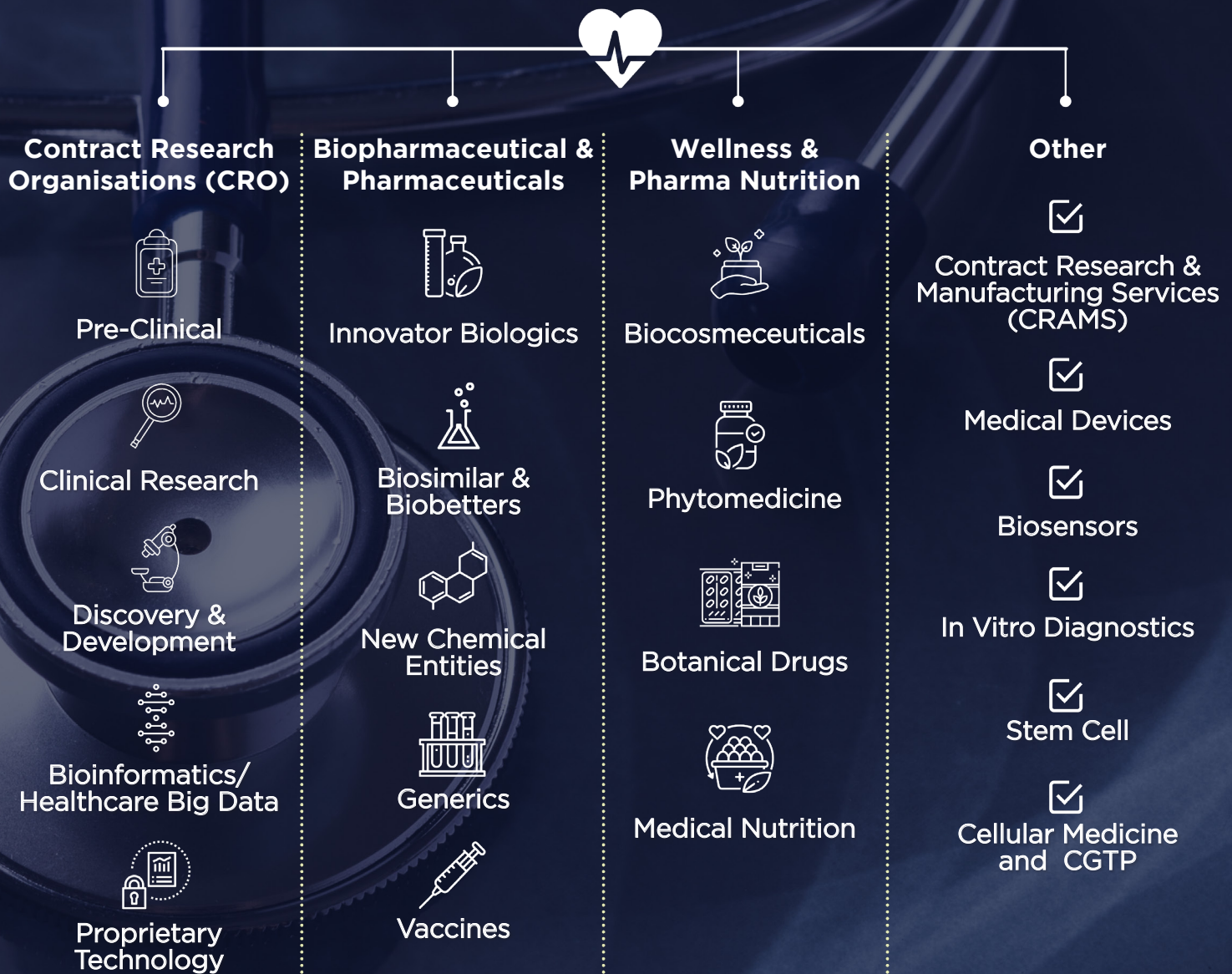


2018-2020 Facts & Figures: Healthcare Bio

The Healthcare Bio division of Bioeconomy Corporation is designed to support the development of healthcare biotechnology.

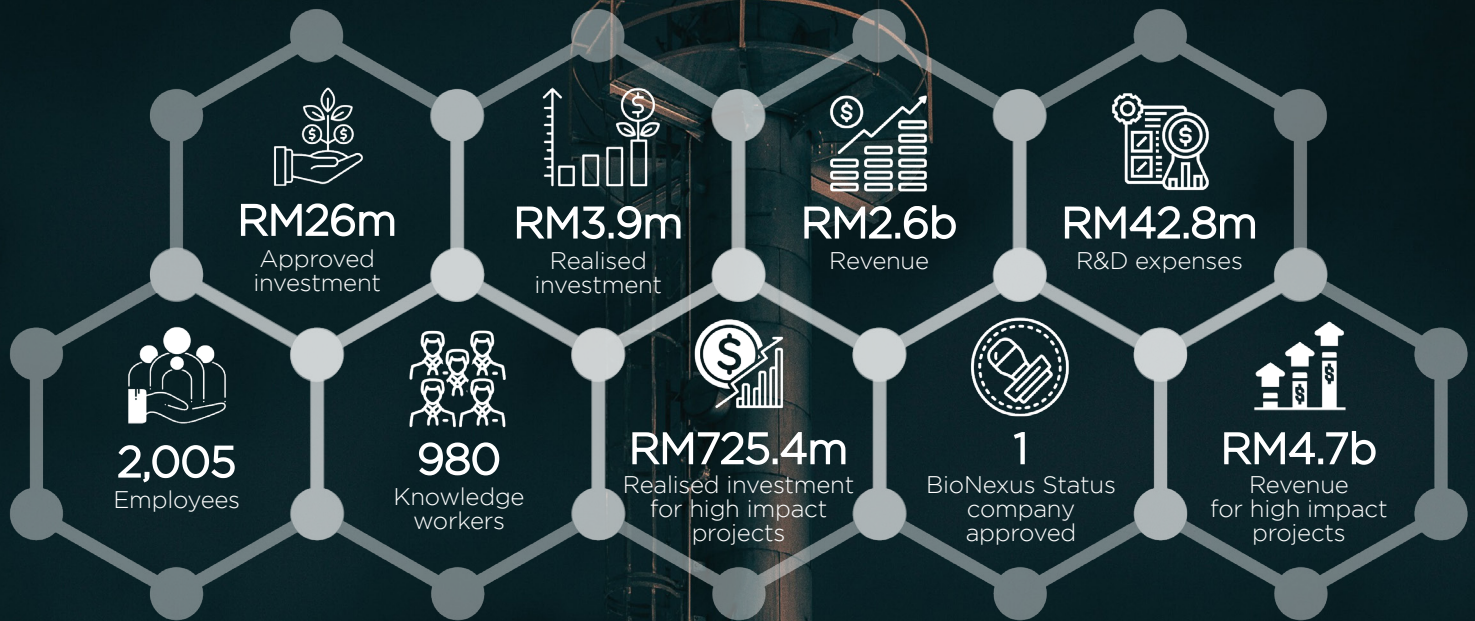


Healthcare Bio



2018-2020 Facts & Figures: BioIndustrial

The BioIndustrial division of Bioeconomy Corporation is designed to support the development of industrial biotechnology.



BioIndustrial



Biomaterials



Bioplastics



Bioadhesives



Biofibres



Biocomposites

Biogas & its Derivatives



Biochemicals



Oleochemicals



Feed Additives



Biohydrogen



Bio-dimethyl Ether

Fine, Bulk & Specialty Chemicals



Bioapplication



Bioremediation



Bioadhesives



Biocatalyst

2018-2020 Facts & Figures: Summary



08

BioNexus Status
companies approved



RM138.4m

Approved investment



RM4.4b

Revenue



RM203.2m

Realised investment



RM220.3m

R&D expenses



RM5.2b

Revenue for high impact
projects



8,286

Employees



RM855.4m

Realised investment for high
impact projects



5,163

Knowledge
workers

From 2018-2020, AgBiotech, Healthcare Bio, and BioIndustrial divisions of Bioeconomy Corporation contributed a total of RM9.6 billion in revenue to the nation's GDP, fulfilling the NBP's vision of supporting Malaysia's transformation to a global high-income country.

The initiatives also created over 13,000 new jobs in the biotechnology industry. With over RM1 billion realised investment for upcoming projects, including for high impact projects, the prospects for continued GDP contribution, employment opportunities, and industry impact remain strong and reliable.



