





The background of the lower half of the cover is an abstract painting. It features a central figure that appears to be a person or a creature, rendered in dark, textured brushstrokes. The figure is surrounded by vibrant, layered colors including reds, oranges, yellows, and greens. The overall style is expressive and textured, with visible brushwork and a sense of depth.

2023-2024 YEARS IN REVIEW REPORT

“As the Prime Minister, I am committed to seeing the biotechnology industry grow in an inclusive and sustainable way, where technological and economic advancements do not compromise human values. This is the true meaning of Bioeconomy For All — a vision where advancements in biotechnology bring welfare and justice to all segments of society.”

- Prime Minister Anwar Ibrahim, 17 July 2024

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Rooted in Innovation, **Growing for the Future**

Welcome to our 2023-2024 in Review, a showcase of our achievements, progress, and commitment to advancing Malaysia's bioeconomy.

A Global Leader in Biotechnology Solutions

It is my pleasure to present this edition of *Years in Review Report* for 2023–2024. Our achievements reflect our nation's continued commitment to harnessing the power of biotechnology.

Malaysia's bioeconomy stands out on the global stage, thanks to our rich biodiversity, strategic location, and strong government support for biotechnology and bio-based industries that drive food security, healthcare, and sustainability.

Notably, Malaysia was the first country in Southeast Asia—and the second in Asia after China—to officially embrace the bioeconomy concept, demonstrating our long-standing dedication to this agenda.

As the nation's main voice for bioeconomy development, Bioeconomy Corporation plays a pivotal role in ensuring that innovation and collaboration thrive across the sector.

Through our efforts to connect industry players, talent, researchers, policymakers, and local communities, we help catalyse investments and partnerships that transform Malaysia's inherent strengths into world-class innovations.

Furthermore, by integrating advanced technologies such as Artificial Intelligence (AI), Augmented Reality (AR), and Virtual Reality (VR), we aim to enrich daily life, foster innovation, and create new income opportunities for communities nationwide.

Looking ahead, Bioeconomy Corporation remains committed to facilitating collaborations, nurturing talent, and translating cutting-edge research into impactful industries.

Together with our partners and stakeholders, we can shape a future where Malaysia stands as a global leader in biotechnology solutions that benefit both the nation and the world.

YBhg. Dato' Dr Lee Boon Chye
Chairman



Purposeful Steps, Impactful Change

Like many organisations, we were tested during COVID-19. The pandemic disrupted programmes, slowed industry activities, and challenged the ways we engaged with stakeholders. Yet, it also taught us valuable lessons about resilience and adaptability.

Building on those lessons, 2023–2024 became a period of recovery and transformation. We recognised that to better serve the industry, we first had to strengthen ourselves through purposeful actions that deliver tangible, impactful change.

To achieve this, our team united in effort to streamline processes, strengthen governance, and foster a more performance-driven culture.

While these internal changes may not always be visible externally, they made us more agile, accountable, and focused on delivering meaningful results.

At the same time, we deepened our engagement with the industry. Beyond facilitation, we strengthened our role as a trusted partner that listens closely to companies, helps them navigate challenges, and accelerates their growth.

To future-proof our bioeconomy, we also invested in developing industry-ready talent and encouraged biotechnology and bio-based businesses to adopt frontier technologies such as AI, AR, and VR.

Lastly, we position ourselves as more than just an industry partner. We are a catalyst, turning ideas into action that generate viable businesses, meaningful jobs, and solutions that improve lives.

The road ahead will require collaboration, resilience, and shared success, and Bioeconomy Corporation remains committed to walking that road together with our partners and stakeholders.

YBrs. Encik Mohd Khairul Fidzal Abdul Razak
Chief Executive Officer



National Biotechnology Policy 2.0 **(NBP 2.0)**

The National Biotechnology Policy (NBP) 2005-2020, a strategic policy initiated by the Ministry of Science, Technology and Innovation (MOSTI), has successfully laid the foundation for advancing biotechnology in Malaysia.

Building on this groundwork and with the ambition of achieving global leadership in bioinnovation, the government introduced NBP 2.0, a continuation and enhancement of NBP 2005-2020.

Through locally driven biotechnology solutions, the policy aims to strengthen the biotechnology ecosystem and act as a catalyst in addressing national challenges such as food security, pandemic management, and climate change.

Recognising biotechnology as a key driver of bioinnovation and national development, it is essential that the industry evolves alongside other emerging technologies such as artificial intelligence (AI) within the framework of the Fourth Industrial Revolution. In consideration of these factors, NBP 2.0 has been formulated with a roadmap extending to 2030.

The policy is structured around five core strategies designed to achieve these ambitious targets, ensuring that Malaysia remains at the forefront of biotechnology innovation while delivering tangible benefits to society, the economy, and the environment.

5 Policy Targets of the NBP 2.0

1

BioNexus Status companies would remain 30% active globally and 70% locally.

The empowerment of institutes and institutions as well as world-class local biotechnological researches.

2**3**

Contribution of 5% of Gross Domestic Product (GDP) by biotechnology companies.

Recognition of 80% of biotechnology graduates through the micro-accreditation programme and 20% of biotechnology graduates through post-graduate programmes.

4**5**

Creation of three bio-innovation firms with unicorn status.

2.0 Industry Development

Accelerating Malaysia's bioeconomy across three main economic sectors: agriculture, healthcare, and industrial.



2.1 Overview

The Industry Development Division (IDD) focuses on three main economic sectors: agriculture, healthcare, and industrial. With a vision to accelerate Malaysia's bioeconomy, the IDD supports key NBP 2.0 goals by nurturing bio-based companies, strengthening value chains, and driving innovation through the following initiatives:

1. Pipeline Development

Onboard and nurture high-potential BioNexus Status and BBA companies, including Malaysia's first biotech unicorn, ALPS Global.

2. Sector-Specific Growth Programmes

Targeted interventions that align with the goals of NBP 2.0.

3. Market Expansion Support

Facilitate market and export readiness for BioNexus Status and BBA companies, as well as global partnerships.

4. Technology Commercialisation

Bridge R&D-to-market gaps and help companies scale.

5. Stakeholder Alignment

Coordinate with ministries, agencies, universities, research institutes, and other industry stakeholders to boost growth across sectors.

6. Policy Advocacy

Help shape regulatory frameworks to create a more conducive ecosystem for sector growth.

Aligned with the MADANI Economy's green-growth agenda, IDD also promotes a circular bioeconomy that transforms renewable resources and waste into high-value products, reducing environmental impact while driving low-carbon, sustainable economic growth.

The IDD implements these initiatives across the three subdivisions under its purview: Agricultural Biotechnology (AgBiotech), Healthcare Biotechnology (Healthcare Bio) and Industrial Biotechnology.

2.2 AgBiotech

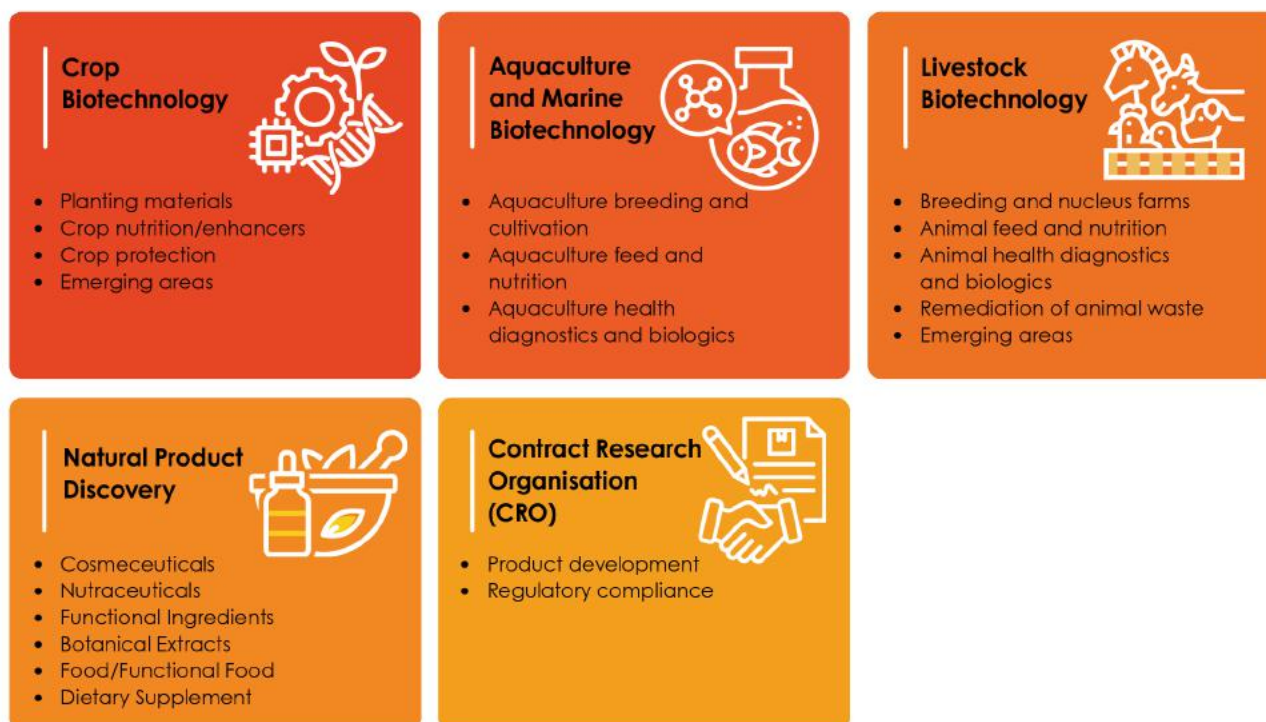
In 2023–2024, the AgBiotech subdivision advanced national food security and agricultural sustainability by promoting innovative agri-biotech solutions aligned with the NBP 2.0.

Its efforts focused on boosting productivity, improving crop resilience, and reducing reliance on imported inputs through technology validation, field demonstrations, and public–private partnerships.

The subdivision strengthened the commercialisation pipeline for local agri-biotech innovations by connecting R&D institutions with industry through business matching, capacity-building, funding facilitation, and support for regulatory and certification readiness. It also enhanced socioeconomic development by enabling market access for bio-based agritech companies under the BBA and BioNexus Status programmes.

Through collaborations with state and federal agencies and agro-industrial clusters, the subdivision expanded biotechnology deployment across key subsectors such as rice, oil palm, livestock, and aquaculture, helping position Malaysia as a competitive regional hub for sustainable agricultural biotechnology.

AgBiotech: Focus Areas



Key Outcomes in 2023–2024

In 2023–2024, the AgBiotech subdivision recorded several notable achievements that contributed to the advancement of Malaysia's bioeconomy and agro-biotechnology agenda.

The table below highlights the key initiatives and impact achieved in this period.

Initiatives	Impact
Comprehensive support and facilitation to BioNexus Status and BBA companies.	Over 50 agribiotech companies were successfully facilitated through the BioNexus Status and BBA programmes, driving commercialisation and business growth in line with NBP 2.0 targets. This included Free The Seed Sdn Bhd, a BioNexus Status company, signing a RM50 million Memorandum of Agreement with Nissho Precision (Malaysia) at the MCY Summit 2023.
Open new local and international markets for BioNexus Status and BBA companies.	Accelerated commercialisation and market access to new local and international avenues via participation in trade shows and missions to Taiwan, Indonesia, and Singapore, in order to form strategic alliances, promote business matching, and to encourage business-to-business collaboration, among others.
Ensure agriculture companies develop solutions that enhance food security, alternative inputs, and productivity.	Facilitation was aligned with NBP 2.0, focusing on three key pillars: food security, alternative inputs, and productivity. In support of food security, companies in Alternative Proteins (Black Soldier Fly and cultivated meat) and Precision Breeding (molecular breeding and tissue culture) received targeted assistance. The division also encouraged industry players to adopt more eco-friendly agricultural inputs, such as biofertilisers and biopesticides.
Facilitate the development of more high value downstream products in the natural products sector.	The division's efforts aligned with NBP 2.0, which targets a 5% bio-based sector contribution to GDP by 2030 through high-tech downstream manufacturing. At MCY 2023, BioNexus Status companies showcased high-value innovations, including advanced bird's nest products by Fuciphagus Agritech and specialised glycopeptides by Glyken Sdn Bhd.

"A key milestone was the successful facilitation of market access for multiple homegrown agricultural biotechnology products, enabling selected bio-based companies to pilot their technologies in real agricultural settings."

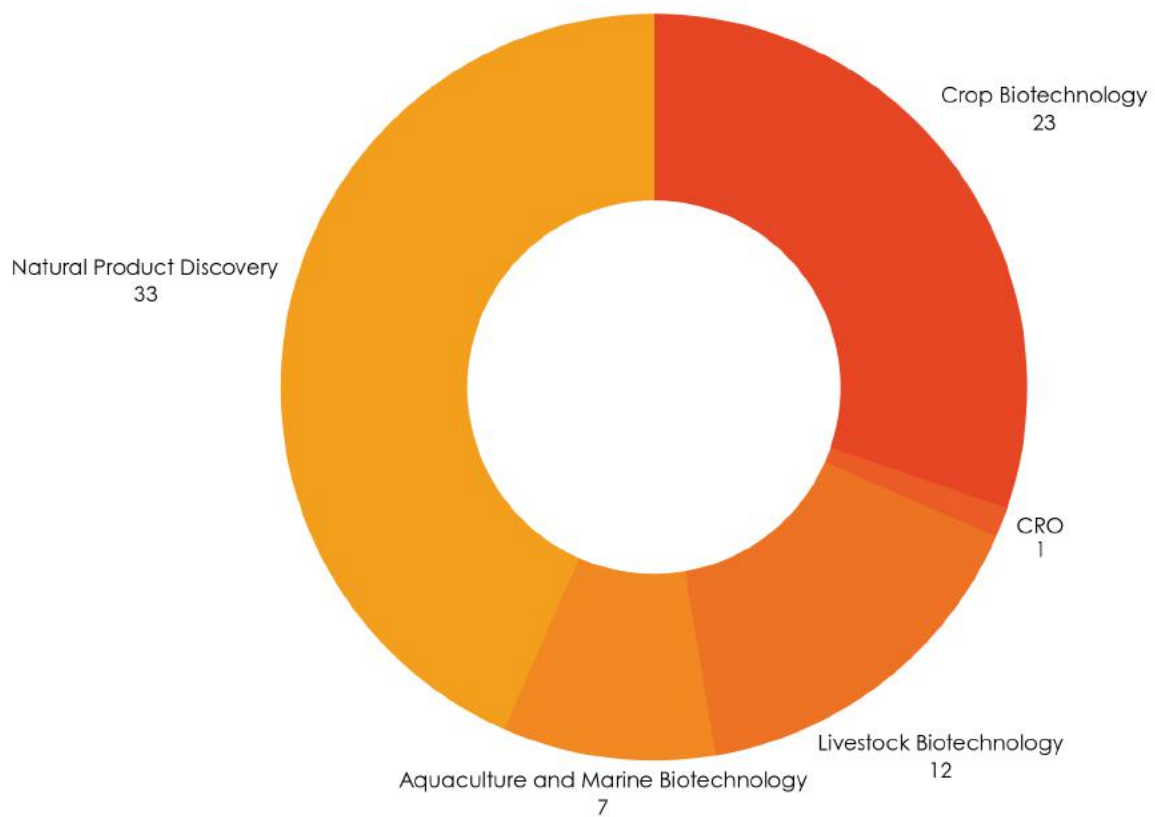
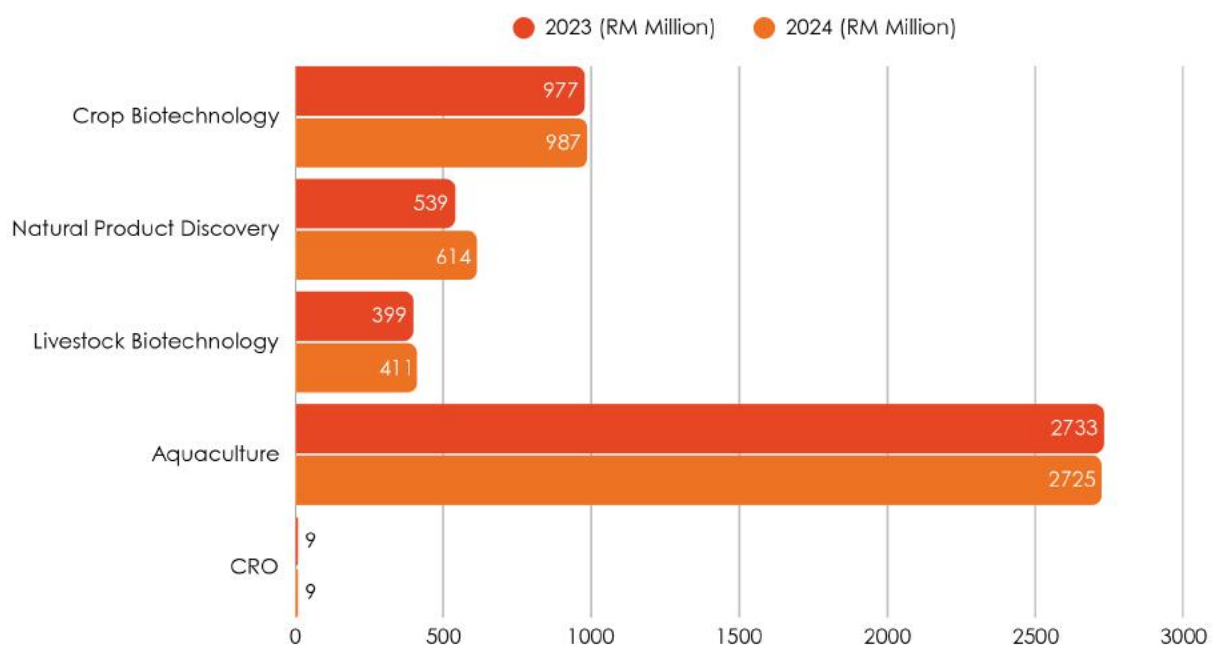
- Dr. Faizal Hamid, Head of AgBiotech, IDD



Challenges & Strategic Responses

To address the challenges encountered and accelerate progress toward its strategic objectives, the AgBiotech subdivision undertook several targeted internal improvements and strategic responses in 2023–2024.