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Bioeconomy Corporation: Industry Development

Ensuring a sustainable and prosperous future by building industries.

Effective industry development is essential to competitiveness as well as sustainable economic growth. Industries lay down the foundations of the economy, provide employment opportunities, and increase the standard of living for the people of a nation.

Developing industries is not a straightforward endeavour as industries are always evolving. To be effective and remain competitive, it's critical to keep up with the pace of technological change and shifting business environments.

With a mission to support the nation's vision of becoming a developed nation, Bioeconomy Corporation's projects strive to provide support, guidance, training, and resources to companies shaping Malaysia's biotechnology landscape.

From 2018-2020, Bioeconomy Corporation has spearheaded key projects under the NBP's three economic sectors of focus: AgBiotech, Healthcare Bio, and BioIndustrial.



Industry Overview

AgBiotech

Agricultural biotechnology, also known as AgBiotech, is a collection of scientific tools and techniques used to improve plants, animals, and microorganisms. Some of the multiple approaches used to achieve this include genetic engineering, molecular markers, molecular diagnostics, vaccines, and tissue culture.

Over the last 20 years, there has been a significant increase in how biotechnologies have been applied to many aspects of crop biotechnology, aquaculture, and livestock with increasing frequency and impact.



Some of the applications include improving the quality, quantity, or nutritional value of food, optimising seed cultivation, enhancing the breeding, rearing and harvesting of marine life, and livestock improvement through reproductive technology, animal health, and animal nutrition.

The application of biotechnology is not just limited to foods. Biotechnology has also created industry growth for natural products derived from food sources, plants, substances, and compounds for nutraceuticals, cosmeceuticals, fragrance and perfumery, botanical drugs, and functional foods.

Improving our agro-food industry across the value chain to become more productive, competitive, and knowledge-intensive will hold immense commercial value and industrial growth for the future. Yet this does not have to come at the expense of our planet.

Since the ever-evolving technical approaches in biological management can make our agriculture industry more efficient, it gives rise to the potential to reverse the deforestation that causes climate change and reduce many other ecological problems.





Healthcare Bio

Healthcare biotechnology, also known as Healthcare Bio, relates to the application of biotechnology for medicine and health. Examples include new therapies based on the understanding of root causes of illnesses and disease, and diagnosis and personalised treatments based on knowledge of an individual's genetic predisposition.

Since the outbreak of COVID-19 at the end of 2019, Healthcare Bio has been getting more mainstream awareness, attention, and investments for the pursuit of developing vaccines and treatments.

While many people are aware that biotech is driving the medical revolution, not as many have a grasp on the broader impact that it will have on our lives—both in the near term and over the coming years. As biotech increasingly becomes part of our everyday lives, it also becomes a critical part of Malaysia's economy.

Healthcare Bio supports various industrial branches contributing to the nation's economy, including Contract Research Organisations (CRO), Contract Research and Manufacturing Services (CRAMS), biopharmaceuticals, pharmaceuticals, medical devices, biosensors, in vitro diagnostics, stem cell, cellular medicine, cellular and gene therapy products (CGTP), biocosmeceuticals, wellness, and pharma nutrition.

BioIndustrial

Industrial biotechnology, also known as BioIndustrial, uses microorganisms and enzymes to produce goods for industries. These industrial goods include chemicals, plastics, food, agricultural and pharmaceutical products, and energy carriers. Renewable raw materials, and increasingly also waste from agriculture and municipal waste, are used for the manufacture of industrial goods.

The application of industrial biotechnology has a tremendous impact on every industry across the board. It will affect how we get food, clothing, electronics, and even how we get our energy. Industrial biotechnology paves the way for new products, new materials and new ways to do things that have never been done before.

In Malaysia, the key focus areas of BioIndustrial include biomaterials, biogas and its derivatives, fine, bulk and specialty chemicals, and other sub-sectors such as bioremediation and biocatalysts.





Bio-based materials such as bioplastics, bioadhesives, biofibres, and biocomposites are making a huge impact in many industries. Bioplastics stand out to be the utmost prolific in terms of technology and market demand for environmentally-friendly alternatives to packaging.

When it comes to biogas and its derivatives, Malaysia stands to take advantage of waste produced from agriculture and palm oil processes, opening numerous opportunities for the production of diverse products like biochemical, oleochemicals, feed additives, biohydrogen, and bio-dimethyl ether.

Finally, bio-based chemical, bioremediation, and biocatalysts are being used as active pharmaceutical ingredients, speciality chemicals for technical applications, biocides, and optimisation of chemical reactions. The trend of biocatalytic processes replacing chemical processes can be seen across many global industries, including starch processing, biofuel production, detergents, food and beverage, and pharmaceuticals.



Key Projects 2018-2020

This section will recap how Bioeconomy Corporation worked with numerous companies to develop the current and future potential of AgBiotech, BioIndustrial, and Healthcare Bio through numerous key projects that have contributed to the nation's industrial development.

Scaling, Investment & Employment

Supporting a company's growth to scale—from the initial phases of construction through to the later stages of operation, expansion, innovation, and commercialisation—is critical to developing key industries as it allows businesses to gain ROI from their R&D efforts while providing numerous benefits to the community at large.

From 2018-2020, Bioeconomy Corporation helped to lead Malaysia's impact across numerous fields of biotechnology through supporting the scaling activities of:

5
AgBiotech
companies

2
Healthcare Bio
companies

2
BioIndustrial
companies

In supporting these companies to scale, a total of RM1.34 billion were raised in investments which contributed to employment opportunities for the community.

AgBiotech:

Scaling, Investment & Employment Impact 2018-2020

Companies Supported

- Relivium Sciences Sdn Bhd
- Biothik Sdn Bhd
- Unique Biotech Sdn Bhd
- Gain Green Development Sdn Bhd

Operation & Commercialisation

- Plant extract-based products for pain management, hair management, skincare, and pet care.
- Insect-based products and their by-products.
- Tissue culture techniques of timber species for R&D.

Commercialisation

- Feed ingredients and organic fertilisers transformed from agriculture and confectionary waste.

Company Supported

- Nutrition Technology Sdn Bhd



Total Investments
RM53.34 million



Community Benefit
Employment (including
knowledge workers)

Healthcare Bio:

Scaling, Investment & Employment Impact 2018-2020

Companies Supported

- Medical Innovation Ventures Sdn Bhd
- ADT Biotech Sdn Bhd
- Novocraft Technologies Sdn Bhd

Innovations to Fight “Covid-19” Virus

- 100% concordance for GenoAmp®, a COVID-19 PCR test kit, in the External Quality Assessment (EQA)/Proficiency Testing (PT) from the UK.
- Regulatory approval for LyteStar 2019-nCoV RT-PCR Kit in India.
- Provided the National Institute of Biotechnology Malaysia (NIBM) the company's proprietary software and an analysis platform in bioinformatics to be used for analysing SARS-CoV-2 virus genome sequencing data from local samples.

Operation & Commercialisation

- Commercialisation of assisted reproductive technologies (ART) and infertility treatment procedures and services.
- Commercialisation of cell lines, cell culture reagents and derivatives, natural compounds, as well as laboratory testing and validation.

Companies Supported

- IVF Nexus Sdn Bhd
- Cytonex Sdn Bhd



Total Investments
RM61.95
million



Community Benefit
Employment
(including knowledge
workers)

BioIndustrial:

Scaling, Investment &
Employment Impact
2018-2020



Total Investments
RM1.23 billion



Additional
Revenue Generation
RM1.5 billion
and upwards



Community Benefit
Up to 2,500 job
opportunities and
employment for
knowledge workers



Company
Supported
CJ-Arkema



Expansion

Expanding their facility
to double the current
production capacity of
bio-methionine.



Company
Supported
Kulim Green
Energy Sdn Bhd



Construction

Biogas capturing
activities.





Business Development

Business development creates sustainable competitive advantage and value creation for an organisation, which in turn collectively leads a country to gain economic growth.

To support Malaysia's economic expansion in the biotechnology landscape, Bioeconomy Corporation led or were involved with several key projects that create public awareness and business development opportunities in AgBiotech, BioIndustrial, and Healthcare Bio.

These initiatives engage stakeholders and participating parties at targeted events and conferences, paving the way to identify companies or projects with the potential to develop business with and commercialise.

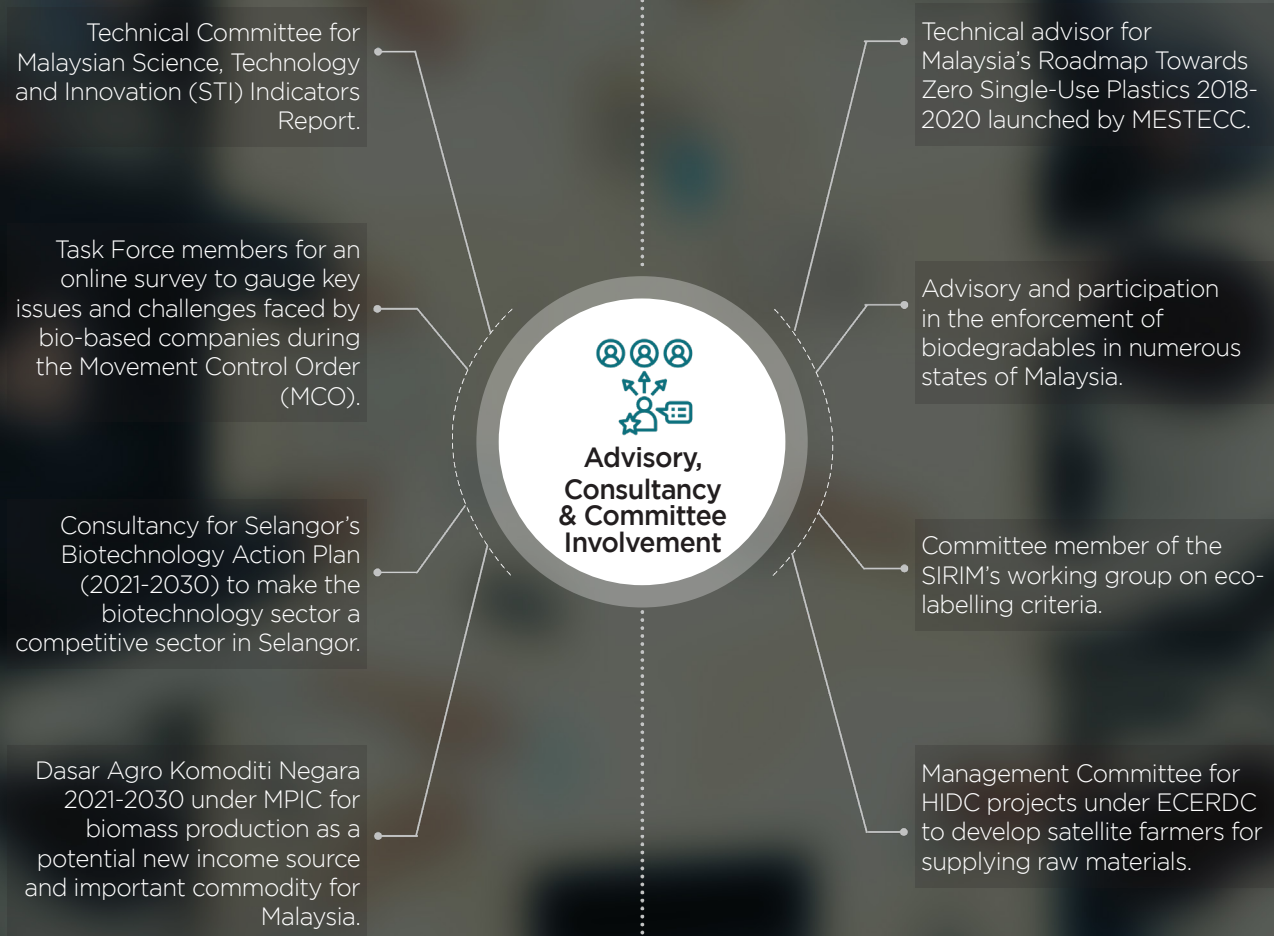
Policies & Education

Policies guide an industry's development while education raises public awareness and demand for biotechnology products and upskilling of talent needed for production, innovation, and growth. Both of these activities go hand-in-hand with business development initiatives to meet the growing needs of an expanding organisation and developing industry at large.

From 2018-2020, Bioeconomy Corporation focused on numerous local programmes and international events that nurtured and promoted awareness for upskilling opportunities.

Business Development, Policies & Education Impact 2018-2020





Bio Asia-Taiwan 2019 and 2020 Conference and Exhibition in Taipei, which facilitated communication between Matrade/MIDA and two companies expanding their market access in Taiwan.

Green World Genetics Batu Arang Field Day organised by Green World Genetics, a local BioNexus Status company, to launch a new variety of seeds.

2019 Malaysia-Taiwan Industrial Collaboration Summit: Introduce investment opportunities in Malaysia as well as one-on-one business matching.

2020 Malaysia-Taiwan Industrial Collaboration Summit: Showcasing Malaysia's biotechnology sector and market opportunities.

Healthcare Supply Chain: Reboot and Rebuild, 3-4 December 2020, where BioNexus Status companies introduced their products to investors/partners and expanded their network with Taiwan companies and global buyers.



Events & Seminars

Urban Grocer: Promoting and selling fresh agricultural products sourced from local organic farmers and BioNexus Status companies in urban office spaces and outlets.

Parents' Day Carnival—Love in Caring Hands: Enhance parent-children relationship and interaction via science activities that raise biotechnology awareness.

Co-organised the Seminar on Developing the Bioplastics Industry in Malaysia with MPC and MESTECC, held on 26 November 2019.

Taiwan Healthcare + Expo 2018 conference and exhibition that showcased advancements in Healthcare Bio and initiated business and market access between Taiwan and Malaysia.





















International Conference on Plastics in the Marine Environment, Singapore, 5-7 December 2018 that opened the potential for Malaysia to partake in Plastics R&D Framework and collaborate between local institutes of higher learning.

Bioeconomy Transformation Programme (BTP)

Maximising commercial opportunities in the bio-based industry.

The Bioeconomy Transformation Programme (BTP) was launched in 2012 as a platform for the private sector to maximise commercial opportunities in the bio-based industry. Since 2012, Bioeconomy Corporation has continuously facilitated, supported, and created visibility for all BTP Trigger Projects with the goal of creating a pool of bio-based businesses in Malaysia.

From 2018-2020, key BTP projects carried out have contributed to the value chain that supports the commercialisation of R&D in bio-based industries. Bioeconomy Corporation's role from 2018 onwards has been to monitor these existing BTP projects focusing on the following six BTP Fund Recipients' disbursement and repayment activities.

BTP Fund Recipients: 2018-2020			
AgBiotech		BioIndustrial	
Bee Farming, Processing of Honey & By-products and Training on Bee Handling	Biogas Power Generation Plant	Biogas Power Generation Plant	
 Objective: Commercialisation	 Model: Feed-in-Tariff	 Model: Feed-in-Tariff	
 Completion status: 100%	 Location: FELCRA Mills	 Location: Felda Kahang	
	 Objective: Setting up	 Objective: Setting up	
	 Completion status: 78%	 Completion status: 100%	
	Biogas Power Generation Plant	Rice Husk and Woodchip Biomass Power Generation Plant	
	 Model: Feed-in-Tariff	 Location: Naka, Kedah	
	 Location: FELCRA Palm Oil Mills	 Objective: Setting up	
	 Objective: Setting up	 Completion status: 87%	
	 Completion status: 100%		
	 Operation status: 100%	cGMP Stearic Acid and Medium Chain Triglycerides (MCT) Powder Plants	
		 Objective: Phase 1 expansion	
		 Completion status: 100%	