Challenges	Strategic Responses
Limited awareness and confidence in biotechnology solutions among farmers and agropreneurs.	Introduced structured outreach programmes, workshops, and field trials to improve understanding and trust in agri-biotech technologies.
Difficulty tailoring biotechnology solutions to diverse agricultural zones.	Collaborated with state agencies and farmer cooperatives to localise technology deployment and customise solutions to regional needs.
Operational inefficiencies and slow coordination within the organisation.	Streamlined internal processes, improved inter-unit coordination, and aligned resources for faster and more integrated project delivery.
Complex product validation, certification, and regulatory pathways.	Expanded strategic partnerships with R&D institutions, regulatory bodies, and international stakeholders to facilitate validation and regulatory approvals.
Need for better tracking of outcomes and programme effectiveness.	Strengthened monitoring and impact evaluation frameworks to guide continuous improvement and ensure alignment with national bioeconomy and agrofood policies.

AgBiotech: Number of Key Projects by Focus Area**AgBiotech: Cumulative Approved Investments by Focus Area**

AgBiotech: Cumulative Approved vs New Investments by Company Status







	2023		2024	
	Cumulative Approved Investments (RM Million)	New Investments (RM Million)	Cumulative Approved Investments (RM Million)	New Investments (RM Million)
BioNexus Status	4,617.66	0.8	4,682.45	64.79
BBA Companies	43.15	0	62.38	0

2.3 Healthcare Bio

In 2023–2024, the Healthcare Bio subdivision aligned itself with the NBP 2.0 by spearheading focus areas that included medical devices, biopharmaceuticals, stem cells, cellular and gene therapy products (CGTP), contract research services (CRO), contract research and manufacturing services (CRAMS), as well as biosmeceuticals and wellness.

The subdivision aimed to strengthen local commercialisation capabilities by enhancing regulatory readiness, infrastructure development, and talent development.

Healthcare Bio: Focus Areas

Contract Research Organisation (CRO)  <ul style="list-style-type: none"> Pre-clinical testing lab services Clinical research organisations Discovery and development services Bioinformatics/healthcare Proprietary technology providers 	Contract Research & Manufacturing Services (CRAMS)  <ul style="list-style-type: none"> Provision of contractual R&D services Internal R&D Biomanufacturing Primary manufacturing Secondary manufacturing 	Biopharmaceuticals & Pharmaceuticals  <ul style="list-style-type: none"> Innovator biologics Biosimilars and biobetters New chemical entities (NCE) Generic pharmaceuticals Vaccines
Medical Devices, Biosensors & In Vitro Diagnostics  <ul style="list-style-type: none"> Medical diagnostics and early detection Medical therapeutics Medical and disease monitoring Personalised medicine Environmental monitoring 	Stem Cell, Cellular Medicine & Cellular and Gene Therapy Products (CGTP)  <ul style="list-style-type: none"> Biomaterials Cell-based technology Biomolecules Biomechanical aspects of design Tissue engineering and related supporting informatics 	Biosmeceuticals, Wellness & Pharmanutrition  <ul style="list-style-type: none"> Biosmeceuticals Phytomedicine Botanical drugs Wellness and pharmanutrition

Key Outcomes in 2023–2024

One of the most significant achievements of the Healthcare Biotechnology subdivision in 2023–2024 was its contribution to the growth of a homegrown healthcare biotechnology company that is on track to become Malaysia's first biotechnology unicorn.

The table below highlights the key initiatives and impact achieved in this period.

Initiatives	Impact
Strategic support and facilitation to BioNexus Status and BBA companies.	Facilitated companies with the potential to achieve unicorn status, contributing to the NBP 2.0 target of creating three bio-innovation companies with unicorn status by 2030. The first Malaysian biotech unicorn, ALPS Global Holding Bhd, was announced during the National Bioeconomy Showcase 2024.
Ensure healthcare companies develop technologies to address real healthcare needs, maximise public health benefits, and support sustainable healthcare systems.	Engaged with relevant stakeholders on the development of biomarkers and biosensors. This is essential for guiding the development of clinically relevant, cost-effective, and impactful products for the application of biologics, omics technologies, and targeted therapies facilitating adoption of precision and personalised medicine, gene as well as cell therapy.
Open new export markets for BioNexus Status and BBA companies.	Facilitated healthcare companies by participating in international trade shows and trade missions in Taiwan, China, and Indonesia, promoting business matching, fostering strategic partnerships, and enhancing awareness of the latest technologies.

"Facilitating the growth of Malaysia's first biotechnology unicorn serves as proof of concept for Malaysia's capacity to nurture globally competitive biotechnology firms."

- En. Ahmad Fazil Elias, Head of Healthcare Bio, IDD

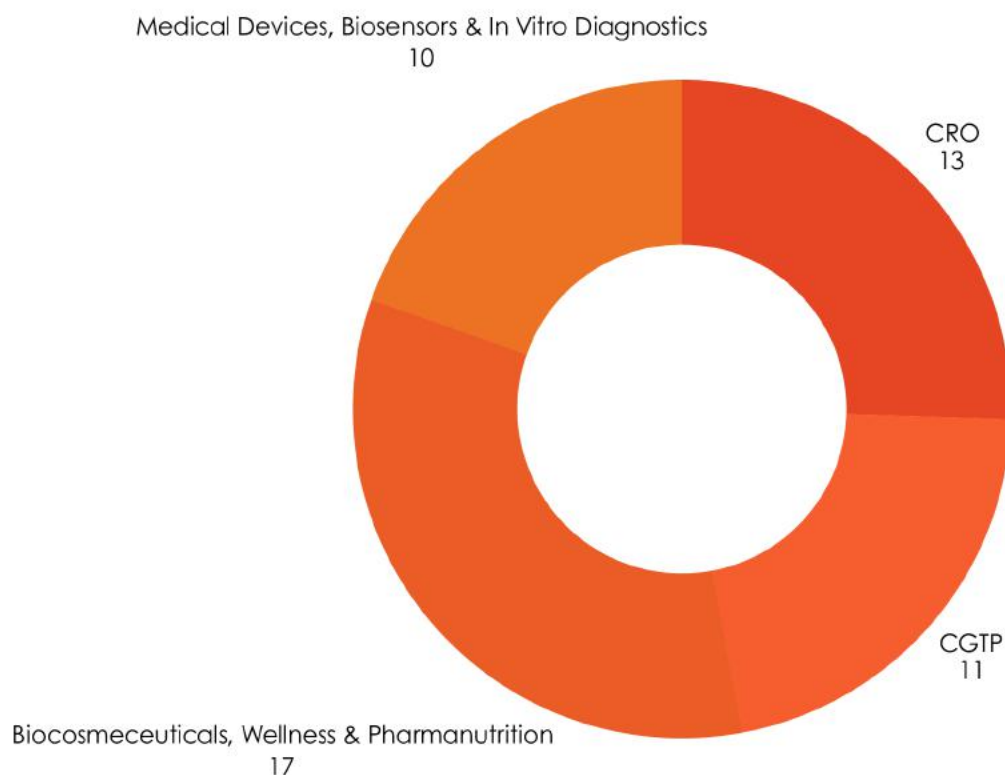


Challenges & Strategic Responses

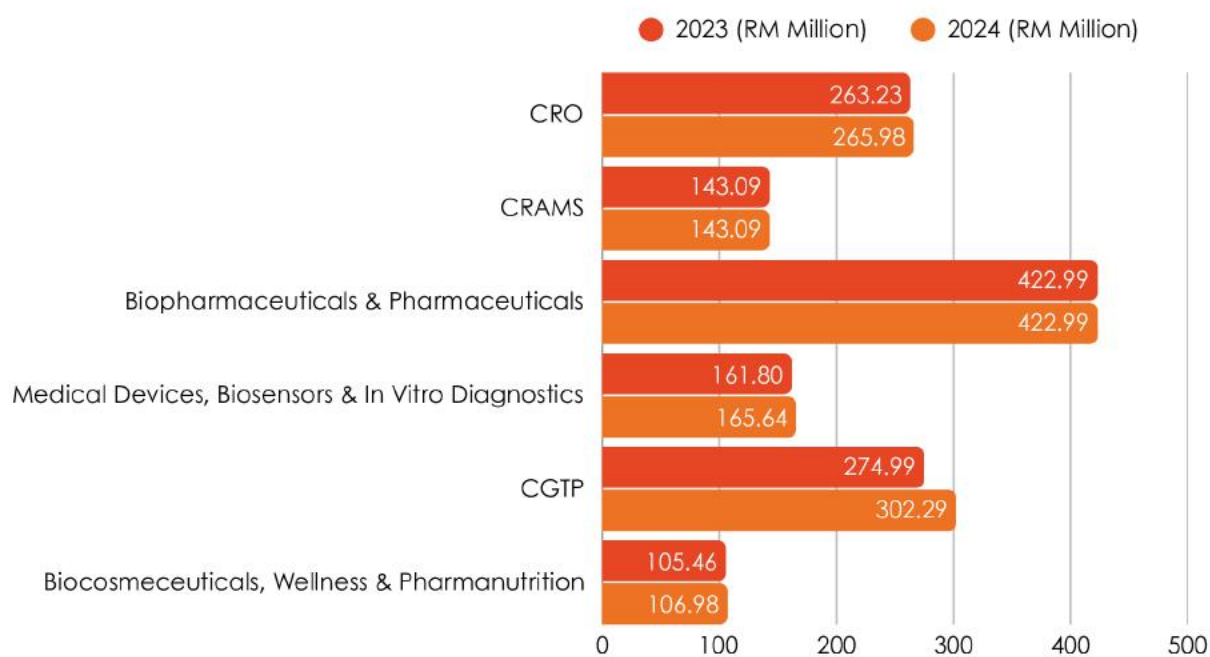
To address the challenges encountered and accelerate progress toward its strategic objectives, the Healthcare Bio subdivision undertook several targeted internal improvements and strategic responses in 2023–2024.

Challenges	Strategic Responses
Complex and evolving regulatory processes, particularly for emerging technologies such as cell and gene therapy.	Proactive engagement with regulatory agencies (e.g., NPRA) to clarify approval pathways, advocate for streamlined processes, and provide industry feedback to support more responsive regulatory frameworks.
Limited access to funding for healthcare biotechnology companies, especially SMEs and startups.	Continued engagement with government funding bodies, development finance institutions, and private investors to improve visibility of funding options and connect companies with suitable financial opportunities, including basic proposal-preparation guidance.
A growing need for enhanced internal coordination and better alignment with overall policy and industry priorities.	Gradual enhancements in internal communication, improved stakeholder mapping, and sustained cross-sector dialogue to ensure activities are aligned with national policy directions and industry priorities.

Healthcare Bio: Number of Key Projects by Focus Area



Healthcare Bio: Cumulative Approved Investments by Focus Area



Healthcare Bio: Cumulative Approved vs New Investments by Company Status

	2023		2024	
	Cumulative Approved Investments (RM Million)	New Investments (RM Million)	Cumulative Approved Investments (RM Million)	New Investments (RM Million)
BioNexus Status	1,365.93	0	1,368.92	3
BBA Companies	5.63	0	2.99	36.95

2.4 Industrial Biotechnology

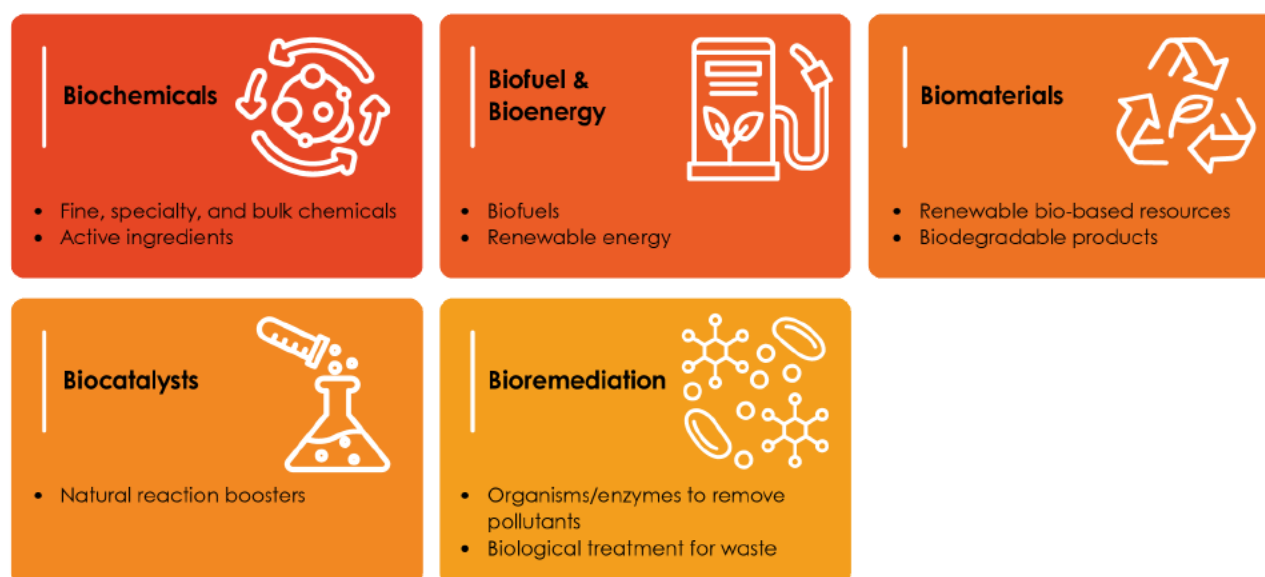
In 2023-2024, the Industrial Biotechnology subdivision remained focused on strengthening Malaysia's industrial biotechnology ecosystem by driving process efficiencies, optimising feedstock utilisation, advancing the production of value-added biomolecules, and fostering a circular economy.

In support of these goals, the subdivision worked closely with clients to spur investment in key focus areas, enhanced the company's marketing and development strategies, and designed targeted marketing and branding initiatives.

It also planned and implemented accelerated development programmes to promote commercialisation within the industrial biotechnology sector, while leading the development and execution of technology transactions that address current and future market needs.

These efforts supported key NBP 2.0 priorities, including its flagship programme, Industrial Biotechnology for Circular Economy. Additional focus areas included expanding the use of biomaterials in green buildings and smart cities, strengthening the bio-based food and ingredients ecosystem, and securing international consultancy projects, including those funded by the Adaptation Fund and the UK FCDO.

Industrial Biotechnology: Focus Areas



Key Outcomes in 2023–2024

In 2023–2024, the Industrial Biotechnology subdivision completed several key initiatives that strengthened the nation's industrial biotechnology sector.