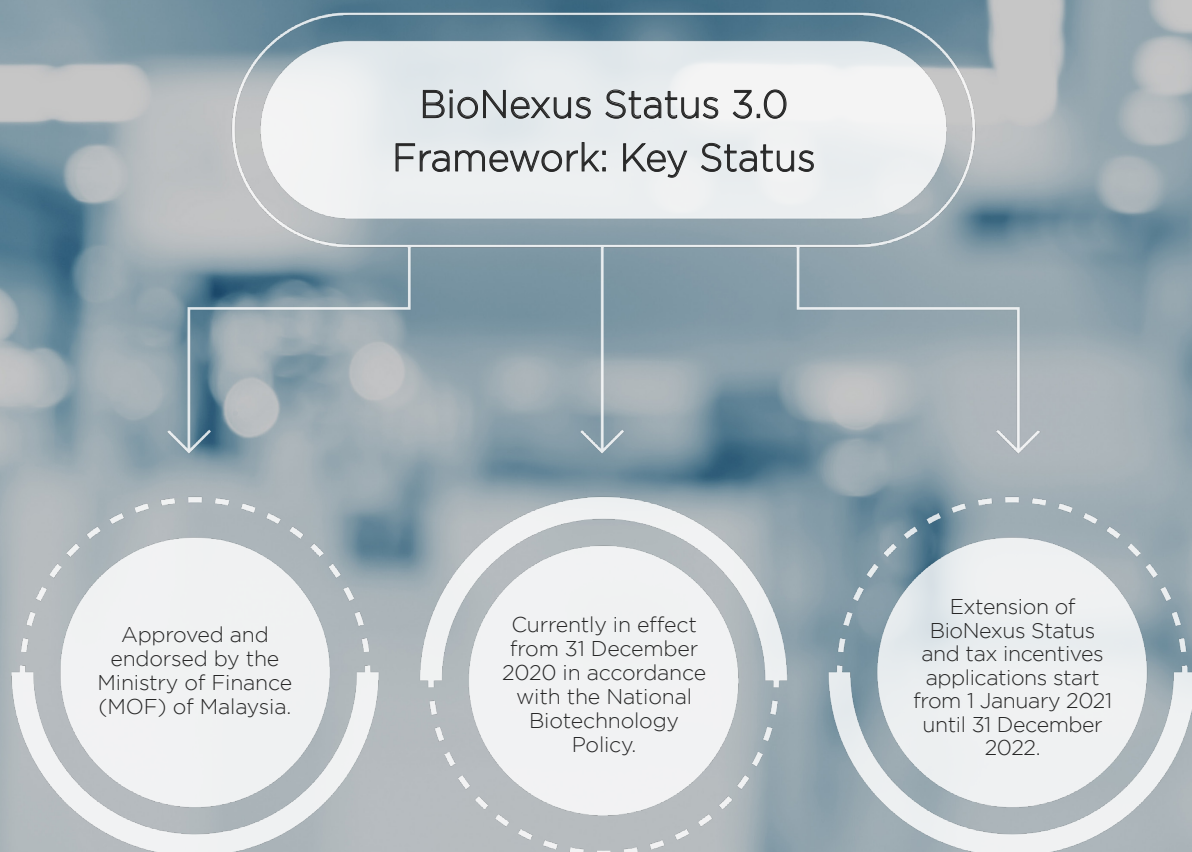
BioNexus Status 3.0 Framework

Compliance with the BEPS Action Plan requirement.

BioNexus is a special status awarded to qualified international and Malaysian biotechnology companies. Managed by Bioeconomy Corporation, the status bestows fiscal incentives, grants, and other guarantees to assist the company's growth, which in turn accelerates the development of biotechnology and bio-based industries in Malaysia.

With Malaysia's commitment to implement and adhere to the Base Erosion and Profit Shifting (BEPS) Action Plan under the Organisation of Economic Corporation and Development, new tax incentives legislation were introduced.

Consequently, affected incentives under the BioNexus Status were revised, leading to the development of a new BioNexus Status 3.0 Framework which complies with the BEPS Action Plan requirement.



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37 Immigration Services: Key Achievements 2018-2020

Platform Technologies

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41 SFE Platform Technologies Key Achievements 2018-2020

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Regulatory & IP Key Achievements 2018-2020

44 ↻ Products & Services Regulatory Landscape: Active Engagement

45 ↻ Products & Services Regulatory Landscape: Education

45 ↻ Products & Services Regulatory Landscape: ASEAN Standards

46 ↻ Intellectual Property (IP)

46 ↻ Biosafety

47 ↻ Accreditation

Technology Solution Department & Development

Enablement Department

48 Forging Paths to Commercialisation

48 Industry Support Programmes

TSD/DED Key Achievements 2018-2020:

49 ↻ Commercialisation of R&D

51 ↻ Halal Certification

53 ↻ Lab-Testing Services



Bioeconomy Corporation: Industry Support

Developmental programmes designed to champion innovation.

Since the mid-20th century, Malaysia has been able to achieve greater economic output through innovations and commercial applications of biotechnology and life sciences.

In order to remain competitive in bioeconomy on the global stage, constant innovation is key. Without innovation, it's easy for Malaysian companies to lose their value and competitive edge since biotechnology research and development is developing at a fast pace.

As part of the effort to enable an innovative Malaysian bioeconomy that leads to the creation of value, jobs, and economic growth, Bioeconomy Corporation provides industry support programmes in tandem with industry development initiatives.

From 2018-2020, Bioeconomy Corporation has executed various industry support programmes, which are designed to create environments that facilitate innovation via developing talent and human resources, providing access to innovative technology, and forging paths to commercialisation.

These industry support programmes have been spearheaded by various departments within Bioeconomy Corporation, namely BioAcademy, Immigration Services, and Development Enablement Department, as well as various platform technology initiatives.

BioAcademy

Developing talent and a skilled local workforce.

Since biotechnology is a diverse sector, there will always be a need for skilled knowledge workers in the local workforce that can help drive the industry forward.

Through the establishment of BioAcademy, a premier facilitator for talent nurturing and development within the industry, Bioeconomy Corporation aims to create a highly skilled workforce in the fields of bio-based, biotechnology, and agriculture.

BioAcademy also supports Bioeconomy Corporation's appointment as the Industry Lead Body to drive the development of a skilled workforce in bio-based and biotechnology sectors in accordance with the requirements of the Department of Skills Development (JKM).

In addition to inspiring graduates to pursue bright careers in bio-based biotechnology and agriculture sectors, BioAcademy also established the Biokerjaya portal for skilled job seekers to be matched with prospective employees (www.biokerjaya.my).



BioAcademy: Industry support programmes.

From 2018-2020, BioAcademy conducted five key projects to meet the following key objectives:

1. Develop skilled talent to ensure an adequate supply of knowledgeable workforce.
2. Facilitate industry talent development and capacity building.
3. Develop capabilities across the related industries.
4. Foster a life-long learning culture.

The five key projects conducted are:

Biokerjaya @ My Future Agro Programme

A hiring and training incentive scheme under PENJANA to promote job creation among employers while increasing employment prospects in the biotechnology, bio-based, agriculture, and agrofood industries.

Recognition of Prior Achievement (PPT) — Malaysian Skills Certificate (SKM) (PPT-SKM) programme

A certification programme to award Malaysia Skill Certificates (SKM) to personnel who can demonstrate skills outlined in the Biotechnology National Occupational Skills Standard (NOSS) based on working experience and achievements.

Bioagrotech/bio-pharmaceutical Employability and Entrepreneurship Specialised Training (BeST 2.0)