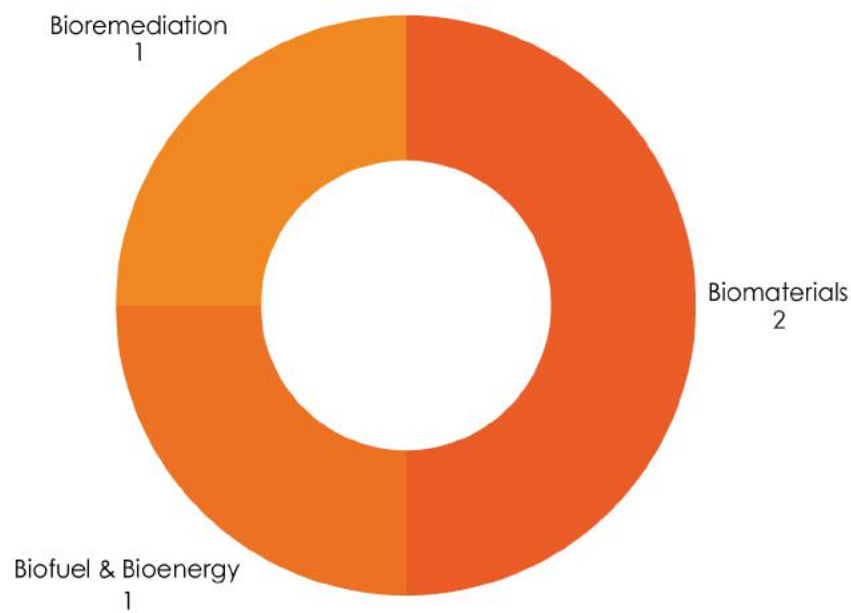
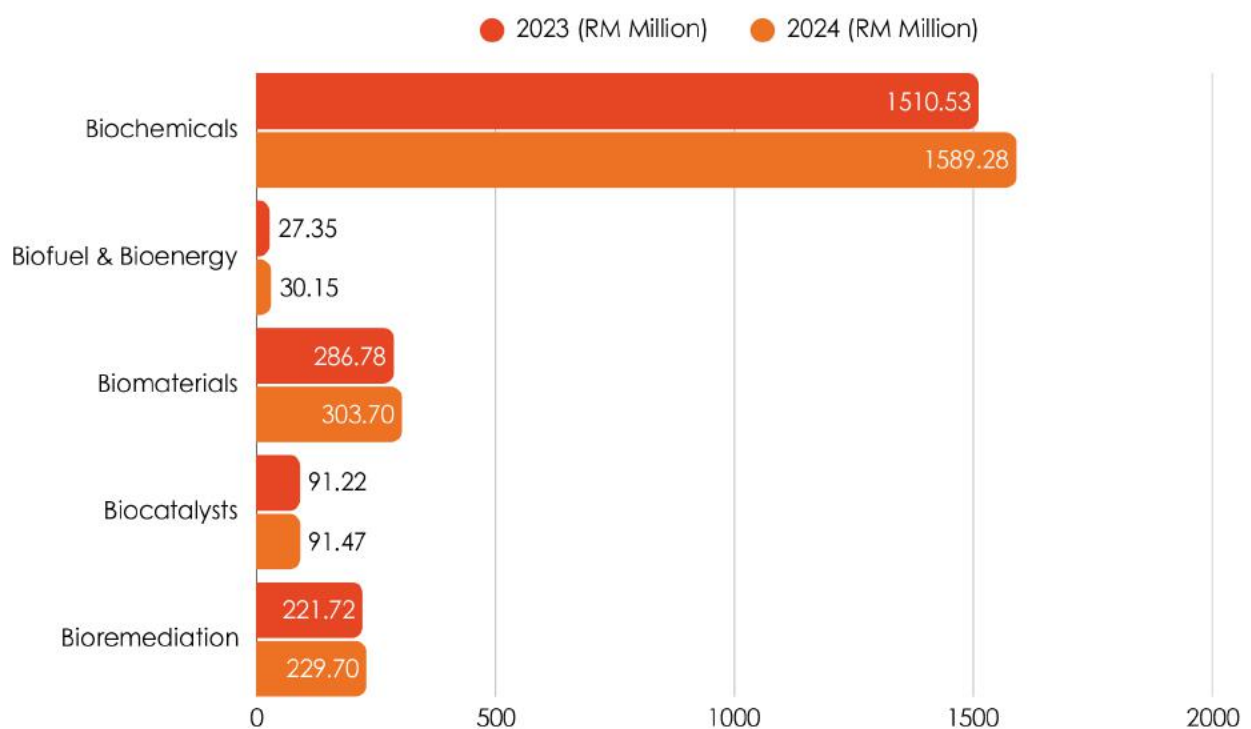
The table below highlights the key initiatives and impact achieved in this period.

Initiatives	Impact
Promoted BioNexus Status applications.	The number of applications in 2024 tripled compared to previous years.
Organised Sustainable Aviation Fuel (SAF) Panel Discussion at NBIOSHOWCASE 2024.	Brought together key stakeholders—PETRONAS, National Aerospace Industry Corporation Malaysia (NAICO), Boeing, Ecoceres, Malaysian Biomass Industries Confederation (MBIC), and MOSTI—to discuss Malaysia's SAF landscape, challenges, and opportunities.
Co-organised the 19th International Symposium on Biopolymers (ISBP) 2024.	Strengthened international collaboration and visibility in biopolymer research and industry.

Challenges & Strategic Responses

To address the challenges encountered and accelerate progress toward its strategic objectives, the Industrial Biotechnology subdivision undertook several targeted internal improvements and strategic responses in 2023–2024.

Challenges	Strategic Responses
Companies were still recovering from the pandemic and only beginning to consider new or additional investments for expansion and global market entry.	Introduced equity funding programmes that support business expansion for biotechnology companies.
Fragmented policies that limited business growth, such as weak national policies on bioplastics and biodegradable packaging.	Conducted stakeholder engagements, including the SAF Forum at NBIOSHOWCASE 2024 and ISBP 2024, to strengthen collaboration and awareness across the ecosystem.
Financial institutions were uncertain about funding bioindustrial projects due to limited understanding of the technology and associated risks.	Facilitated linkages between BioNexus Status and BBA companies with universities and experts to enhance R&D, strengthen project credibility, and build confidence among funders.

Industrial Biotechnology: Number of Key Projects by Focus Area**Industrial Biotechnology: Cumulative Approved Investments by Focus Area**

Industrial Biotechnology: Cumulative Approved vs New Investments by Company Status

	2023		2024	
	Cumulative Approved Investments (RM Million)	New Investments (RM Million)	Cumulative Approved Investments (RM Million)	New Investments (RM Million)
BioNexus Status	2,130.32	14.85	2,193.12	62.81
BBA Companies	7.29	0	51.19	0

2.5 Moving Forward

For 2025–2026, the IDD will move decisively from strategic planning into focused execution.

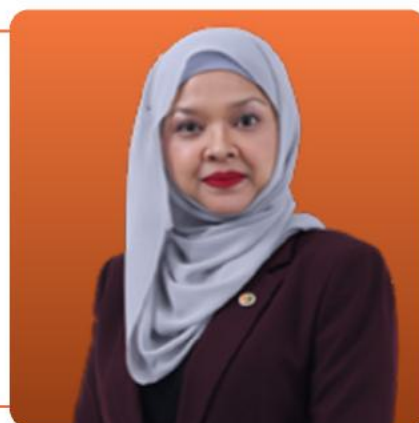
In 2025, the IDD will lay the necessary groundwork by identifying high-potential subsectors in alignment with national policies, including NBP 2.0 and the 13th Malaysia Plan. Based on this analysis, the IDD will design two complementary strategic initiatives: one focused on accelerating the growth of high-potential companies, and another dedicated to building supportive ecosystems for the selected subsectors.

In 2026, the IDD will transition into implementation by launching targeted acceleration programs for identified companies through platforms such as BioPartnering and the Global Expansion Driver. Concurrently, the IDD will initiate tailored interventions for the prioritised subsectors to address specific barriers, including regulatory frameworks and supply chain development.

This dual-track approach will drive both enterprise-level growth and broader sectoral advancement, directly contributing to Malaysia's bioeconomy objectives.

"The bioeconomy sector holds significant transformative growth potential, particularly through innovation and sustainability practices, which could revolutionise the industry, especially with the integration of AI and digital technologies."

- Ts. Soeraya Satem Ahmad, Senior Vice President, IDD



3.0 Industry Support

Targeted support to enable sustainable growth of bio-based companies in an increasingly competitive global landscape.



3.1 Overview

Providing robust industry support is critical to accelerating the growth and global competitiveness of Malaysia's bio-based sector.

To achieve this, Bioeconomy Corporation has implemented a range of initiatives aimed at strengthening companies' market access, enhancing technical capabilities, and fostering innovation. These initiatives include:

- 1. BioNexus Status**

A special status awarded to qualified biotechnology companies, giving them access to a comprehensive suite of incentives and facilitation services.

- 2. Bio-Based Accelerator (BBA) Programme**

A targeted programme that serves as a strategic pipeline for companies aspiring to attain BioNexus Status.

- 3. Market Access & Business Support (MABS)**

Programmes and initiatives designed to drive the growth of bio-based businesses by enabling their entry into new markets.

- 4. BioNexus Partners Laboratories (BNP Labs)**

A network of key facilities that provide industry access to their services, expertise, and resources.

3.2 BioNexus Status

Established in 2006 under Malaysia's NBP 2005-2020, BioNexus Status continues to serve as a strategic catalyst in positioning biotechnology as a key driver of national economic growth.

Awarded by the Malaysian Government through Bioeconomy Corporation, the designation recognises qualified local and international companies undertaking value-added biotechnology activities across the agricultural, healthcare, and industrial sectors.

As a core enabler of Malaysia's bioeconomy ambitions, the BioNexus Status supports export expansion, attracts high-value investments, and stimulates the creation of skilled employment opportunities.

During the 2023-2024 period, the number of qualified BioNexus Status companies grew to 352 nationwide, reflecting sustained industry confidence and continuous sectoral development.

Number of BioNexus Status Companies by State (as of 31 December 2024)



Number of BioNexus Status Companies by Industry (as of 31 December 2024)



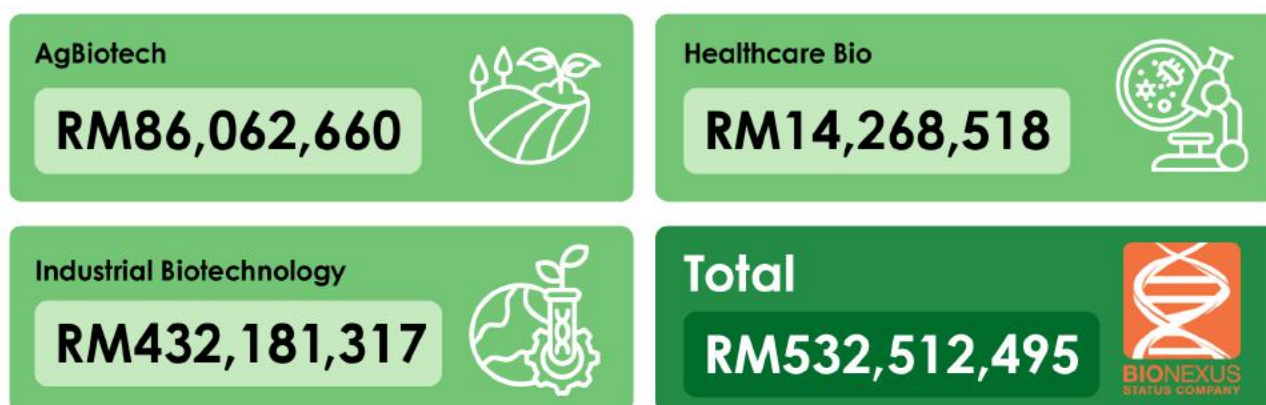
BioNexus Status Companies by Company Type (as of 31 December 2024)



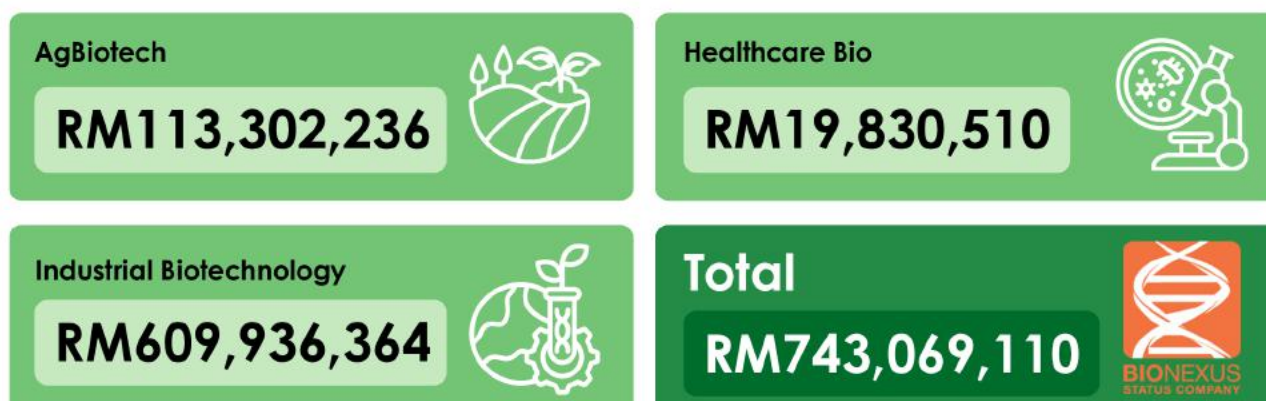
BioNexus Status companies benefit from a comprehensive suite of incentives and facilitation services, including fiscal incentives, funding opportunities, advisory support, and investment facilitation, enabling them to accelerate growth, commercialisation, and global market readiness.

With this support, BioNexus Status companies recorded export values of RM432.18 million in 2023 and RM743.07 million in 2024. This continued growth reflects the sector's rising global competitiveness and its critical contribution to Malaysia's ambition of securing a 5% bioeconomy share of GDP by 2030.

Export Value of BioNexus Status Companies by Industry (2023)



Export Value of BioNexus Status Companies by Industry (2024)



3.3 BBA Programme

Launched on 16 May 2022, the BBA programme was established to accelerate the growth of bio-based start-ups and SMEs.

Serving as a strategic pipeline for companies aspiring to attain BioNexus Status, the BBA programme provides targeted support to enhance technology readiness, strengthen regulatory compliance, and align business operations with value-added biotechnology requirements.

The programme focuses on companies across the agricultural, industrial, and healthcare sectors, addressing critical gaps in skills development, technology adoption, financing, regulatory preparedness, and market access.

Through structured facilitation, industry-led workshops, and business-matching activities, the BBA programme builds the capabilities and competitiveness of participating firms, ultimately preparing and guiding them toward eligibility for BioNexus Status.

By the end of 2024, the number of active companies participating in the BBA programme totalled 166, reflecting growing interest and confidence among bio-based enterprises in moving toward BioNexus Status.

Number of BBA Companies in 2023 -2024

Number of BBA Companies as of 31 December 2023

AgBiotech

29



Healthcare Bio

14



Industrial
Biotechnology

18



Total: 61

Number of BBA Companies as of 31 December 2024

AgBiotech

45



Healthcare Bio

35



Industrial
Biotechnology

25



Total: 105



Total Number of Companies Inducted
Into the BBA Programme in 2023-2024

166
companies

3.4 MABS

Our MABS department drives the growth of bio-based businesses by enabling their entry into new markets and strengthening their capacity to navigate and compete effectively. This is achieved through a comprehensive suite of programmes and initiatives organised under the following three key pillars:

1. Exhibitions & Trade Missions

Enhances market access and visibility for Malaysian bio-based products.

2. Strategic Partnerships & Collaboration

Strengthens the local and global presence of Malaysian bio-based products.

3. Business Matching, Networking & Trainings

Provide companies with training, tools, and networking opportunities to support market expansion.

The following table highlights the events and initiatives implemented under these pillars during 2023–2024.

Exhibitions & Trade Missions			
Date	Programme	Location	Impact
4-6 July 2023	Food & Drinks Malaysia by SIAL	Kuala Lumpur	Improved access to quality, innovative food products and sustainable bio-based food technologies.
12-15 September 2023	Malaysia International Halal Showcase (MIHAS) 2023	Kuala Lumpur	Promoted awareness and access to innovative Halal bio-based products. Helped local bio-based companies and food-based products grow from research stage to global markets.
19-21 September 2023	Smart Nation Expo 2023	Kuala Lumpur	Promoted smarter, more connected living through sustainable technologies. Created new bio-based business opportunities.
9-10 October 2023	Agro Middle East (AgraME) 2023	United Arab Emirates	Promoted sustainable agriculture, food security, and innovation. Generated leads for Malaysian biotechnology companies to form international partnership.
19-22 October 2023	Selangor International Expo 2023	Kuala Lumpur	Boosted access to healthcare innovations. Promoted adoption and export of sustainable bio-based food technologies.
17-20 September 2024	MIHAS 2024	Kuala Lumpur	Promoted awareness and access to innovative Halal products. Helped local bio-based companies and halal-based products grow from research stage to global markets.
30 October – 1 November 2024	Business and Investment Acceleration Programme 2024	Kazakhstan	Participating companies gained international exposure, export, and partnership opportunities in Central Asia and direct engagement with potential buyers and investors.
2-3 November 2024	Malaysia Fair 2024	Japan	Participating companies gained international exposure, export, and partnership opportunities in Japan and direct engagement with potential buyers and investors.

Strategic Partnerships & Collaborations			
Date	Programme	Location	Impact
11-13 May 2023	Karnival Bio	Kelantan	Promoted awareness and access to bio-based products and solutions. Attracted promising business leads and boost commercialisation.
5-7 July 2023	German - Malaysia Pharmaceuticals & Medical Biotechnology Industry Conference & Business Matching	Kuala Lumpur	Enhanced engagement of German pharmaceutical companies with innovative and high tech bio-based health and wellness solutions providers.
21-23 July 2023	Hari Koperasi Negara	Sabah	Promoted Bioeconomy Corporation's facilitation services. Accelerated business prospects, sales, and strategic partnerships for BioNexus Status and BBA companies.
1 November 2023	Flag Off Ceremony for the First Shipment of Bio-Smart Greenhouse Vegetables to Singapore	Singapore	Provided safer, pesticide-free vegetables and promoted smart farming awareness. Promoted high-value exports and local agri-tech innovation.
22-23 February 2024	KPKM Business Matching for Pan Pacific International Holdings (PPIM)	Putrajaya	Participating companies gained direct engagement with potential buyer for export market to Japan.
17-19 December 2024	Malaysia-China Summit 2024	Kuala Lumpur	Unlocked export and partnership opportunities in China and ASEAN.

Business Matching, Networking & Trainings			
Date	Programme	Location	Impact
3 October 2023	Mastering The Art of TikTok Shop	Putrajaya	Empowered entrepreneurs with practical skills to generate income through TikTok.
15 & 27 August 2024	ESG Webinar	Online	Equipped businesses with the knowledge and tools to adopt sustainable practices, improve resource efficiency, and meet global environmental and social standards.
15-16 October 2024	ESG Workshop: B Impact Assessment	Putrajaya	Educated bio-based companies on the requirements for ESG audit and compliance.
17 October 2024	Market Access Seminar: Domestic Market Access	Putrajaya	Helped BioNexus Status and BBA companies gain exposure to product demand and trends, developing market penetration strategy, and available market assistance to strategically expand their market.
23 October 2024	Market Access Seminar: International Market Access to China	Putrajaya	Helped BioNexus Status and BBA companies gain practical insights and develop effective market strategies to accelerate business expansion into China.
5 December 2024	Export like Expert: Japan	Putrajaya	Helped BioNexus Status and BBA companies gain practical insights and develop effective market strategies to accelerate business expansion into Japan.

3.5 BNP Labs

BNP Labs was established in 2008 as one of BioNexus Status' Bill of Guarantees. It also serves as a mechanism to provide access to bio-based services, expertise, and facilities that support the Research, Development and Commercialisation (R&D&C) needs of the bio-based industry.

The BNP Labs programme plays a role in implementing the NBP 2.0 by bridging the innovation gap between biotechnology R&D and the industry. This helps start-up companies, particularly in areas of R&D, technical expertise, and facilities, as these companies often lack the capability to manage such resources independently.

As of 2024, 38 laboratories have been awarded the BNP Labs status. These laboratories are available throughout Malaysia, including at renowned Institutions of Higher Learning (IHLs), Research Institutes (RIs), Government-Linked Companies (GLC), and Private Laboratories (PLs).

BNP Labs have various international and local accreditations, including:

- ✓ ISO 17025
- ✓ Good Laboratory Practice (GLP)
- ✓ American Association for Accreditation of Laboratory Animal Care (AAALAC)
- ✓ Hazard Analysis of Critical Control Point (HACCP)
- ✓ Good Manufacturing Practice (GMP)

In 2024 alone, BNP labs generated a combined revenue of RM67 million, reflecting their growing role in Malaysia's biotechnology ecosystem. They successfully secured 274 collaborations with industry players, research institutions, and start-ups, fostering knowledge exchange and innovation. Additionally, BNP labs delivered 394 completed services, ranging from advanced analytical testing and product validation to specialised technical support, demonstrating their commitment to accelerating commercialisation and strengthening the bio-based industry.

Revenue
RM67mil
generated in 2024



Services
394

completed in 2024 covering
marine, product development,
bioprocess engineering, food
technology, DNA & genetic

Collaborations
274

between BNP and individual/
industries/universities



The following table provides an overview of BNP Labs throughout Malaysia as of 31 December 2024.

No	List of the Laboratories/Units	Name of Institution/Company	Category	State
1	ALS Technichem (M) Sdn Bhd	ALS Technichem (M) Sdn Bhd	PLs	Selangor
2	Analytical Biochemistry Research Centre (ABrC)	Universiti Sains Malaysia (USM)	IHLs	Pulau Pinang
3	Analytical Unit (Biofertiliser Services Laboratory)	Universiti Teknologi Malaysia (UTM)	IHLs	Johor
4	Analytical Unit, Faculty of Pharmacy	Universiti Teknologi MARA (UiTM)	IHLs	Selangor
5	Bioequivalence Laboratory, University of Malaya Bioequivalence and Testing Centre (UBAT)	Universiti Malaya (UM)	IHLs	Kuala Lumpur
6	Biomedical Analysis Unit	Universiti Sains Malaysia (USM)	IHLs	Pulau Pinang
7	Bioprocess Engineering Laboratory	Universiti Teknologi Malaysia (UTM)	IHLs	Johor
8	Biosafety and Biocompatibility Laboratory, Industrial Biotechnology Research Centre	SIRIM Berhad	RIIs	Selangor

No	List of the Laboratories/Units	Name of Institution/Company	Category	State
9	Central Laboratory	Universiti Malaysia Pahang Al-Sultan Abdullah (UMPSA)	IHLs	Pahang
10	Environmental Technology Research Centre (ETRC)	SIRIM Berhad	RLs	Selangor
11	Fermentation Technology Unit, Faculty of Biotechnology and Biomolecular	Universiti Putra Malaysia (UPM)	IHLs	Selangor
12	Genetic Laboratory	Forest Research Institute Malaysia (FRIM)	RLs	Selangor
13	GLP & ISO Product Testing Laboratory	Melaka Biotechnology Corporation	GLCs	Melaka
14	GLP Preclinical Unit of the Advanced Medical and Dental Institute (AMDI)	Universiti Sains Malaysia (USM)	IHLs	Pulau Pinang
15	GMP Pilot Plant, Malaysian Institute of Pharmaceuticals & Nutraceuticals (IPHARM), NIBM	National Institute of Biotechnology Malaysia (NIBM)	GLCs	Selangor
16	Halvec Laboratories Sdn Bhd	Global Haltech Sdn Bhd	PLs	Kuala Lumpur
17	Herbal and Phytochemical Processing Laboratory	Universiti Teknologi Malaysia (UTM)	IHLs	Johor
18	Herbal Product Development Laboratory	Forest Research Institute Malaysia (FRIM)	RLs	Selangor
19	Herbal Technology Laboratory	Forest Research Institute Malaysia (FRIM)	RLs	Selangor
20	Human Identification/DNA Unit, School of Health Sciences	Universiti Sains Malaysia (USM)	IHLs	Kelantan
21	Industrial Fermentation and Bioseparation, IBRC	SIRIM Berhad	RLs	Selangor
22	Institute of Climate Adaptation and Marine Biotechnology (ICAMB)	Universiti Malaysia Terengganu (UMT)	IHLs	Terengganu
23	Institute of Nano Electronic Engineering	Universiti Malaysia Perlis (UMP)	IHLs	Perlis
24	Integrative Pharmacogenomics Institute (iPROMISE)	Universiti Teknologi MARA (UiTM)	IHLs	Selangor
25	KHTP Bio Analytical Laboratory Sdn Bhd	KHTP Bio Analytical Laboratory Sdn Bhd	GLCs	Kedah
26	Laboratory of Halal Services, Halal Products Research Institute	Universiti Putra Malaysia (UPM)	IHLs	Selangor
27	Makmal Bioserasi, Centre for Research and Instrumentation Management (CRIM)	Universiti Kebangsaan Malaysia (UKM)	IHLs	Selangor
28	Metabolite Profiling Laboratory	Universiti Teknologi Malaysia (UTM)	IHLs	Johor

No	List of the Laboratories/Units	Name of Institution/Company	Category	State
29	Microscopy Unit, Institute of Bioscience	Universiti Putra Malaysia (UPM)	IHLs	Selangor
30	NMR Laboratory, Malaysia Genome and Vaccine Institute (MGVI), NIBM	NIBM	GLCs	Selangor
31	Orthopaedic Research Laboratory	International Islamic University Malaysia (IIUM)	IHLs	Pahang
32	Pharmaceutical Design and Simulation Laboratory, School of Pharmaceutical Sciences	Universiti Sains Malaysia (USM)	IHLs	Pulau Pinang
33	Pharmacognosy Laboratory	Forest Research Institute Malaysia (FRIM)	RIIs	Selangor
34	Phytochemistry Laboratory	Forest Research Institute Malaysia (FRIM)	RIIs	Selangor
35	Phytopharmaceutical Development Facility	Malaysian Nuclear Agency	RIIs	Selangor
36	Proteomics Laboratory, Malaysia Genome and Vaccine Institute (MGVI), NIBM	NIBM	GLCs	Selangor
37	Tissue Culture Laboratory	Forest Research Institute Malaysia (FRIM)	RIIs	Selangor
38	UNIQE Sdn Bhd	UNIQE Sdn Bhd	PLs	Selangor

Key Projects in 2023–2024

In addition to delivering comprehensive laboratory services and technical support, BNP Labs also undertakes a range of strategic initiatives to advance the growth of the bio-based sector.

The table below highlights the key projects and the impact achieved during 2023–2024.

Business Matching, Networking & Trainings			
Date	Programme	Participants	Impact
23 June 2023	Teh Tarik Session	23 BNP Labs	Strengthened collaboration across the BNP Labs' network through open dialogue and knowledge-sharing. Collected valuable industry feedback to enhance joint initiatives and project alignment.
5 July 2023	Teh Tarik Session II	12 BNP Labs	Identified new opportunities for innovation and commercialisation within the bio-based sector.
6 February 2024	BNP Way Forward Launching & Certificate Award	38 BNP Labs	Recognised and renewed the certifications of BNP Labs. 38 labs strategically positioned to support Malaysia's biotechnology industry under the national bioeconomy mandate.
11 June 2024	BNP Business Matching	25 BNP Labs, 58 participants	Provided a pitching platform connecting BioNexus Status and BBA companies with BNP Labs for R&D, commercialisation, and industrialisation. Enabled bio-based startups and SMEs to access lab expertise. 18 projects pitched, contributing to growth in Malaysia's bioindustrial output.
12 November 2024	FundSphere Connect	17 BNP Labs, 34 researchers	Served as a one-stop hub connecting bio-based companies, government agencies, and private sector stakeholders. 17 labs successfully established partnerships, translating R&D into market-ready applications.

3.6 Moving Forward

In the coming years, Bioeconomy Corporation will strengthen and expand its industry support initiatives to maintain momentum in enhancing market access for the bioeconomy. These efforts are aligned with the targets of NBP 2.0, particularly in nurturing BioNexus Status companies and ensuring that at least 30% of these companies establish a presence in international markets.

4.0 Advisory & Growth Services

Enhancing the capabilities of bio-based companies through regulatory, fiscal, and funding support.



4.1 Overview

Malaysia's bio-based companies continue to face challenges in regulatory compliance, access to funding, and talent development amid an increasingly competitive global landscape.

To address these critical gaps, Bioeconomy Corporation provides targeted support through its Business Advisory and Business Development departments. These services enhance the capabilities of bio-based enterprises by guiding them through complex regulatory, fiscal, and funding environments, enabling sustainable growth, and creating a chain of transformative impact.

4.2 Business Advisory

The Business Advisory department at Bioeconomy Corporation plays a pivotal role in supporting the growth of Malaysian bio-based companies through its three key units: Tax Advisory, Regulatory & Intellectual Property (IP) Advisory, and Immigration Advisory.

This multifaceted support addresses critical business needs, ranging from tax planning and compliance to regulatory alignment, IP protection, and expatriate talent facilitation.

Malaysian companies in the biotechnology and bio-based industries face increasingly complex challenges due to evolving regulatory landscapes, stringent tax compliance requirements, and the need for specialised talent to fuel innovation.

The advisory services provided are essential in helping these companies to navigate statutory obligations efficiently while maximising available incentives and opportunities, which in turn strengthen their competitiveness in both domestic and global markets.

In 2023–2024, Business Advisory focused on several strategic priorities:

1. Delivering targeted technical training to BioNexus Status, BBA, and bio-based companies to deepen their understanding of tax, IP, regulatory, and expatriate matters.
2. Offering tailored advisory and facilitation services to ensure companies are fully prepared for statutory obligations and can leverage available incentives.
3. Expanding engagement channels and building stronger partnerships with key government agencies and industry bodies such as *Unit Peneraju Agenda Bumiputera* (TERAJU), NIBM, and Halal Development Corporation (HDC), to offer more comprehensive and accessible business solutions.

Creating Impactful Change

In mid-2023, the Malaysian government introduced the Xpats Gateway system to improve the speed, transparency, and ease of the expatriate employment pass process, supporting Malaysia's goals of attracting and managing foreign talent efficiently across key economic sectors, including biotechnology and bio-based industries.

This single-window platform integrates approvals across multiple agencies, including the Bioeconomy Corporation, accelerating the hiring of expatriate professionals and ensuring transparency throughout the process.

The introduction of the new Xpats Gateway expatriate pass system brought significant changes to service processes, resulting in fewer facilitation requests as employers were able to manage applications directly.

Concurrently, the Business Advisory department shifted fully to virtual technical training in 2023–2024 to seamlessly align with the new Xpats Gateway system. This transition adds further value to employers by providing them with faster access to advisory services while maximising support for the new systems.

To ensure seamless alignment, the Business Advisory department focused on:

1. Maximising advisory value and economic contribution for high-impact companies, including BioNexus Status, BBA, and promising bio-based companies.
2. Expanding and enhancing virtual training, improving engagement, and ensuring content remains current with evolving regulatory and tax frameworks.
3. Strengthening team capacity to enable more effective programme delivery and long-term sustainability.

4.2.1 Tax Advisory

The Tax Advisory unit actively assists companies in managing tax-related issues through direct liaison with agencies such as the Inland Revenue Board Malaysia (IRBM), Ministry of Finance, Royal Malaysian Customs Department, and Malaysian Investment Development Authority (MIDA).

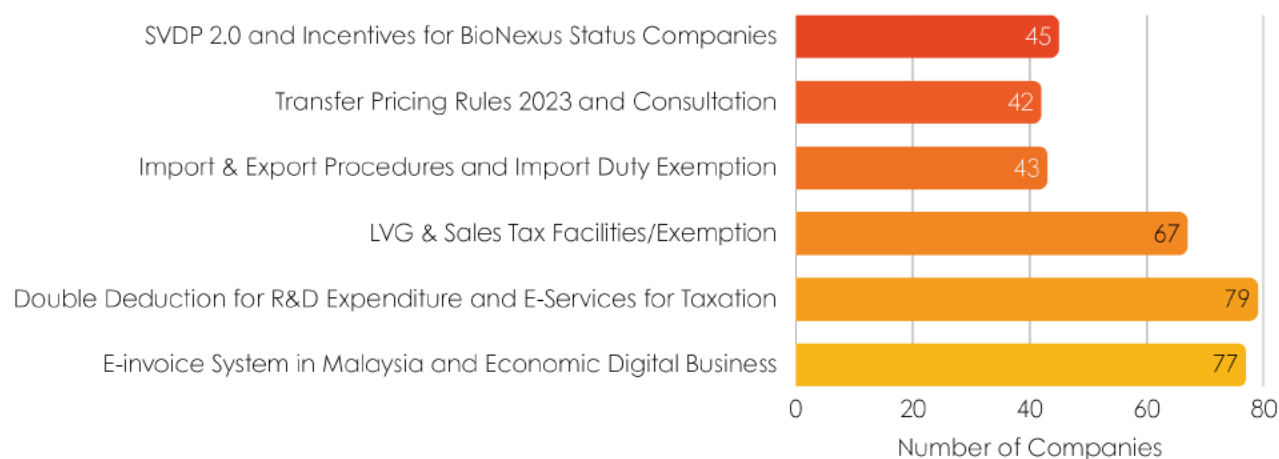
It shapes tax policies supporting the bioeconomy and delivers tailored training to help companies understand tax incentives and explore tax-saving opportunities.

The following highlights the training programmes delivered as a webinar via Zoom and the impact generated through Tax Advisory Services during 2023–2024.

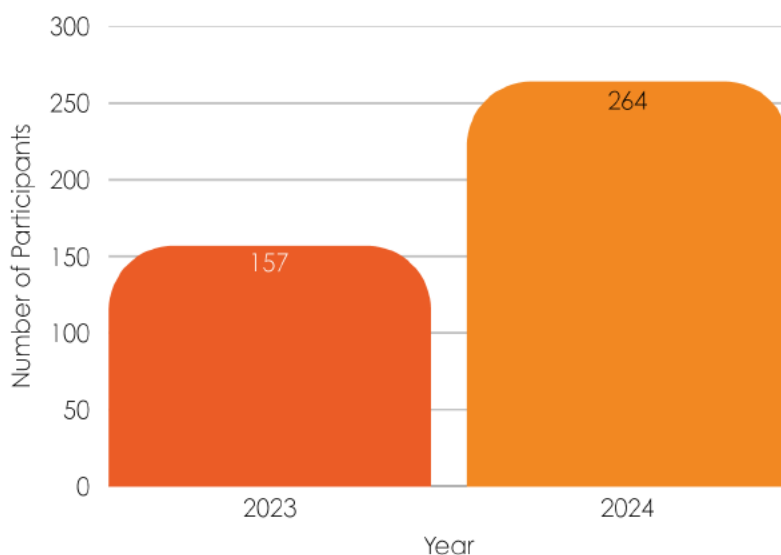
Webinar Training Programmes Conducted in 2023–2024

Date	Programme	Key Results
12 September 2023	Special Voluntary Disclosure Programme 2.0 (SVDP 2.0) and Incentives for BioNexus Status Companies	Enhanced tax compliance and awareness of available incentives, enabling companies to make informed financial decisions.
13 September 2023	Transfer Pricing Rules 2023 and Consultation	Improved understanding of the updated Transfer Pricing Rules 2023, helping companies reduce tax risks, enhance transparency, and align with global standards.
14 September 2023	Import & Export Procedures and Import Duty Exemption	Deepened understanding of import/export regulations and duty exemptions, enabling cost reduction and improving market competitiveness.
27 June 2024	Low Value Goods (LVG) & Sales Tax Facilities/Exemption	Strengthened understanding of LVG regulations and sales tax facilities, enabling better compliance, cost reduction, and supply chain optimisation.
30 July 2024	Double Deduction for R&D Expenditure and E-Services for Taxation	Guided companies to achieve greater tax savings, thus encouraging innovation and reducing compliance burdens.
31 July 2024	E-Invoice System in Malaysia and Economic Digital Business	Guided companies to adopt the e-Invoice system, improving tax compliance, efficiency, and digital readiness.