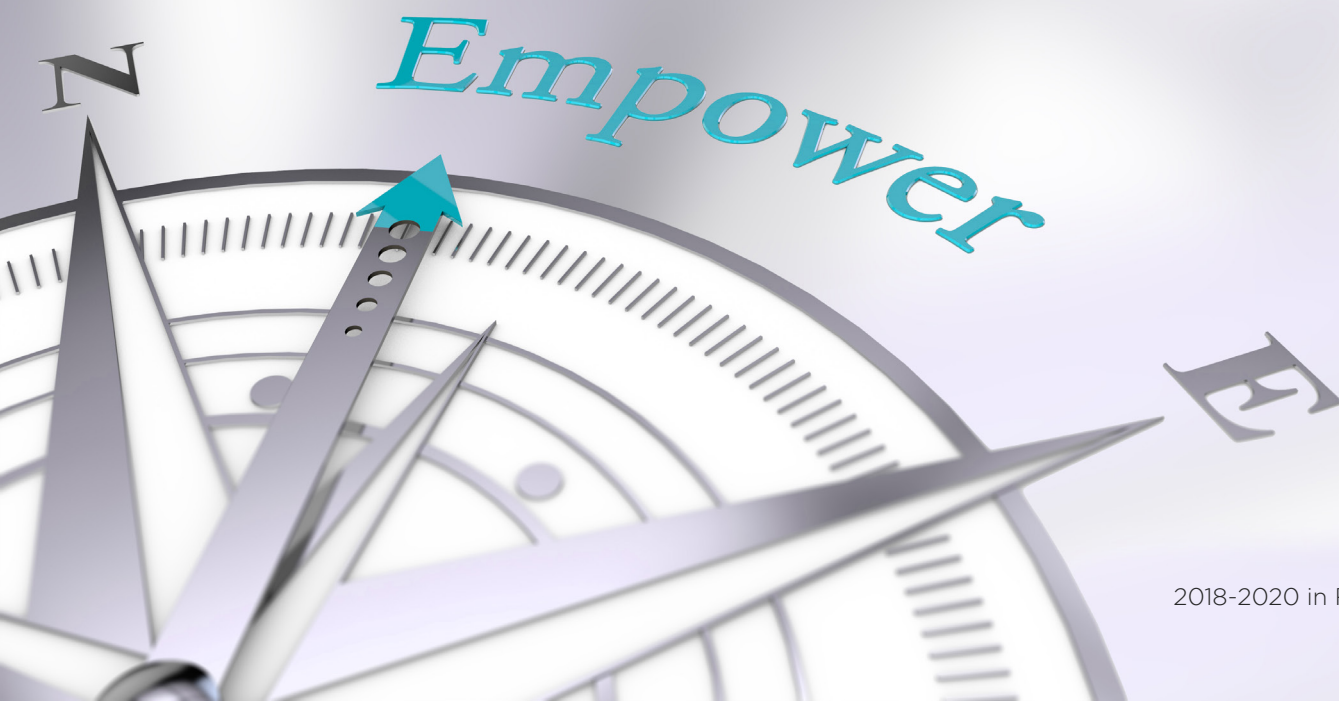
First introduced in 2007, BeST has successfully trained 2,640 biotechnology and life sciences graduates. It is now relaunched as BeST 2.0 and will commence in the year 2021.

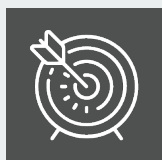
Library BIO (Library 1310)

The role of Library 1310 is to foster lifelong learning of biotechnology through a specialised knowledge network accessible to professionals and students.

Sciensation 1310: “Biotechnology — Fuel, Feed and Heal the World”

An interactive and hands-on programme to help the public become more aware of how biotechnology can improve their daily lives and promote a better economy for Malaysia.





BioAcademy

Key Achievements 2018-2020



Developing skilful
and talented local
workforce

- 🔑 **Biokerjaya @ My Future Agro:** Provided opportunity for the unemployed, post-graduate, post-school, and retrenched workers to work as apprentices and reduced unemployment rates.
- 🔑 **PPT-SKM:** Equipped individuals with certified skills recognised by the government to boost job and promotion prospects in the challenging post-COVID-19 job market.
- 🔑 **BeST 2.0:** Equipping young graduates with a basic knowledge of real-life industry experience combining classroom, laboratory, and on-the-job training, with prospects absorbed as permanent employees.



Facilitate industry
talent and capacity
building

- 🔑 **Biokerjaya @ My Future Agro:** Customised training programme for eligible participants helped channel industry talent to assist companies to recover post-COVID-19 and rebuild resilient businesses.
- 🔑 **PPT-SKM:** Developed 38 types of NOSS in bio-based and biotechnology sectors to upskill manpower to remain relevant and competitive locally and globally.
- 🔑 **BeST 2.0:** Development of knowledge workers through customised training programmes and job placements in established local and multinational companies in modern agriculture and biopharmaceutical sectors.



Develop
capabilities across
related industries

- 🔑 **Biokerjaya @ My Future Agro:** Promoted job creation among employers in the biotechnology, bio-based, agriculture, and agrofood industries.
- 🔑 **PPT-SKM:** Improved Malaysia's image of a skilled local workforce to attract foreign investors.
- 🔑 **BeST 2.0:** Supporting the production of quality products and services through the agriculture and biopharmaceutical industries.



Foster a lifelong
learning culture

- 🔑 **Library 1310:** Provided core collections in biotechnology, food and agricultural biotechnology, healthcare and pharmaceutical biotechnology, industrial and environmental biotechnology, and intellectual property and law.
- 🔑 **Sciensation 1310:** Cultivating interest, awareness, and appreciation of biotechnology and encouraging a new generation of talent to pursue studies in biotechnology.



Immigration Services

Developing human resources.

In addition to developing a local skilled workforce, Bioeconomy Corporation has also been designated as a Monitoring Agency (Regulatory Body) for applications for Employment Pass and Resident Pass Talent for the biotechnology and bio-based industry in Malaysia.

Developing an expatriate talent pool can help organisations become competitive and resilient by bringing in unique global experiences, talents, and perspectives that can be difficult to obtain through domestic recruitment efforts alone. At the same time, it can uplift the development of the local workforce by facilitating the transfer of global knowledge and skills that will further enhance the local talent workforce.

Immigration Services: Industry support programmes.

From 2018-2020, Immigration Services provided industry support to develop the expatriate talent pool in Malaysia's bio-based industries namely through:

1. Acting as a one-stop centre and Regulatory Body for foreign recruitment.
2. Providing advisory and facilitation of expatriate applications.
3. Enhance expatriate services in Malaysia.



Immigration Services

Key Achievements 2018-2020



One-stop centre and
Regulatory Body for foreign
recruitment in biotechnology
and bio-based sectors

- Provide consultancy and advisory.
- Documentation review and due diligence.
- Provide recommendations to support expatriate applications.



Provide advisory and
facilitation of expatriate
applications in the
bio-based industry

- Successfully processed 233 applications for job creation and income.



Enhance
Expatriate Services
in Malaysia

- Enhance engagement and collaborations with TalentCorp, Immigration Department of Malaysia, and other relevant agencies or ministries.

Platform Technologies

Facilitating innovation to develop high-value-added products.

The success of a biotechnology or bio-based company is based on the value of its services or products. Therefore, an organisation's ability to rapidly innovate in both the product and service lines is critical to its success.

As part of enabling innovation in the nation's biotechnology industry, commercially-ready platform technologies offer businesses and research institutions the avenue to develop high-value-added products in bio-based industries that adhere to the halal and global markets, as well as creating income and employment opportunities for the rural communities through their involvement in consequent commercial activities.



Platform technologies: Industry support programmes.

From 2018-2020, Bioeconomy Corporation supported various industries through platform technologies by carrying out the following key projects to facilitate innovation for research and commercial purposes:

Marker Assisted Selection (MAS)

Marker Assisted Selection (MAS) is a way to use molecular markers to identify particular genes and then breed plants with those genes.

Commercially ready MAS platform technology provides various genotyping services made available for companies, universities, and agencies to access for research and commercial purposes. The development of DNA Markers can lead to the innovation of desired traits for plants, livestock, and aquaculture breeding.

This can open up various opportunities for businesses and research centres in Malaysia to commercialise value-added products through MAS platform technologies and create innovative impacts such as crops with improved yield and resistance to disease.

Supercritical Fluid Extraction (SFE)

Supercritical Fluid Extraction (SFE) is one of the most advanced technologies in biological and chemical sciences and is one of the most important innovations that's currently disrupting the global biotechnology industry.

SFE platform technologies is a high purity extraction facility that utilises supercritical carbon dioxide as the extraction media to isolate vital plant extracts from some of the most difficult plant sources. SFE has been driving significant advancements and new product developments in various industries such as food & beverages, health & personal care, nutraceuticals, cosmetics, and pharmaceuticals.

With access to this advanced platform technology, companies, universities and agencies in Malaysia can conduct world-class research that leads to the development of commercially valuable products and services.



MAS Platform Technologies

Key Achievements 2018-2020



Genotyping and DNA fingerprinting services for crops, aquaculture, and livestock with high commercial value



Figs



Coconut



Star Fruit



Durian



Malayan Mahseer Fish



Grouper Fish



Free-range Chicken



Stingless Bee



SFE Platform Technologies

Key Achievements 2018-2020



Various extraction services for new product development of plant extracts with high commercial value



Bentong Ginger



Mangosteen Peel



Frankincense



New protocols developed for the extraction of plant extracts with high commercial value



Black Pepper



Cat's Whiskers/
Java Tea



Sky Fruit



Roselle Seed



Regulatory & IP

Creating a balanced and supportive regulatory framework for biotechnology development.

Biotech companies need to balance their relationship with their customers by sharing information about the benefits of biotechnology while also addressing public concerns with transparency and trust.