Number of Companies Trained Per Programme in 2023–2024



Number of Participants Trained Per Programme in 2023–2024



4.2.2 Regulatory & IP Advisory

Regulatory compliance and IP protection are critical to business success in biotechnology, ensuring responsible practices and safeguarding innovation. The Regulatory & IP Advisory unit enhances advisory services, provides ongoing training, and actively develops frameworks to promote biosafety, accreditation, access, and benefit-sharing compliance.

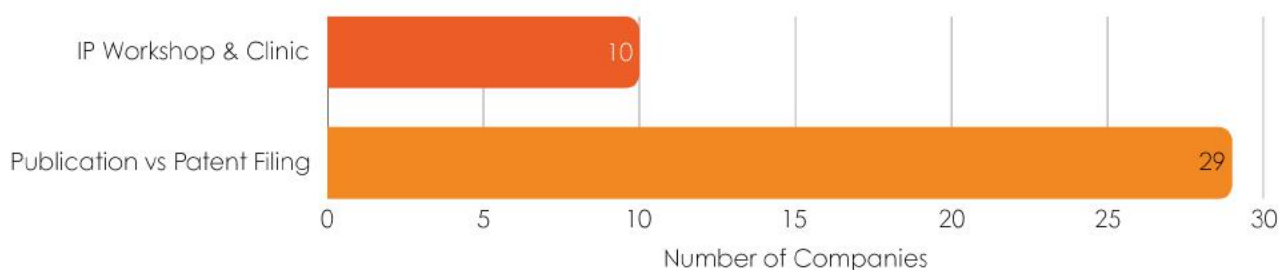
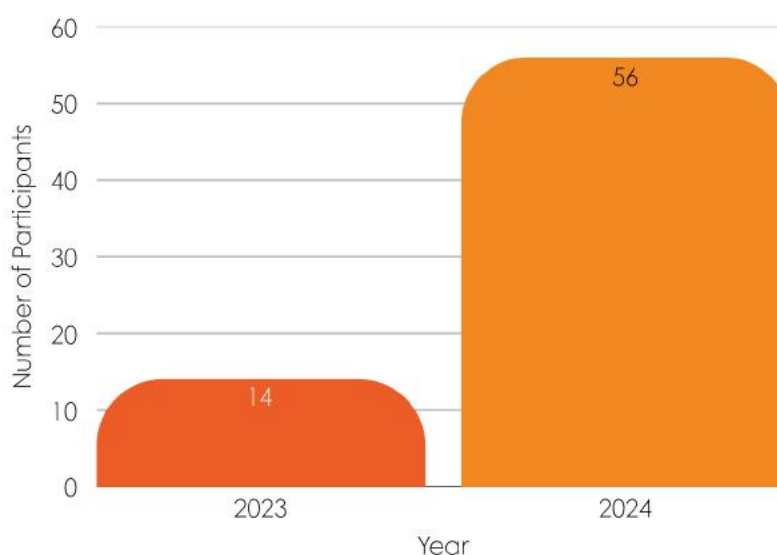
Key strategies include strengthening regulatory and IP frameworks for global market access, fostering

collaborative ecosystems between public and private sectors, and integrating business intelligence for improved service delivery. The unit remains committed to continuous stakeholder engagement and advocacy to address industry concerns.

The following highlights the training programmes delivered as a webinar via Zoom and the impact generated through Regulatory & IP Advisory during 2023–2024.

Workshops Conducted in 2023–2024

Date	Programme	Key Results
17-18 October 2023	IP Workshop & Clinic @ Mercure Hotel, Putrajaya	Strengthened participants' capacity to leverage IP as a strategic asset, enabling better protection, valuation, and commercialisation of innovations.
17 November 2024	IP Webinar 2024: Publication vs Patent Filing	Equipped researchers and entrepreneurs to make strategic IP decisions, balancing publishing and patenting to protect innovations, support commercialisation, and boost Malaysia's bioeconomy with more patentable, market-ready technologies.

Number of Companies Trained Per Programme (2023–2024)**Number of Participants Trained Per Year (2023–2024)**

4.2.3 Immigration Advisory

Addressing talent gaps remains central to fostering innovation in Malaysia's biotechnology and bio-based industries. In 2023–2024, the Immigration Advisory unit played a pivotal role in enabling impactful change by strengthening systems that connect companies with the specialised global expertise they need to thrive.

The unit oversees end-to-end advisory and consultancy services for Foreign Knowledge Worker (FKW) applications, including:

- Employment Passes (EP)
- Residence Pass–Talent (RP-T)

As the central coordination point for expatriate post-approvals, Immigration Advisory provides:

- Expert guidance on eligibility, documentation, and regulatory compliance.
- Close liaison with relevant authorities to streamline processes.

These services ensure smoother application processes, stronger compliance, and timely access to critical talent.

By facilitating the entry of skilled foreign professionals, the unit enables:

- Research and product development in advanced biotechnology fields.
- Knowledge transfer and skills enhancement for the local workforce.
- Retention of vital expertise, strengthening Malaysia's bioeconomy foundation.

The Immigration Advisory continues to address key industry challenges, such as limited awareness of current FKW requirements, documentation gaps, and compliance issues that can delay or hinder applications. To mitigate these, it conducts targeted awareness sessions and one-on-one consultations to help companies prepare and submit complete applications efficiently.

Strong partnerships with regulatory bodies, including MYXpats Centre, SOCSO, Jabatan Tenaga Kerja Semenanjung Malaysia, and the Immigration Department of Malaysia, have further improved issue resolution and coordination. Additionally, early document vetting and advisory support help reduce the risk of delays or rejections.

These efforts align with the Government's digital governance initiatives, particularly with the newly launched Xpats Gateway. The lasting impact created includes:

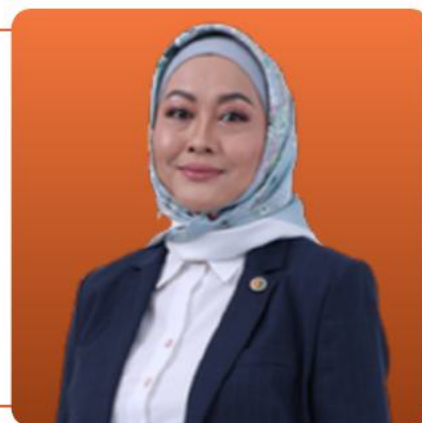
- Streamlined foreign talent facilitation in the biotechnology sector.
- Enhanced Malaysia's attractiveness to high-value investors.
- Supported impactful change by ensuring access to global expertise critical for sustained innovation and growth.

Key Outcomes in 2023-2024

Focus Area	Outcome
Advisory & engagement	Consistently positive feedback highlighting advisory quality and responsiveness.
Awareness building	Targeted sessions and one-on-one consultations improved company readiness.
Efficiency gains	Early document vetting reduces the risk of delay or rejection.
Collaboration	Strengthened coordination with MYXpats, SOCSO, JTKSM, and the Immigration Department.
Digital transformation	Alignment with the Xpats Gateway launch (June 2023) streamlined Employment Pass processes.

"Participant and client feedback has been consistently positive, particularly in recognising the value of our technical training and advisory services in tax, regulatory, IP, and expatriate matters."

- Puan Nora Mohamed, Senior Vice President, Industry Support Division



4.3 Business Development

Overview

Access to capital is the lifeblood of innovation and growth within Malaysia's biotechnology and bio-based industries. To strengthen this foundation, the Funding Access unit of ISD plays a dual role through its funding advisory and funding access initiatives.

Creating Impactful Change

Through this integrated Business Development ecosystem, Bioeconomy Corporation continues to deliver impactful change that helps bio-based companies in Malaysia move from idea to market, from local potential to global presence, and from early-stage ambition to sustained economic impact.

Beyond funding, this ecosystem creates ripple effects of progress including fostering innovation, creating high-value jobs, strengthening local supply chains, and attracting international collaboration.

These outcomes align closely with the NBP 2.0, creating a lasting impact that drives Malaysia's bioeconomy forward and supports the nation's aspiration to become a regional bioeconomy powerhouse.

4.3.1 Funding Advisory

The Funding Access unit acts as a vital enabler for BioNexus Status, BBA, and bio-based companies, providing expert guidance on funding linkages and strategies.

By connecting companies with financial institutions, venture funds, and alternative financing platforms, the unit helps bridge critical funding gaps. It also strengthens financial literacy and market insight through tailored training and advisory programmes.

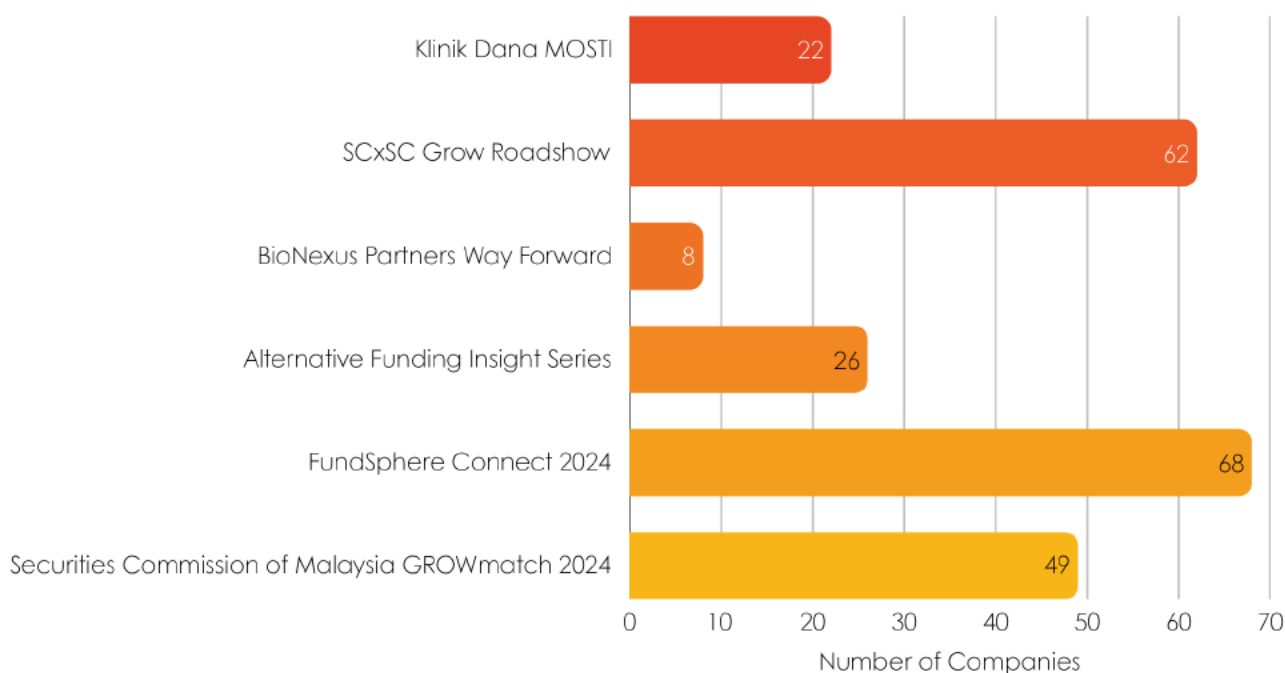
This unit helps BioNexus Status, BBA, and bio-based companies to access the funding they need for sustainable growth and success by:

- Connecting companies with development and commercial financial institutions, crowdfunding platforms, and other funding sources.
- Providing consultation on funding strategies and opportunities.
- Equipping companies with knowledge and tools tailored to their unique financial requirements and long-term plans.
- Training programmes to meet the varying needs of each BioNexus Status and BBA company.

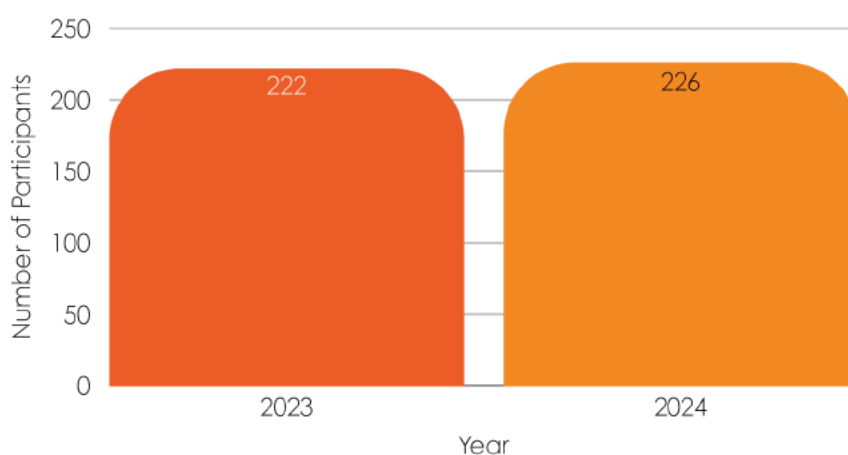
Funding Advisory Programmes Conducted in 2023–2024

Date	Programme	Key Results
15 August 2023	Klinik Dana MOSTI @ Menara Z10, Putrajaya	Enhanced knowledge and readiness for R&D funding applications of bio-based products.
4 October 2023	SCxSC Grow Roadshow and Bioeconomy Corporation Conference @ Securities Commission Malaysia	A total of 10 exhibitors and 4 pitching companies showcased their innovative, high-growth bio-based products, successfully raising RM500,000 through the IPivot crowdfunding platform.
May - December 2023	Program Modenisasi Rantaian Nilai Agromakanan (PMRNA) @ Ministry of Agriculture and Food Security	Companies that received financing support under PMRNA: <ul style="list-style-type: none"> • Creative Imagine Sdn Bhd: RM250,000 • Entomal Biotech Sdn Bhd: RM450,000 • Circafeed Sdn Bhd: RM500,000
January & September 2024	Funding Support and Facilitation	Companies received financing support from alternative funding and agencies: <ul style="list-style-type: none"> • IGI International Sdn Bhd – IPivot RM500,000 • Dunita International Sdn Bhd – Cradle Fund RM500,00 • Creative Imagine - September 2024 Funding Societies RM40,000
28 May 2024	BioNexus Partners Way Forward @ Universiti Malaysia Terengganu	Enhanced knowledge and readiness for R&D funding of BioNexus Partners Laboratories.
26 June 2024	Alternative Funding Insight Series @ Mystertr, Kuala Lumpur	Raised awareness of alternative financing opportunities and crowdfunding for bio-based companies, especially in ECF for bio-based sectors.
16 August 2024	Securities Commission of Malaysia GROWmatch 2024 @ Securities Commission Malaysia	Out of 20 companies that progressed to the final stage, 11 were bio-based companies highlighting the growing attractiveness and competitiveness of the bio-based sector.
12 November 2024	FundSphere Connect 2024 @ Pulse Grande Hotel, Putrajaya	A total of 16 exhibitors participated in the event, generating 121 engagements with participants from government and private sectors.

Number of Companies Trained Per Programme (2023–2024)



Number of Participants Trained Per Year (2023–2024)



4.3.2 Funding

As part of our commitment to advance bioinnovation and recognising that innovation requires not only ideas and expertise, but also access to strategic financial support, we've established two specialised funding programmes.

Biotechnology Commercialisation Fund (BCF)

The BCF is a financing scheme for business expansion and ongoing commercialisation of biotechnology and bio-based products and services.

The BCF provides financial support for biotech companies focused on commercialising innovative products and solutions. This fund is designed to help bio-based companies bring their ideas to market, scale up production, and make a meaningful impact in the industry.

Agro-based Venture Fund (AGVF)

The AGVF is an equity funding programme developed to invest, assist, and support agricultural, bio-based, and agritech activities.

The AGVF is tailored for bio-based startups and companies seeking to grow their operations and introduce sustainable innovations in the bio-based sectors. With this fund, bio-based companies will have the resources to expand their reach, improve their processes, and create sustainable solutions for the future.

AGVF Applications & Approvals in 2023-2024		
State	Number of Companies Applied	Number of Companies Approved
Pulau Pinang	1	1
Selangor	3	2
Negeri Sembilan	2	0
Wilayah Persekutuan	2	1
Johor	1	1
Total	9	5

4.4 Moving Forward

The Industry Support Division will pursue new collaborations, including a partnership with the Forest Research Institute Malaysia (FRIM) to provide digital marketing training under the HerbaXpress platform.

Additionally, a comprehensive Halal Programme will be launched in collaboration with JAKIM, HDC, and others, offering end-to-end support for market readiness and expansion.

There will also be a return to more physical training sessions to enhance engagement and networking opportunities, alongside continued updates and facilitation in tax, IP, regulatory, and expatriate matters.

5.0 BioIndustry Talent Development

Strengthening the nation's bioeconomy talent pipeline to build a highly-skilled workforce driven by innovation and knowledge.

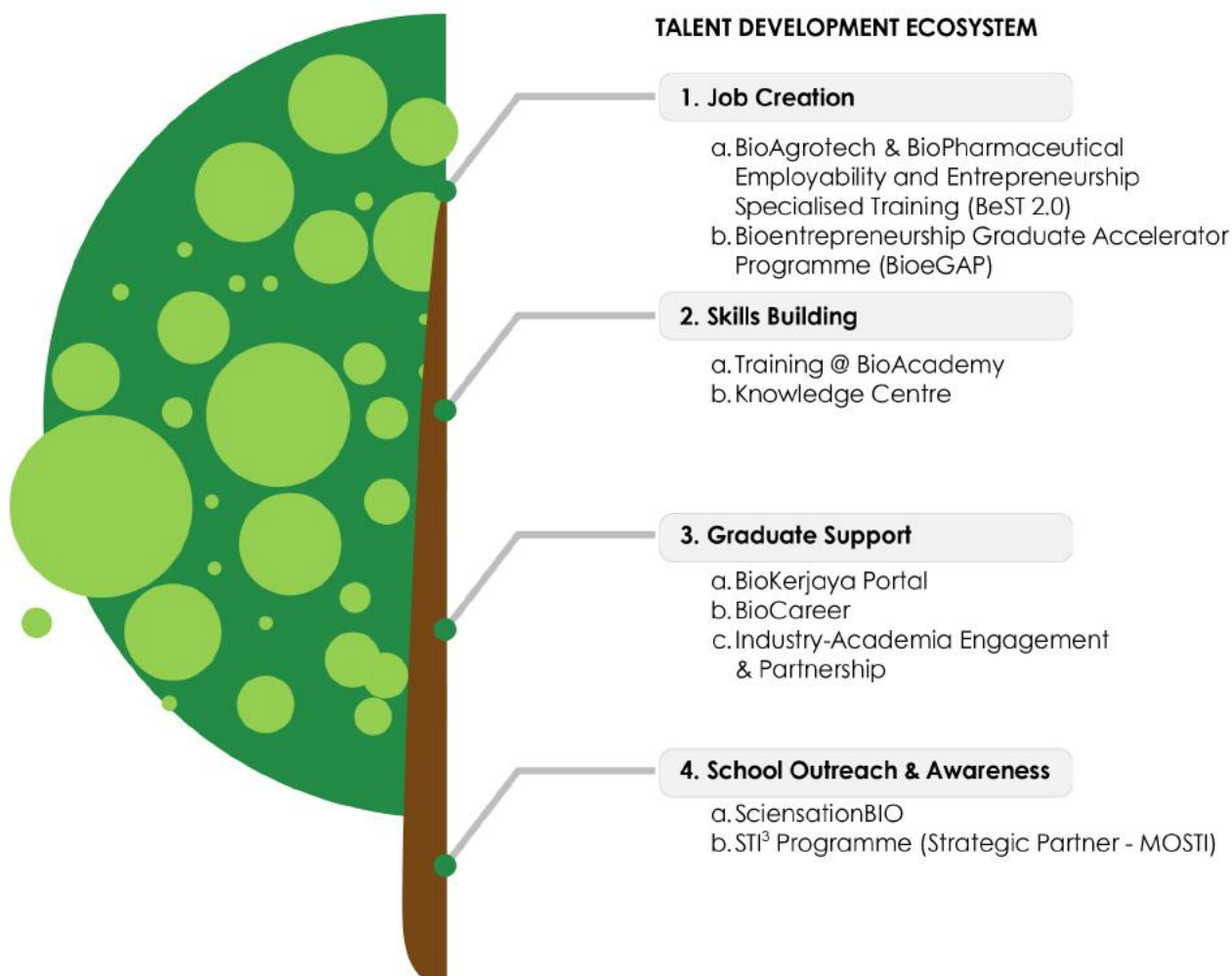


5.1 Overview

Talent development remains a cornerstone of Malaysia's ambition to build a vibrant and competitive bioeconomy driven by innovation, knowledge, and a highly skilled workforce.

As the lead agency for national bioeconomy talent development, Bioeconomy Corporation spearheads a comprehensive talent development ecosystem designed to cultivate capabilities from early awareness all the way to workforce placement.

This structured approach strengthens the nation's bioeconomy talent pipeline, supported by a suite of programmes across four key areas.



"BioAcademy aims to support the growth of Malaysia's biotechnology and bio-based industries by developing a highly skilled, industry-ready workforce through industry-centric talent development programmes."

- Encik Fadzin Azwar Abdul Aziz, Senior Vice President, Strategic Ventures



5.2 BeST 2.0

The BeST 2.0 programme is a six-month Place-Train-Hire initiative designed to enhance graduate employability in the biotechnology and bio-based industries. It provides participants with practical industry experience, technical skills, and personal development, culminating in opportunities for permanent employment at host companies in response to a rapidly evolving technological landscape.

Since its launch as BeST 1.0 in 2007, the programme has addressed key challenges, including the shortage of industry-ready talent, limited graduate exposure to real-world biotechnology operations, and the absence of structured pathways linking academic learning to industry needs. The programme serves as a public-private partnership (PPP) that brings together the government, industry players, and Institutions of Higher Learning (IHLs) to strengthen Malaysia's biotechnology talent ecosystem.

Today, BeST 2.0 serves as a trusted pipeline of skilled and innovative talent for the rapidly evolving biotechnology and bio-based industries, recognising graduates through its micro-accreditation system and contributing to Malaysia's vision of becoming a high-tech nation by 2030.

Building the Next Generation of Biotechnology Talent

Industry-Relevant Talent Development

Equips graduates with relevant soft skills, industrial awareness, and technical skills.

Expanding the Workforce

Increases skilled professionals to drive innovation and growth.

Supporting National Goals

Aligned with NBP 2.0 through the recognition of 80% of biotechnology graduates under the micro-accreditation programme.

Mutual Value

Prepares graduates for careers while companies gain industry-ready talent.

Trainings Offered under BeST 2.0

Training Programme	Skills Covered
Soft Skills Training	<ul style="list-style-type: none"> Mindset Change Personal Branding & Professional Grooming Effective Communication & Storytelling Design & Creative Thinking Building Adaptability & Resilience Leadership & Team Building
Industry Awareness Training	<ul style="list-style-type: none"> Good Manufacturing Practice (GMP) Good Laboratory Practice (GLP) Hazard Analysis and Critical Control Points (HACCP) Environmental, Social and Governance (ESG) Best Aquaculture Practices (BAP) Malaysian Good Agricultural Practices (MyGAP) Halal Certification Occupational Safety and Health Administration (OSHA)
Bioprocess/Microbial Technical Training	<ul style="list-style-type: none"> An Overview of Industrial Microbiology Handling of Basic Equipment Isolation, Preservation and Improvement of Industrial Microorganism Usage of Microbes in Food, Healthcare and Pharmaceutical Industries Microbial Observation Aseptic Technique in Animal Cell Cultures
Scientific Communication Technical Training	<ul style="list-style-type: none"> Discover Your Sales Profile Digital Communication in Science Writing Science and Hands-on Session Speaking of Science and Hands-on Session Business Development Skills Session Social Media and Digital Marketing Customer Service and Selling Skills Session
Biomedical & Bioinnovation Technical Training	<ul style="list-style-type: none"> Good Laboratory Practice (GLP) Non-Conformities Exercise Product Development Process Flow Presentation of Product Development Flow Chart Identifying the Unmet Medical Needs Planning and Setting up a Clinical Validation Study Process and Application of Institutional Review Board (IRB) Clinical Study: Good Documentation Practice
Biopharmaceutical Industries Technical Training	<ul style="list-style-type: none"> Quality Management in Pharmaceutical Introduction to Quality Control (QC) Engineering Aspect of Stirred Tank Bioreactor General Principles and Key Personnel Cleanroom Behavior Cross Contamination Premises and Equipment Setting-up Bioreactor System

Training Programme	Skills Covered
Biotechnology Technical Training	<ul style="list-style-type: none"> Microbe & Heavy Metal Analysis Principles of Aseptic Techniques & Cleanroom Behavior Introduction to Proteomics & Sample Preparation Bioprocess Technology & Effective Microbes Introduction to Design of Experiments PCR Techniques & DNA Sequencing Herbal Extraction & QA/QC
Biocosmeceutical Technical Training	<ul style="list-style-type: none"> Good Practice for the Production of Herbal Extracts Laws and Regulations for Producers and Manufacturers Herbal Product Registration Challenges in Herbal Authentication and Standardisation Cosmetic Formulation Traditional vs Scientific Bioactivity Study Cosmetic and Skin Care Cosmetic Hands-on Training Cosmetic GMP (Good Manufacturing Practice)
Bioentrepreneurship / Agropreneurship Technical Training	<ul style="list-style-type: none"> Entrepreneurial Mind Growth Hacking ESG into Business Funding Available for Entrepreneurs Design Thinking 101 Application in Problem Solving & Ideas Implementation of Ideation to Prototype Branding & Position Strategy Customer Relationship Management SEO, SEM, E-commerce & Google Trends + Ads Social Media Marketing, Chat GPT & Content Creation Mobile Marketing & Video Editing Survey & Questionnaires
Agriculture Biotechnology Technical Training (Smart Farming)	<ul style="list-style-type: none"> Post-Harvest Technology & Produce Preservation Farm Management MyOrganic Certification Precision @ Smart Farming Through Wireless Sensor Network System with IOT Hydroponic System Set Up Fertigation Techniques Biostatistic / Data Analytics For Agriculture

BeST 2.0 Training & Placement (2023–2024)

Batch	Training Period	Placement Period	Host Companies Location
2023: Batch 1	March 2023	April–September 2023	Kuala Lumpur Melaka Negeri Sembilan Perak Selangor
2023: Batch 2	July 2023	August–December 2023	Kuala Lumpur Melaka Perak Pulau Pinang Selangor
2023: Batch 3	August 2023	September 2023–January 2024	Johor
2023: Batch 4	November 2023	December 2023–April 2024	Johor Kuala Lumpur Melaka Negeri Sembilan Perak Pulau Pinang Sabah Selangor
2023: Batch 5	January 2024	February–June 2024	Johor Kuala Lumpur Negeri Sembilan Perak Perlis Sabah Sarawak Selangor
2024: Batch 1	February 2024	March–August 2024	Sabah Sarawak
2024: Batch 2	May 2024	June–October 2024	Johor Kedah Kuala Lumpur Melaka Negeri Sembilan Perak Pulau Pinang Sabah Selangor
2024: Batch 3	October 2024	November 2024–March 2025	Johor Kedah Kuala Lumpur Melaka Perak Pulau Pinang Sabah Sarawak Selangor



MYmAb Biologics Sdn Bhd

Selangor

Healthcare Biotechnology & Wellbeing

"Our commitment goes beyond innovation in the lab—we are investing in the future of Malaysia's biotechnology ecosystem. By hosting and training young talents through the BeST 2.0 programme, MYmAb Biologics is contributing to a more robust, competitive, and sustainable biotechnology industry in the region."

Central Corporate Engineering

Selangor

Industrial Biotechnology & Circular Economy

"Throughout the BeST 2.0 programme, we've had the opportunity to contribute to the community by providing technical and industrial training to passionate young graduates. This initiative allows us to share real-world experience, develop practical skills, and help aspiring talents build meaningful careers in science and biotechnology."



Sunway XFarms Sdn Bhd

Selangor

Agriculture Biotechnology & Food Security

"The BeST 2.0 programme has a very structured format, in which it is a 1 + 5-month programme. The first month's specialised training equips the graduate with different skills and knowledge about the industry."



Now serving as an R&D Engineer, Munirah credits the BeST 2.0 programme for enhancing her approach to developing sustainable solutions at Airstec Innovations. She is also responsible for ensuring that processes comply with all regulatory and safety requirements.

- **Munirah Mohamad**, R&D Engineer, Airstec Innovations (Kuala Lumpur)

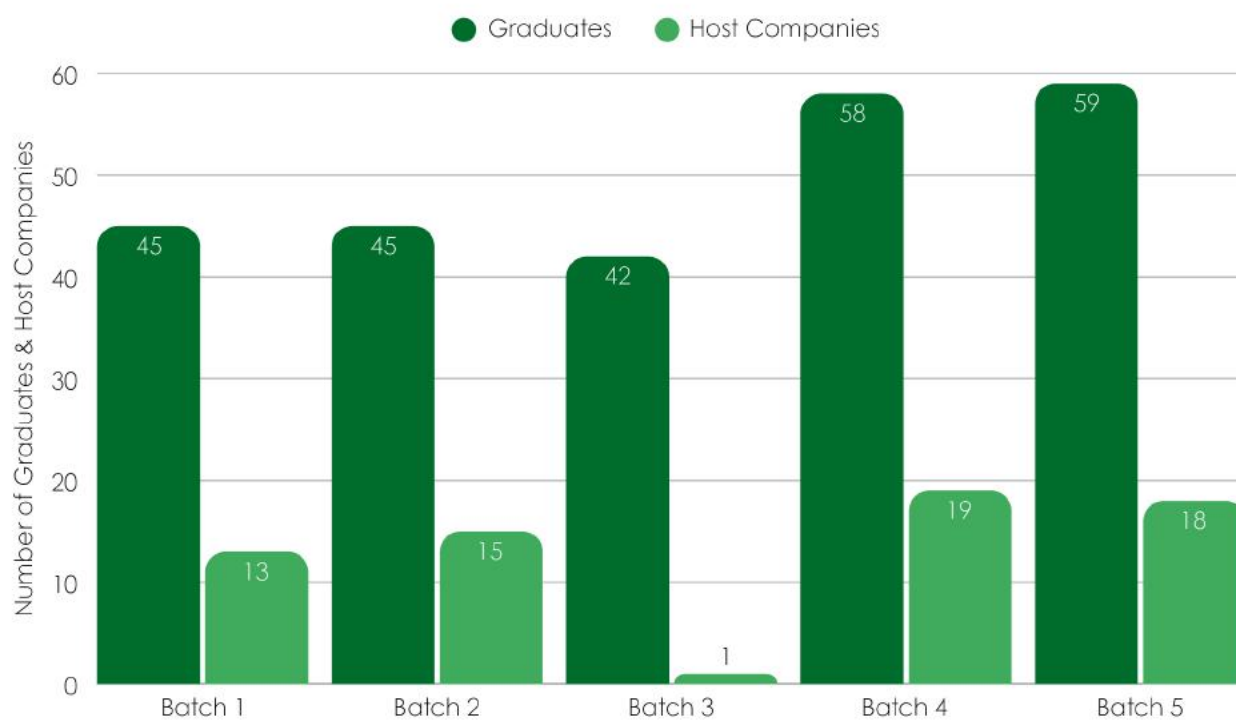
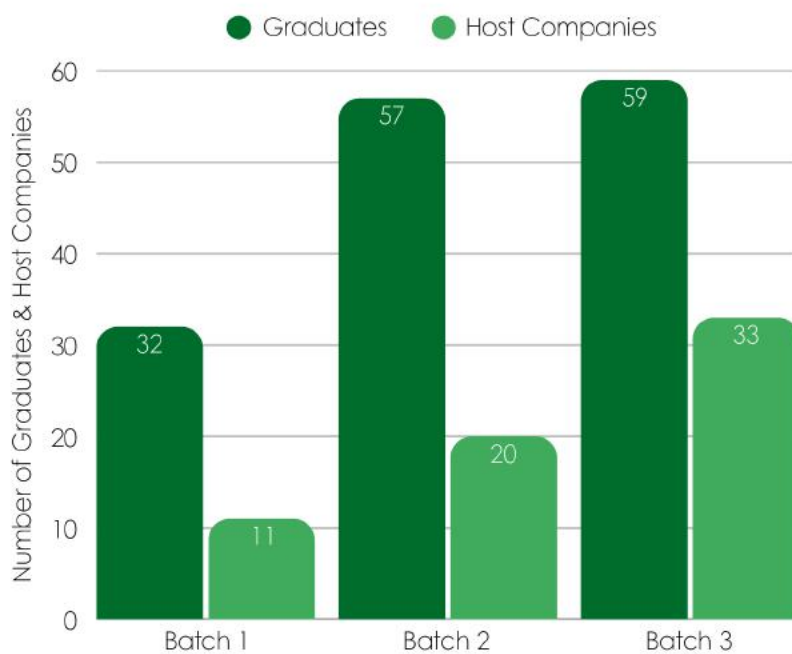
"BeST 2.0 has equipped me with invaluable skills and knowledge, which I find essential as I embark on my new journey as a bioentrepreneur. Monetising my expertise in genetics has been a dream since I first entered the field, and I am now closer to realising it. Like many, I initially had no clear direction, but thanks to Bioeconomy Corporation, I now have a clearer path and feel wiser for the experience."