One way of achieving this is by creating a regulatory framework for biotechnology development that is balanced in its approach to regulation. The framework protects public health and safety while still incentivising innovation to develop new technologies that can address climate change, food security, and other contemporary social problems.

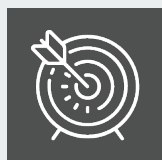
With this objective in mind, Bioeconomy Corporation continues its engagement initiatives with the relevant regulatory authorities to create a progressive regulatory framework for the bio-based and biotechnology sector in accordance with Trust 7 of the NBP.



Bioeconomy Corporation strives to create a balanced and supportive regulatory framework for biotechnology development so that it can grow and succeed. These regulations are designed to be scalable so that they are up-to-date with new technology advancements in the future.

Other than involvement in regulatory framework development, Bioeconomy Corporation also provides supporting advisory and facilitation in five focus areas.





Regulatory & IP

Key Achievements 2018-2020

Products & Services Regulatory Landscape: Active Engagement



Active Engagement Initiatives with Regulators and Ministries

Legend:

CKAPS	Private Medical Practice Control Section
CRM	Clinical Research Management
DoA	Department of Agriculture
IVD	In-vitro Diagnostics
MoA	Ministry of Agriculture
MoH	Ministry of Health
MREC	Malaysian Research Ethics Committee
NPRA	National Pharmaceutical Regulatory Agency
NCERT	National Stem Cell Research and Ethics Subcommittee
TCM	Traditional and Complementary Medicine



Product classification and registration/
notification with:

- NPRA
- MoH



Medical practices and facility setup
with:

- CKAPS
- MoH



Clinical trial application with:

- MREC
- MoH



Clinical trial application related to
stem cell with:

- NCERT
- MoH



Clinical research framework with:

- CRM
- MoH



TCM framework with:

- TCM Division
- MoH



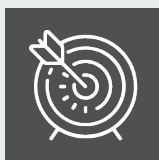
Licensing and products registration
for Medical Device and IVD with:

- MDA
- MoH



Import permit of microbes with:

- DoA
- MoA



Regulatory & IP

Key Achievements 2018-2020

Products & Services Regulatory Landscape: Education



Regulatory Training & Talks

- “Good Document Submission on Product Registration for Traditional Medicine” training with NPRA.
- “Product Notification and Requirements” training with NPRA.
- “Product Regulatory and Requirements in Malaysia” talk for Go-eCommerce in partnership with MDeC’s eCommerce series.

Products & Services Regulatory Landscape: ASEAN Standards



Standards and Technical Requirements in ASEAN

- ACCSQ TMHS PWG 2019
 - Participation in the 32nd ACCSQ TMHS PWG.
 - Harmonisation of the regulatory requirements and standards with regards to registration of products within ASEAN member countries (i.e. traditional medicine, and health supplements).

Legend:

ACCSQ	ASEAN Consultative Committee for Standards and Quality
PWG	Product Working Group
TMHS	Traditional Medicines and Health Supplements



Regulatory & IP

Key Achievements 2018-2020

Intellectual Property (IP)



Upholding IP

- Active Engagement Initiatives
 - Development of intellectual property landscape in Malaysia with:
 - MyIPO
- Advisory and Facilitation Services
 - Supporting companies on matters related to IP.
 - Ensure smooth IP development and business operations.
 - Ensure R&D and commercialisation do not infringe IP of other parties.

Biosafety

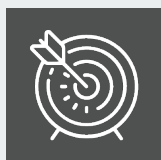


Upholding Biosafety

- Active Engagement Initiatives
 - Regulation of gene modification (GM) and other regulatory matters related to Biosafety Act with:
 - Department of BioSafety
 - NRE
- Advisory and Facilitation Services
 - Supporting companies on matters related to GM.
 - Ensure smooth GM compliance and business operations.
 - Ensure compliance with Biosafety Act and regulations.

Legend:

NRE Natural Resource Environment



Regulatory & IP

Key Achievements 2018-2020

Accreditation



Active Engagement Initiatives

Pharmaceutical regulations with:

- NPRA
- MoH
- GLPt
- GMP

BNP laboratories and other BioNexus Status companies' facilities accreditation with:

- JSM
- MITI

MyGLPC with:


- JSM
- MITI

Advisory and Facilitation Services

- Supporting companies and BNP labs on accreditation matters.
- Ensure the facilities are accredited.
- Ensure fulfilment of international standards and requirements.

Legend:

BNP	BioNexus Partners Lab
GMP	Good Manufacturing Practices
GLP	Good Laboratory Practices
JSM	Department of Standard Malaysia
MITI	Ministry of International Trade and Industry
MoH	Ministry of Health
MyGLPC	Malaysian Good Laboratory Practice
NPRA	National Pharmaceutical Regulatory Agency



Development Enablement Department

Forging paths to commercialisation.

Commercialising biotechnology products and services is a challenging task. The commercialisation process involves many stakeholders including scientists, regulators, investors, and distribution platforms.

Bioeconomy Corporation's Development Enablement Department (DED) was established to help bio-based companies and/or stakeholders in the facilitation of:

1. Commercialising their R&D outputs.
2. Obtaining Halal Certification for their products.
3. Lab-testing services access throughout Malaysia.

DED: Industry support programmes.

From 2018-2020, DED conducted a total of 11 projects which supported over 102 companies and 337 entrepreneurs to achieve the aforementioned objectives.



DED

**Key Achievements 2018-2020:
Commercialisation of R&D**

**38 COMPANIES/RESEARCH
PROJECTS SUPPORTED**

**30 ENTREPRENEURS
SUPPORTED**



DED

Key Achievements 2018-2020: Commercialisation of R&D



MIHAS 2018
by MATRADE

- A business networking platform for local bio-entrepreneurs to promote their halal products to international buyers.

5

Number of companies supported



MyPITCH
@ MIHAS 2018

- A collaboration with MATRADE that provides Malaysian bio-based entrepreneurs market access to international buyers via pitching sessions.

19

Number of companies supported



Effective Copywriting
Skills Workshop 2018

- A workshop to equip local bio-based entrepreneurs with creative copywriting skills for social media marketing to increase product sales.

30

Number of entrepreneurs supported



Product Development
Programme 2020

- Cooperation with IAT of MAFI to improve the quality and income of agro- and bio-based companies.

10

Number of companies registered



TechNetwork 2020

- An online, live networking session for researchers to share their latest technologies and engage with new business prospects, buyers, traders, and investors.

4

Number of research projects supported

Legend:

IAT	Agro-based Industry Division
MAFI	Ministry of Agriculture & Food Industries
MATRADE	Malaysia External Trade Development Corporation
MIHAS	Malaysia International Halal Showcase



DED

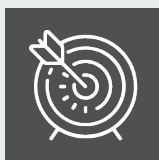
Key Achievements 2018-2020:
Halal Certification

50 COMPANIES
SUPPORTED

307 ENTREPRENEURS
SUPPORTED

حلال





DED

Key Achievements 2018-2020: Halal Certification



Halal Clinic 2019 @
BioUsahawan

- A programme to help local bio-based gain insights on increasing competitiveness with Halal Certification and awareness on JAKIM Halal Certification procedures.

37
Number of
companies
supported



Halal Boost
Programme 2020

- A Halal Certification and training programme recognised by JAKIM for agro- and bio-based companies to obtain JAKIM Halal Certification.

13
Number of
companies
supported



eHalal Clinic
2020

- Five eHalal clinics were conducted as a joint collaboration with Global Haltech Sdn Bhd supported by MAFI to help micro and small entrepreneurs apply for Halal Certification in Malaysia.

307
Number of
entrepreneurs
supported

Legend:

JAKIM Department of Islamic Development Malaysia
MAFI Ministry of Agriculture & Food Industries



DED

Key Achievements 2018-2020: Lab-Testing Services

14 COMPANIES SUPPORTED



**BioNexus
Partners Lab
(BNP)**



Through BNP, start-ups will be given easy access to suitable and accredited laboratories to conduct lab tests on their products.

9

Number of
companies
supported



**Recognition
Programme for
Cosmetic and
Personal Care
2020**



A programme to award cosmetics and personal care products with an accredited lab-tested logo.

5

Number of
companies
supported

Gaining a Foothold in the Global Biotechnology Market

- 55 Bioeconomy Corporation: Commercialisation
- 56 Quality Management
- 57 Bioeconomy Corporation ISO 9001 Certification 2018-2020
- 58 BioShoppe
- 59 BioShoppe Events 2018-2020



Bioeconomy Corporation: Commercialisation

Upholding quality management and forging paths to market access.

The global market for biotechnology products and services is estimated to reach RM10 trillion (USD 2.44 trillion) by 2028. The expansion of the market is expected to grow with a CAGR of 15.83% from 2021 to 2028.

Malaysia has the resources, talent, and technology to propel our proprietary technologies and gain a foothold in the growing and lucrative global biotechnology market. The final leg to secure this goal lies in successful commercialisation of biotechnology products and applications.

The path to commercialisation is full of challenges and often requires a significant amount of time and financial investment. To make commercialising biotechnology products and services easier for Malaysia's bioeconomy players, Bioeconomy Corporation provides support via two initiatives: Quality Management System ISO9001 and BioShoppe.



Quality Management

Supporting quality management for commercialisation.

Bioeconomy Corporation's Quality Management System ISO9001 (QMS ISO9001) was established in 2008 and then updated with more QMS policies and procedures in 2009. By 2019, Bioeconomy Corporation had changed its certification body from Intertek Certification International to SIRIM QAS.

The scope of the certification signifies a standard of quality for:



By building frameworks in these areas that are certified ISO9001 by SIRIM QAS, Bioeconomy Corporation ensures consistent quality in the provision of services to meet the needs of its customers and other stakeholders effectively.



**Bioeconomy
Corporation**
ISO 9001 certification
2 0 1 8 - 2 0 2 0

ISO 9001:2015

Transition of ISO 9001: 2008 to the recertification of ISO 9001:2015; conducted in 2018 by SIRIM QAS.

**ISO 9001:2015
Surveillance Audit
Year 2**

Conducted in 2020 and certified by SIRIM QAS.

**ISO 9001:2015
Surveillance Audit
Year 1**

Conducted in 2019 and certified by SIRIM QAS.



BioShoppe

Enhancing market access and commercialisation of natural-based health products by BioNexus Status companies.

Bioeconomy Corporation recognises the importance of unlocking the full potential of BioNexus Status companies by helping them to build their brand and monetise the results of their R&D in the domestic and international market.

With wellness products experiencing strong growth and demand across the globe, BioNexus Status companies with wellness products and services possess high growth potential.

BioShoppe was created in 2013 as a market access platform aimed at enhancing market access and commercialisation of natural-based products by BioNexus Status companies, particularly in the area of bio-cosmeceutical and pharma nutrition.

By the end of 2020, BioShoppe products can be purchased at four locations nationwide as well as on the popular online shopping platform, Lazada.

BioShoppe Events 2018-2020





Calendar of Events 2018-2020

- 61 2018 Events
- 67 2019 Events
- 74 2020 Events

2018 Events

11th January

Bioeconomy Day 2018
Kuala Lumpur

An educational event with experts and thought leaders to share insights on the impact of bio-based industries and funding opportunities.

Over 500 participants attended the event officiated by the Minister of MOSTI, Datuk Seri Panglima Wilfred Madius Tangau.

26th-28th January

InspiraC Bazaar
Petaling Jaya, Selangor

"Empowering Communities to Achieve Sustainability" bazaar.

Created public awareness of Sustainable Development Goals.

Supported the government's effort to produce 1,000 social entrepreneurs by the end of 2018.

11th February

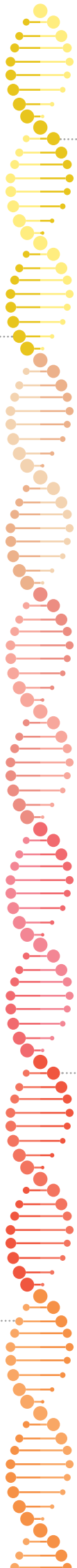
PERHEBAT
Kluang, Johor

A Memorandum of Collaboration with PERHEBAT to implement projects under the Bioeconomy Community Development Programme throughout Malaysia.

23rd March

Universiti Malaysia Kelantan (UMK) visit
Bioeconomy Corporation, Kuala Lumpur

An educational visit from students from the Faculty of Bioengineering & Technology, UMK.



2nd April

National Science Week
Kuching, Sarawak

The National Science Week programme organised by MOSTI.

Raised awareness and importance of science, technology, and innovation (STI).

Officiated by Dato' Sri Michael Manyin Jawong, Minister for Education, Science and Technological Research, Sarawak.

5th April

MyPITCH@MIHAS 2018
MITEC, Kuala Lumpur

Collaboration with MATRADE.

Provided Malaysian companies the opportunity to pitch their technologies and products to local and international buyers and gain market access.

25th September

**Bioeconomy Day:
"Bioeconomy Beyond Borders"**
Kuala Lumpur

With the theme Bioeconomy Beyond Borders, the event focused on economic prospects and future direction of bioeconomy development in Malaysia. In addition, there were forum sessions on transforming bio-based resources for bioeconomy, market access, and the global bioeconomy supply chain.

Other programmes that were lined up during the event were Launch of Bioeconomy Plantopia Programme, Bioeconomy Plantzania Mini Carnival which gave bioscience exposure to school students, as well as exhibition from bio-based companies in Malaysia.

Officiated by Minister of Energy, Science, Technology, Environment and Climate Change Y.B. Puan Yeo Bee Yin.

2nd August

**Taiwan's Institute for
Biotechnology and Medicine
Industry (IBMI) visit**
*Bioeconomy Corporation,
Kuala Lumpur*

A visit by Taiwanese delegates from IBMI to explore new areas of cooperation in bio-based and biotechnology fields in Malaysia.



10th October

Leave a Nest Malaysia visit
Bioeconomy Corporation,
Kuala Lumpur

A visit by Japanese delegates with the purpose of finding new business in the fields of natural resources.

24th October

Tax Seminar on Sales & Services Tax (SST 2.0)
Bioeconomy Corporation,
Kuala Lumpur

Education programme for BioNexus Status companies, Bioeconomy Transformation Programme project owners, and bio-based companies to understand how to comply with the new SST 2.0.

23rd November

Ginseng Egg-Laying Chicken Farming Project
Sipitang, Sabah

A Bioeconomy Community Development Programme (BCDP) Project.

Boost the development of farmers and small entrepreneurs with the potential to produce 4,000+ eggs daily and earn a monthly income of RM5,650 per person.

Advance the layer chicken industry in Malaysia.

27th November

Halal Certification Training for Bio-based Products
Bioeconomy Corporation,
Kuala Lumpur

Intensive training and coaching programme to assist bio-based companies in the JAKIM Halal certification process.





2019 Events



18th January

Leave a Nest Malaysia visit
*Bioeconomy Corporation,
Kuala Lumpur*

An information-sharing session with Japanese delegates on Malaysia's bio-based and agri-based ecosystem to explore collaboration opportunities in Malaysia.

18th February

**Pre-event Media Briefing/Press
Conference for BioUsahawan 2019**
Kuala Lumpur

Media education on the opportunities and challenges of agro and bio-based industries in Malaysia, as well as BioUsahawan 2019's role to drive these industries forward.

15th-16th March

BioUsahawan 2019
Kuala Lumpur

Promoted the growth of agro-based and bio-based local entrepreneurs, start-ups, and SMEs.

Officiated by the Deputy Minister of Ministry of Agriculture and Agro-based Industry, Y.B. Tuan Sim Tze Tzin.

3rd April

MyPITCH@MIHAS 2019
MITEC, Kuala Lumpur

Collaboration with MATRADE.

Provided Malaysian companies the opportunity to pitch their technologies and products to local and international buyers and gain market access.

19th April

MOA Meet the Customer Day
Selayang, Selangor

Created awareness and disseminated information on Bioeconomy Corporation and its various initiatives.



15th May

Signing Ceremony for BCDP
*Bioeconomy Corporation,
Kuala Lumpur*

An agreement between Green Afforestation International Network with participants from Rombin to conduct the RevoTropix Paulownia Farming Project in Rompin, Negeri Sembilan.

11th July

BCF 2.0 Business Clinic
*Bioeconomy Corporation,
Kuala Lumpur*

Assisted potential application to understand the financial requirement of the BCF 2.0 Programme.

20th July

MOA Meet the Customer Day
Pulau Tioman, Pahang

Created awareness and disseminated information on Bioeconomy Corporation and its various initiatives.