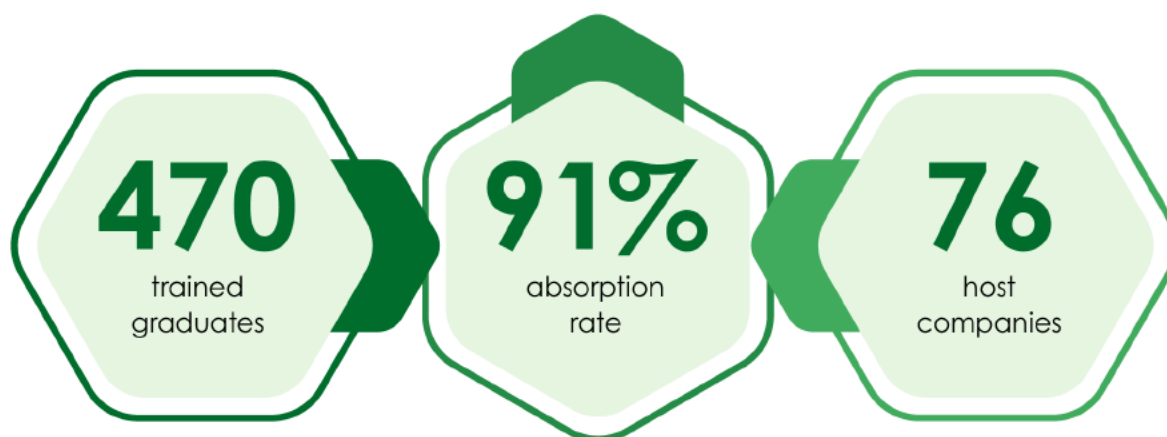
- **Ikhmal Daniel**, Business Developer & Analyst, Absolute Genetic Technologies Sdn Bhd



Passionate about sustainability, Walafuddin is committed to sharing knowledge and educating local communities on farming. He shared that the on-the-job experience gained during the BeST 2.0 programme provided him a platform to engage with communities and promote sustainable farming practices.

- **Walafuddin Maliq**, Farm Executive, GE Nitrate Solutions (Sabah)

Number of Graduates Trained & Host Companies Per Batch: 2023**Number of Graduates Trained & Host Companies Per Batch: 2024**

BeST 2023-2024 Achievements**5.3 BioeGAP**

BioeGAP delivers a high-impact bridge between academic talent and industry needs, nurturing job creators rather than job seekers. It is developed in response to recognising the need for a complementary initiative to nurture entrepreneurial capabilities within the nation's bioeconomy talent pool.

Designed as a six-month accelerator, the programme cultivates entrepreneurial mindsets, equips participants with essential business skills, and provides structured mentorship to help them transform innovative ideas into viable biotechnology ventures.

Participants are supported through a unique "buyback" model driven by anchor companies, enabling successful ventures to be further nurtured and reintegrated into the broader bioeconomy ecosystem.

The strategic partnership with anchor companies builds a sustainable pipeline of biotechnology spin-offs that meet industry needs, commercialise solutions, and reinforce Malaysia's position as a regional hub for bioentrepreneurship and innovation while fostering innovation and job creation in the nation's bioeconomy.

Pilot Phase

The pilot phase successfully enrolled ten apprentices, with 70% of the training focused on practical, industry-based learning in bio-based crop production, sustainable farming practices, and post-harvest handling. The first training commenced in October 2024, with additional sessions planned for the first batch throughout 2025.

Success Stories

Two companies were created from BioeGAP:

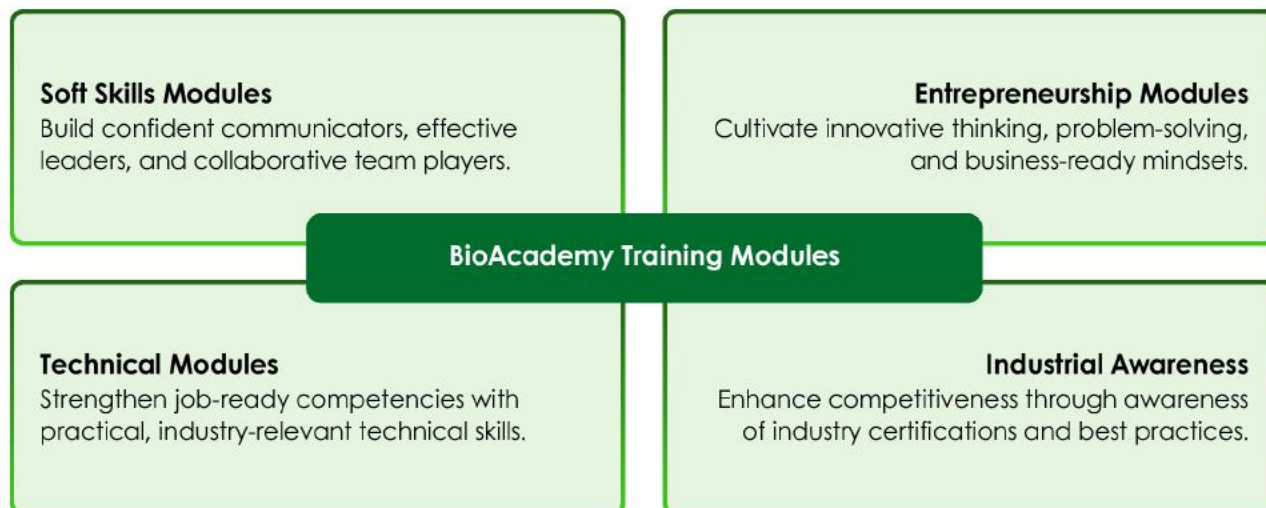
1. Nuha Enterprise, and
2. A.Z.O Enterprise.

Trainings Offered under BioeGAP

Training Programme	Skills Covered
AI & Digital Marketing	Social Media Marketing Content Creation
Data Analytics & Storytelling	Data Presentation in Excel Data Analysis Shortcut and Formulas Presentation of Data to Customers
Crop Production & Management	Types of Crops Soil Management Water Management Technique Pest and Disease Management Sustainable Agriculture Practices Variable Rate Technology Automation and Robotics Future Trends in Precision Agriculture
Customer Service	Understanding Customers Types of Customers
Financial Management	Introduction to Accounting Concepts Dual Aspect Concept Introduction to Bookkeeping Initiating Transactions Financial Reporting Income Statement Balance Sheet Cash Flow Management Tax-deductible Expenses
Agriculture Technology	Pest Control in Farming using IRAC Guidelines Internet of Things (IoT) in Agriculture
Strategic Marketing Mastery	Market Research Technique Brand Strategy and Positioning Strategy Planning and Roadmap Creation Developing Value Propositions Integrated Marketing Communications Go-to-Market Strategies Brand Loyalty and Retention Strategies Measuring Success with Marketing Metrics

5.4 Training @ BioAcademy

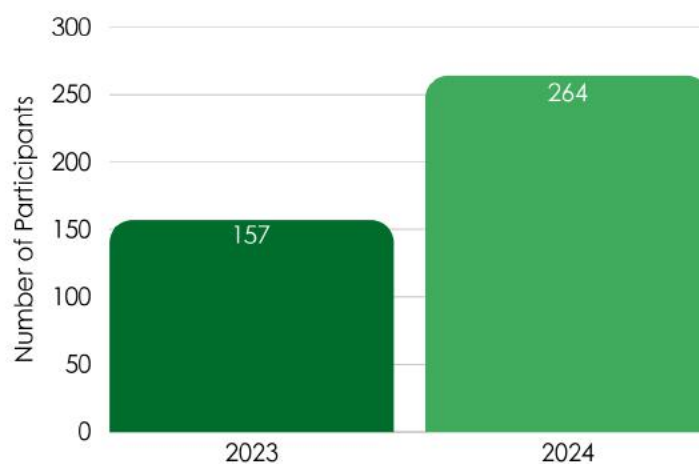
Training @ BioAcademy provides a wide range of talent development training courses to hone abilities in leadership, management, soft skills, technical, entrepreneurship, which can be customised based on the employer's requirements.



"These programmes are designed to equip participants with practical knowledge, technical expertise, and professional certifications that meet the evolving needs of the sector, while also inculcating interest in STEM, particularly in biotechnology and bio-based fields, to build a strong pipeline of future talent."

- Encik Fadzrin Azwar Abdul Aziz, Senior Vice President, Strategic Ventures

Number of Participants Trained by Year @ BioAcademy



To advance these objectives, BioAcademy delivered the following training programmes during the 2023–2024 period.

Date	Programme	Key Results
20–22 March 2023	Industrial Awareness (GAP, GMP, GLP, BAP, ESG) online training	Equipped graduates with industry-aligned competencies, strengthening their understanding of safety, quality and sustainability standards.
24–25 October 2023	Tissue Culture: An Advanced Technology in Plant Production @ Forest Research Institute Malaysia (FRIM)	Participants gained hands-on tissue culture skills and techniques to scale plant production with higher success rates.
6–7 November 2023	Biofertiliser Development for Sustainable Agriculture Biocon Academy @ Universiti Putra Malaysia (UPM)	Trained participants to formulate and evaluate biofertilisers, reducing reliance on chemical inputs and improving soil health.
20–21 February 2024	Supercritical Carbon Dioxide (CO ₂) Technology as Sustainable Technique for Food Security @ Universiti Putra Malaysia (UPM)	Enhanced understanding of clean CO ₂ extraction workflows to produce safer, higher-quality and sustainable extracts.
4 March 2024	GMP, HACCP & MeSTI @ Universiti Malaysia Sabah (UMS)	Strengthened capability to implement food safety systems and improve readiness for certifications.
5 March 2024	Kesedaran Halal @ Universiti Malaysia Sabah (UMS)	Improved knowledge of halal standards and certification processes, increasing industry compliance and market confidence.
15 May 2024	Bioeconomy Campus Takeover @ Innovation Science Technology Engineering Exhibition 2024	Provided students with hands-on experience in biotechnology skills and career pathways, inspiring interest in future industry opportunities.
24 -25 June 2024	Farm Management Online Training	Equipped participants with essential planning, budgeting and resource-management skills to boost farm productivity and profitability.
29 June 2024	Beyond the Resume: The Power of Personal Branding in the Digital Age @ UniKL Malaysian Institute of Chemical and Bio-Engineering Technology	Helped participants enhance their digital identity and optimise LinkedIn profiles to improve employability and online visibility.
19 August 2024	Marker Assisted Selection (Basic) @ Malaysian Agricultural Research and Development Institute (MARDI)	Enabled participants to understand and interpret basic genetic marker data for informed breeding decisions.
24–26 September 2024	Marker Assisted Selection (Intermediate) @ Malaysian Agricultural Research and Development Institute (MARDI)	Improved precision and efficiency in crop enhancement by enhancing marker analysis and interpretation skills.

5.5 Knowledge Centre

The Knowledge Centre serves as a specialised library dedicated to biotechnology, agriculture, and other bio-based fields.

With a core collection of over 5,000 hardcopy and digital resources, including books, industry reports, market analyses, and directories, the centre facilitates knowledge sharing across key areas such as life sciences, healthcare, industrial applications, business, and intellectual property.

Open to BioNexus Status companies, BBA participants, approved bio-based enterprises, and the general public, the Knowledge Centre provides support for information searches, resource borrowing, and industry-related inquiries. This accessibility enhances its role as a central hub for research, learning, and innovation within Malaysia's bioeconomy ecosystem.

Beyond serving as a resource centre, the Knowledge Centre extends its impact through public STEM initiatives such as SciensationBIO, which inspire youth and communities to explore biotechnology careers and deepen understanding of the bioeconomy's potential.

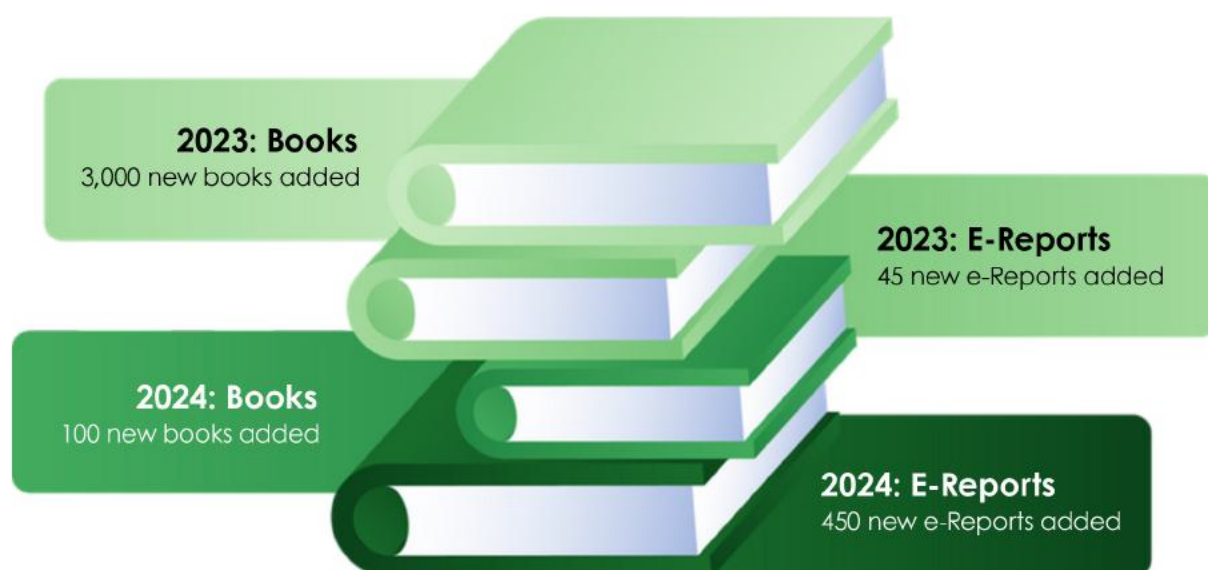
Through strengthened online access, targeted outreach, and strategic collaborations, the Knowledge Centre continues to expand its role as a trusted platform for industry insights and stakeholder engagement.

"The Knowledge Centre has been instrumental in my role as an R&D executive, especially for market research in new agricultural product development. The website offers a wealth of valuable information, and the staff are always friendly and helpful in providing relevant details on requested topics."

- Encik Afiq Syazwan Abu Ubaidah, R&D Executive, Ova Chem Sdn Bhd (BBA Company)



Knowledge Centre Growth: 2023-2024



5.6 BioKerjaya Portal

The BioKerjaya Portal is an online job-matching platform designed to connect job seekers with employers in the biotechnology and bio-based industries. It provides an efficient and centralised hub where graduates and skilled professionals can discover opportunities, while employers can identify candidates with the right technical expertise and industry experience.

The portal addresses key industry gaps, including the absence of a dedicated job-matching platform, limited visibility of specialised biotech roles, and challenges in sourcing talent with both practical skills and relevant experience.

Future plans for BioKerjaya Portal include evolving beyond job matching to serve as a talent intelligence hub, offering labour market insights on talent availability, in-demand skills, and hiring trends across the sector. This enhanced function aims to strengthen industry workforce planning and policy development.

BioKerjaya Portal: Key Achievements 2023–2024



5.7 BioCareer

BioCareer is a platform that bridges academia and industry by raising career awareness through activities such as walk-in interviews, resume clinics, and career assessments. BioCareer supports talent attraction and readiness by engaging with universities and institutes to expand graduate opportunities.

To advance these objectives, BioAcademy conducted the following engagement programmes during the 2023–2024 period, benefiting more than 5,000 graduates.