25th July

Chinese Academy of Agricultural Sciences (CAAS) visit
*Bioeconomy Corporation,
Kuala Lumpur*

Engaged CAAS for research collaboration.

6th August

MOA Meet the Customer Day
Rembau, Negeri Sembilan

Created awareness and disseminated information on Bioeconomy Corporation and its various initiatives.



8th August

BCF 2.0 Business Clinic,
Bioeconomy Corporation,
Kuala Lumpur

Assisted potential application to understand the financial requirement of the BCF 2.0 Programme.

27th August

Biodiversity Based Economy Development Office (BEDO),
Thailand visit
Bioeconomy Corporation,
Kuala Lumpur

A visit from Thai delegates to explore and exchange experiences on the implementation of bioeconomy policies in Malaysia.

29th August-1st Sept.

National Entrepreneur Week (MUN 2019)
MAEPS, Selangor

Participation in the exhibition with other agencies under the Ministry of Agriculture pavilion.

Displayed and disseminated information on Bioeconomy Corporation and its various initiatives.

26th September

Tax Seminar on Sales & Services Tax (SST 2.0)
Bioeconomy Corporation,
Kuala Lumpur

Education programme for BioNexus Status companies, Bioeconomy Transformation Programme project owners, and bio-based companies to understand how to comply with the new SST 2.0.

9th October

Universiti Putra Malaysia (UPM) visit
Bioeconomy Corporation,
Kuala Lumpur

An educational visit from students from the Faculty of Biotechnology and Biomolecular Sciences, UPM.



15th October

Crowdfunding: Briefing & Sharing Session on Funding Opportunities

*Bioeconomy Corporation,
Kuala Lumpur*

An educational programme for local companies to access alternative options for business financing.

15th-17th October

**Asia-Pacific Urban Forum 7
Penang**

Participation in the APUF-7 exhibition as MOAgrotech showcasing the smart urban farming system.

22nd October

Product Notification & Requirements Training

*Bioeconomy Corporation,
Kuala Lumpur*

Educational programme on the processes, procedures, documentation, and requirements to market cosmetic and personal care products in Malaysia.

31st October

**Paulownia Tree Planting Programme & Sciensation Bio
Pontian, Johor**

Increased high-school students' awareness and knowledge on the importance of agriculture, Science, Technology, Engineering, and Mathematics (STEM).

27th November

Seminar on Developing the Bioplastic Industry SMEs in Malaysia,

*Bioeconomy Corporation,
Kuala Lumpur*

A seminar in collaboration with MESTECC and Malaysia Productivity Corporation.

Shared insights and best practices on the local bioplastics industry with industry players.

28th November-1st Dec.

Farmers, Breeders and Fishermen Day 2019 (HPPNK 2019)

Johor Bahru

Participation to showcase programmes and activities adapting agro-based Lifestyle Technology.



BioUsahawan: Launch of BioNexus Products in Kuala Lumpur, March 2019

BioUsahawan:
Exchange Leave A Nest & UTM,
March 2019





MOA Meet the Customer Day in Pulau Tioman, July 2019

2020 Events



4th March

EXPO 2020 Dubai Townhall
*Bioeconomy Corporation,
Kuala Lumpur*

Townhall on EXPO 2020 Dubai to discuss programmes and activities with participating companies during the Sustainable Agriculture Week.

11th March

**Crowdfunding with
Ata Plus Malaysia,**
*Bioeconomy Corporation,
Kuala Lumpur*

EYE CONTACT pitching session to assist local bio-based companies in embracing crowdfunding.

24th June

e-Halal Clinic
Virtual platform

Online programme for entrepreneurs to understand the Halal certification process and determine their readiness.



8th-9th July

**Product Development
Programme Evaluation Session,**
*Bioeconomy Corporation,
Kuala Lumpur*

An initiative by the government to help SMEs' entrepreneurs to develop and improve their products for better market access.

16th July

e-Halal Clinic
Virtual platform

Online programme for entrepreneurs to understand the Halal certification process and determine their readiness.

6th August

e-Halal Clinic
Virtual platform

Online programme for entrepreneurs to understand the Halal certification process and determine their readiness.

11th August

**Signing Ceremony: Letter of
Intent (LOI)**
Shah Alam, Selangor

An LOI with the Faculty of Pharmacy, University Technology MARA (UiTM) to mobilise and develop career and skills programmes in the field of biotechnology and bio-based agriculture and food industries.

11th August

**Briefing Session: Skills Certification
Programme through PPT**
Shah Alam, Selangor

Malaysia Skills Certificate (SKM) to enhance the image and visibility of competent and productive organisations, companies, and individuals.



13th August

**Briefing Session: Skills Certification
Programme through PPT**
Putrajaya

Malaysia Skills Certificate (SKM) to enhance the image and visibility of competent and productive organisations, companies, and individuals.

26th August

**Community Connect: Creative
Innovation of Urban Farming**
Virtual platform

A sharing session on urban farming by En. Roslan Ghazali, CEO of Toclan Agritrade Asia Sdn Bhd.

Provided a platform for communities interested in generating side income during the COVID-19 pandemic.

3rd September

**Community Connect: The
Potential of Kelulut Farming as a
Source of Income**
Virtual platform

A sharing session by Prof. Madya Dr. Shamsul Bahri Abd Razak from University Malaysia Terengganu on the potential of Kelulut as a source of income.

Provided a platform for communities interested in generating side income during the COVID-19 pandemic.

10th September

**Community Connect:
Generating Income through
Biocosmetic Business**
Virtual platform

Dr. Mariani Abdul Hamid, Founder of DerMags products and CEO of Biopro Cosmeceutical Sdn Bhd shared her experience growing the DerMags brand—a mangosteen-based cosmetic product.

Provided a platform for communities interested in generating side income during the COVID-19 pandemic.

21st September

Halal Awareness Training 2020
*Bioeconomy Corporation,
Kuala Lumpur*

Training sessions for agro-based companies eligible to participate in the Halal Boost Programme.



25th September

TechNetwork: High Pressure Processing of Food Products
Virtual platform

Ts. Dr. Noranizan Mohd Adzahan, Associate Professor & Professional Technologist from University Putra Malaysia, provided an overview of the HPP technology and highlighted its potential in the Malaysia food industry.

Online, live networking session for researchers nationwide to share their findings and/or products.

23rd September

Community Connect: The Use of Pesticides in Farming and Households
Virtual platform

Dr. Abdul Syukor Abd Razak, Founder of biopesticide product, Pisoptera, and Director of UMP Ecopest Sdn Bhd shared his journey in developing the bio-based pesticide business.

Provided a platform for communities interested in generating side income during the COVID-19 pandemic.

30th October

TechNetwork: Elastin Powder for Cosmetics & Skin Health
Virtual platform

En. Muhammad Syazwan Mohd Syarif, Technology Transfer Officer from University Kebangsaan Malaysia, shared the usage of elastin powder for cosmetics and skin health with beauty products entrepreneurs.

Online, live networking session for researchers nationwide to share their findings and/or products.

19th-23rd October

Virtual SME Solutions Expo
Virtual platform

Participation to create awareness and disseminate information on Bioeconomy Corporation and its various initiatives.

4th December

TechNetwork: Danio Assay Journey
Virtual platform

Assoc. Prof. Dr. Syahida Ahmad, Associate Professor/Senior Researcher from University Putra Malaysia shared the R&D of the toxicology test using zebrafish with panel experts from Danio Assay Laboratories Sdn Bhd.

Online, live networking session for researchers nationwide to share their findings and/or products.



Product Development Programme Evaluation Session, July 2020



Skills Certification Programme through PPT,
Putrajaya, August 2020



Letter of Intent (LOI) Signing Ceremony
between Bioeconomy Corporation & UiTM,
August 2020

EXPO 2020
Dubai Townhall,
March 2020





COMMITTEE MEMBERS

Committee members


Main Coordinator

 Nur M. F.,
Strategic Communication

Industry Overview

 Nuramirah Fawzi

BTP


 Norazlina Borhan

BioNexus Status

 Siew Mun Loh

BioAcademy

 Fadzrin Abd Aziz

 Faizah Pakhrizi

Immigration Services


 Faizul Zakaria

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 Angela Lai


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ISO

 Anju Kaur

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KEMENTERIAN PERTANIAN
DAN INDUSTRI MAKANAN

MINISTRY OF AGRICULTURE AND FOOD INDUSTRIES

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