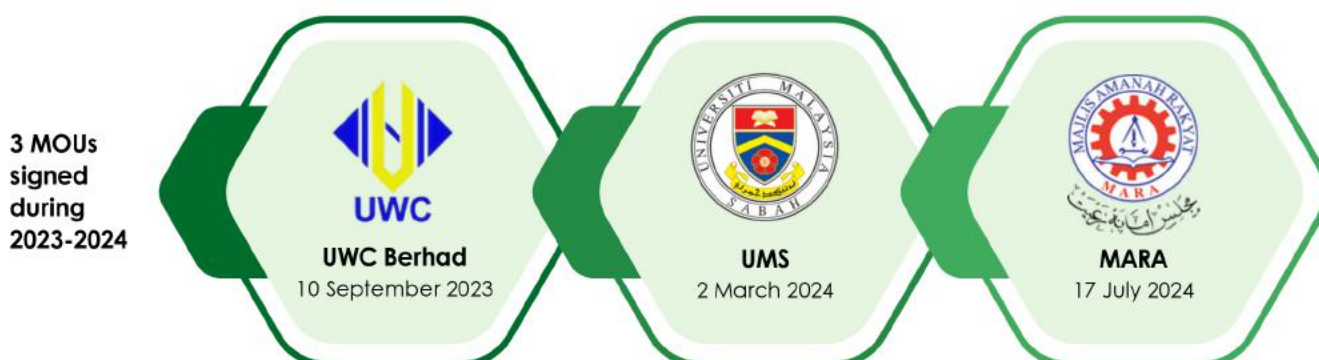
Date	Programme	Location
16 March 2023	Career Internship Fair 2023	University of Nottingham Malaysia (UNM)
29 March 2023	Sharing Session on Way Forward for Bio-Based Product Technology	Business Innovation and Technology Commercialisation Centre, Universiti Teknologi MARA (UiTM)
1 April 2023	Career Discovery Forum 2023 by Leave A Nest	Rekascape, Cyberjaya
11–13 May 2023	Karnival BioKelantan	Kota Bharu, Kelantan
16–17 May 2023	Karnival Kerjaya dan Keusahawanan 2023	Universiti Teknologi MARA (UiTM)
15 May 2023	Engagement Session with Dewan Perniagaan Sabah	Dewan Perniagaan Sabah
18–20 May 2023	Creation De UiTM Dengkil (International Mega Innovation Carnival 2023)	Universiti Teknologi MARA (UiTM)
22 May 2023	Engagement Session with Universiti Putra Malaysia (UPM) & Green World Genetics	Faculty of Agriculture, Universiti Putra Malaysia (UPM)
18 May 2023	Pameran Internship & Career Programme 3.0 (i-Care 3.0)	Politeknik Nilai, Negeri Sembilan
13 June 2023	Business 101: Road To Entrepreneurship	Universiti Putra Malaysia (UPM)
15 June 2023	Career Insights with Bioeconomy Corporation: Starting Your Bioscience Career	University of Nottingham Malaysia (UNM)
17–18 June 2023	Selangor Mega Job Fair 2023	MBSA Convention Center
12–15 September 2023	Malaysian International Halal Showcase 2023 (MIHAS 2023)	Malaysia International Trade and Exhibition Centre (MITEC)
13 October 2023	Career Grooming Workshop	Universiti Malaya (UM)
20 October 2023	Industry Networking Event 2023 (iNET)	Sunway University
2–3 November 2023	Karnival Kerjaya 2023	Universiti Malaya (UM)
9 November 2023	Industrial Training Resume Writing for Science Students	University of Nottingham Malaysia (UNM)

Date	Programme	Location
16 February 2024	Leisure Talk Alumni Experience Sharing with Universiti Putra Malaysia (UPM)	Online training
2 March 2024	Jelajah Bioekonomi	Kota Kinabalu, Sabah
4 March 2024	Jelajah Bioekonomi	Kuching, Sarawak
5–6 March 2024	University of Nottingham Malaysia Career & Internship Fair 2024	University of Nottingham Malaysia (UNM)
6 March 2024	Jelajah Bioekonomi	Miri, Sarawak
27 April 2024	6th Career Discovery Forum, Leave a Nest	Rekascape, Cyberjaya
7 May 2024	Future Talent Connect Series 1.0	Universiti Malaysia Sabah (UMS)
7 May 2024	Jelajah Bioekonomi	Pulau Pinang
14–15 May 2024	Minggu Kerjaya	Kolej Kemahiran Tinggi Mara (KKTm)
16 May 2024	Jelajah Bioekonomi	Johor
23 May 2024	Industrial Talk Universiti Malaya	Universiti Malaya (UM)
11 June 2024	Jelajah Bioekonomi	Terengganu
2 July 2024	Engagement Talk Session with University College of Yayasan Pahang (UCYP)	University College Yayasan Pahang (UCYP)
17–18 July 2024	National Bioeconomy Showcase 2024	World Trade Centre (WTC), Kuala Lumpur
24 July 2024	International Symposium on Synthetic Biology and CRISPR Technology 2024	Universiti Kebangsaan Malaysia (UKM)
26–28 July 2024	Sabah Agro Expo 2024	Sabah International Convention Centre (SICC)
10 September 2024	Quest International University Industry Day	Quest International University (QIU)
16–7 October 2024	International Digital Economy Conference Sarawak 2024 (IDECS 2024)	Kuching, Sarawak
18 October 2024	Karnival Kerjaya 2024	Fakulti Sains, Universiti Malaya (UM)
21 October 2024	Unlocking Science Careers: Shatter Stereotypes and Discover New Paths	Monash University Malaysia

Date	Programme	Location
26 October 2024	Career Day and Mock Interview	Universiti Kebangsaan Malaysia (UKM)
26–27 October 2024	MyCareer Fair 2024	Kuala Lumpur Convention Centre (KLCC)
29 October 2024	Faculty of Resource Science & Technology & Institute of Biodiversity & Environmental Conservation Research Open Day	Faculty of Resource Science and Technology (FRST), University Malaysia Sarawak (UNIMAS)
7 November 2024	Life Science Industrial Placement Training: Resume Writing Workshop	University of Nottingham Malaysia (UNM)
5 December 2024	University of Nottingham Resume Competition 2024	University of Nottingham Malaysia (UNM)

5.8 Industry-Academia Engagement & Partnership

Bioeconomy Corporation aims to deepen collaboration between universities, both public and private, and industry players to create a more connected talent pipeline through three key strategic initiatives: internship opportunities, sharing industry insights, and R&D collaborations.



5.9 SciensationBIO

SciensationBIO is an internal flagship programme by Bioeconomy Corporation, designed as an interactive, school-based initiative to ignite early interest in biotechnology while fostering curiosity and scientific awareness.

In addition to implementing SciensationBIO, Bioeconomy Corporation also collaborates with MOSTI as one of their implementation partners for the Science, Technology and Innovation 100 on the Power of Three (STI 100^3) initiative. This national effort aims to cultivate interest in Science, Technology and Innovation (STI) by connecting students with local scientists through interactive, school-based activities.

During 2023–2024, Bioeconomy Corporation conducted a total of 12 SciansationBIO and STI 100^3 programmes, reaching 91 schools and benefitting over 2,900 students nationwide. These programmes delivered the following impact:

- Hands-on biotechnology experiments that transform complex scientific concepts into fun and memorable learning experiences.
- Interactive innovation challenges that promote creativity, teamwork, and problem-solving skills.
- Real-world exposure to biotechnology applications across health, agriculture, environmental sustainability, and industry.
- Career discovery sessions introducing students to biotech pathways, emerging job roles, and industry insights.
- Showcases of local biotech innovations to inspire students through homegrown success stories.
- STEM talent nurturing through guided activities that build confidence, curiosity, and sustained interest in science.

The programmes conducted are outlined in the table below.

Date	Programme	Location	Number of Participating Schools
11–13 December 2023	SciansationBIO: STEM4U @ TECHFEST UMS 2023	Universiti Malaysia Sabah (UMS)	21
17-18 July 2024	SciansationBIO @ National Bioeconomy Showcase 2024	World Trade Centre (WTC), Kuala Lumpur	4
25 October 2024	STI 100^3 Programme	Universiti Malaysia Sabah (UMS)	8
5 November 2024	STI 100^3 Programme	Bio Tree Biotechnology (BBA company), Melaka	6
7 November 2024	SciansationBIO and STI 100^3 Programme	Universiti Malaysia Kelantan (UMK)	10
12 November 2024	STI 100^3 Programme	Bio Tree Pharmaceutical Int'l (BBA company), Melaka	4
27 November 2024	SciansationBIO	Sekolah Menengah Agama, Kuala Lumpur	1
3 December 2024	STI 100^3 Programme	Kuala Selangor, Selangor	20
5 December 2024	STI 100^3 Programme	Suncrox Solar (BBA company), Sabah	5
18 December 2024	STI 100^3 Programme	Universiti Pendidikan Sultan Idris (UPSI)	10
18 December 2024	STI 100^3 Programme	Sekolah Kebangsaan Pajar Sejingkat, Sarawak	1
18 December 2024	STI 100^3 Programme	Sekolah Kebangsaan Bandar Samariang, Sarawak	1

5.10 Moving Forward

Over the next two years, Bioeconomy Corporation will strengthen its role in shaping a competitive, innovation-driven biotechnology workforce. The strategic focus will centre on six key pillars: STEM and TVET Empowerment, Industry-Academia Collaboration, Talent Reskilling and Upskilling, Biokerjaya Portal, Nurturing R&D, Innovation & Commercialisation, and Building a Skilled Bio-Based Workforce.

STEM and TVET Empowerment Focus Areas



Strengthening Industry–Academia Partnerships



Reskilling and Upskilling Talent



BioKerjaya Portal

**Labour Market Insights**

Provide data on talent availability, in-demand skills, and hiring trends across bio-based industries.

**Promotion**

Strengthening its position as a go-to recruitment and career platform for bio-based industries.

Nurturing R&D, Innovation & Commercialisation

BioAcademy will introduce a new programme, the *BioInnovation Launchpad*, designed to support the journey from research to market and enable bioinnovators to successfully commercialise their ideas.

**Commercialisation Pathways**

Helping researchers and startups turn lab ideas into market-ready products.

**Entrepreneur Support**

Offering funding, mentorship, and training to build successful bio-based businesses.

**Employment**

Promoting STEM-related careers within the biotechnology and bio-based sectors.

**Innovation Platforms**

Showcasing new solutions to attract investors and boost industry visibility.

Building a Skilled Bio-Based Workforce

**Industry-Relevant Talent Development**

Equipping graduates with practical skills and micro-credentials to meet evolving industry demands.

**Expanding the Knowledge Workforce**

Increasing the number of skilled professionals to drive innovation and growth in the bioeconomy.

**Alignment with NBP 2.0**

Supporting national goals to recognise 80% of biotechnology graduates through micro-accreditation.

**Mutual Value Creation**

Nurturing industry-ready knowledge workers while enabling graduates to build sustainable careers.

6.0

Corporate Social Responsibility (CSR)

Promoting environmental responsibility, empowering communities, and advancing the circular economy to create a sustainable future.



6.1 Overview

As Malaysia and the global community face increasing climate challenges, resource scarcity, and rising waste generation, the call for sustainable transformation has never been more urgent. Bioeconomy Corporation continues to lead by example, championing a circular economy within the biotechnology and bio-based sectors — transforming waste into value and innovation into impact.

Guided by the NBP 2.0, Bioeconomy Corporation remains steadfast in integrating Environmental, Social, and Governance (ESG) principles into its operations and ecosystem development efforts. Through these initiatives, Bioeconomy Corporation promotes responsible production and consumption patterns, aligning with Malaysia's commitment to the Sustainable Development Goals (SDGs) and the 12th Malaysia Plan.

Creating Impactful Change

Since 2018, Bioeconomy Corporation has continued its CSR collaboration with Kloth Cares, Life Line Clothing Malaysia Sdn Bhd, and the Selangor Youth Community under the Kitar-Kloth Fabric Recycling Initiative to promote textile recycling and waste reduction.

Through these continuous efforts, Bioeconomy Corporation reaffirms its role as a catalyst for impactful change, driving Malaysia's transition toward a low-carbon, circular, and inclusive bioeconomy that benefits both people and the planet.

6.2 Outreach & Impact

In 2023–2024, Bioeconomy Corporation expanded its fabric recycling outreach through a series of community engagement programmes designed to raise awareness of sustainable practices and promote circular economy values.

These initiatives demonstrate a strong commitment to advancing the circular economy by integrating sustainability, resource efficiency, and social inclusion into practical, impactful actions.

Through strategic partnerships, we demonstrated how the circular economy empowers communities to flourish, fostering a healthier planet while simultaneously generating sustainable opportunities that improve livelihoods.

By driving these initiatives forward, we further reinforced Bioeconomy Corporation's role in driving an inclusive and sustainable bioeconomy that improves the lives of families and communities.



6.2.1 2023 Programme

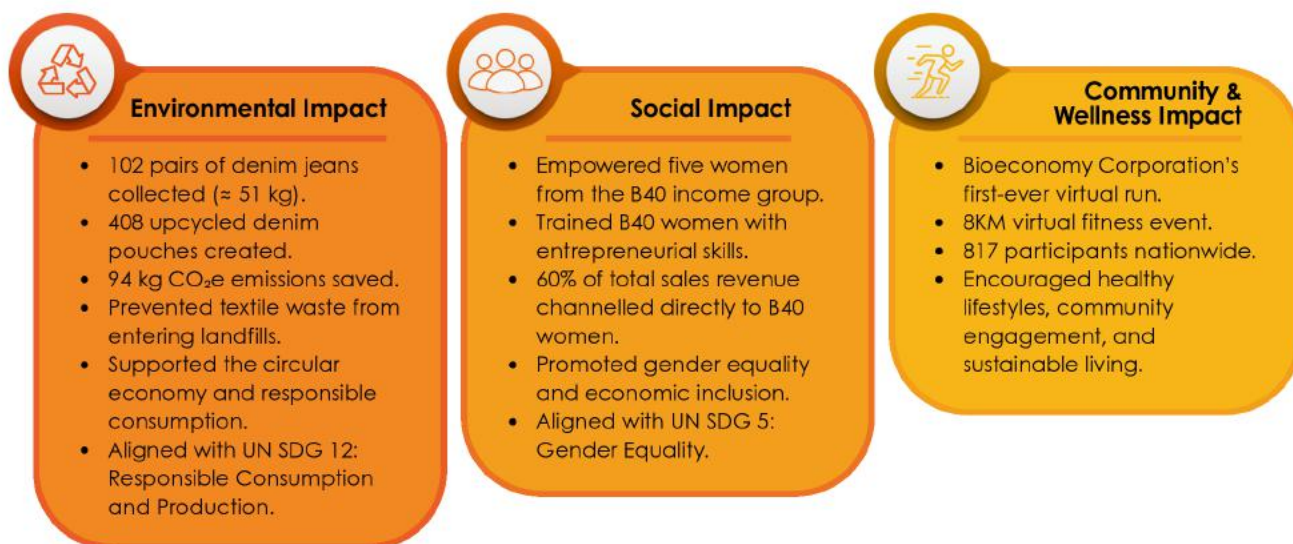
In conjunction with International Women's Day, Bioeconomy Corporation collaborated with Kloth Woman Up and Starun Malaysia to organise a virtual run themed "Who Run the World 2023", which took place from 8 March to 8 April 2023.

The initiative celebrated women's empowerment while promoting the United Nations' Sustainable Development Goals (UN SDGs).

Participants who registered under selected special categories received exclusive pouches upcycled from used denim fabrics. These pouches were skillfully crafted by women from the B40 income group under the Kloth Woman Up initiative.

Complementing the virtual run, Bioeconomy Corporation also conducted a denim donation drive, encouraging employees and the public to contribute unwanted denim to Kitar-Kloth fabric recycling bins.

Who Run the World 2023: Impact Highlights



6.2.2 2024 Programme

As part of Bioeconomy Corporation's ongoing commitment to sustainability, our CSR partner Kloth participated in the "Hijau Corner" of the National Bioeconomy Showcase 2024 (NBiOSHOWCASE 2024) from 17-28 July 2024 at the World Trade Centre, Kuala Lumpur.

The "Hijau Corner" is a dedicated segment at the NBiOSHOWCASE 2024 that highlights green innovation and sustainable practices. Through our collaboration, Kloth gained the platform to showcase a range of sustainably made products, including scarves crafted from recycled polyester and bags produced from upcycled fabrics.

To further promote fabric recycling, Kitar-Kloth bins were also placed at the Hijau Corner, allowing visitors to donate unwanted textiles for upcycling or recycling.

Hijau Coner NBiOSHOWCASE 2024: Impact Highlights



6.3 Key Milestones

Sustained support from employees, the public, and outreach programmes, together with generous contributions to the Kitar-Kloth initiative, has enabled Bioeconomy Corporation to achieve notable milestones in advancing sustainability through this CSR partnership from 2018–2024.

Kitar-Kloth Milestones 2018-2024

Period/Year	Number of kg of Textiles Diverted from Landfills	Number of T-shirts Saved from Landfills	Number of kg of CO ₂ Equivalent Prevented from being Emitted into the Environment	Number of Days of CO ₂ Equivalent Emissions Prevented
2018-2022	2,520	15,117	4,636	221
2018-2024	3,508	21,051	7,842	373



6.4 Moving Forward

Bioeconomy Corporation remains committed to advancing sustainability and circular economy practices through meaningful partnerships and public engagement. Building on the success of initiatives such as the "Who Run the World 2023" and participation in the "Hijau Corner" of NBiSHOWCASE 2024, we will continue collaborating with Kloth Cares to develop interactive activities that inspire participation and encourage fabric donations.

Moving ahead, Bioeconomy Corporation will also strengthen its visibility and leadership in ESG initiatives that are aligned with the UN SDGs, positioning itself as a driving force for sustainable growth within Malaysia's biotechnology and bio-based industries.

7.0 In the Media

Showcasing the bioeconomy to build public awareness and market interest while catalysing investor confidence and industry growth.



7.1 Overview

Bioeconomy Corporation's active and strategic presence across diverse media channels plays a pivotal role in shaping positive public perception and broadening awareness of biotechnology's critical importance.

This sustained visibility in the media not only educates the public and stakeholders on emerging bio-based technologies but also reinforces confidence in the bioeconomy sector, driving investor interest and policy support.

7.2 Media Value

News coverage of Bioeconomy Corporation during the 2023–2024 period generated a total media value of RM127.47 million. A year-by-year breakdown is presented in the table below.

Media Channel	Media Value Generated in 2023 (RM million)	Media Value Generated in 2024 (RM million)
Print	0.99	3.90
Broadcast	1.98	4.90
Online	39.70	76.00
Total	42.67	84.80

7.3 Top News

The top three news stories generating the highest media value each year are as follows:

Year	Topic	Media Value Generated in 2024 (RM million)
2023	Hari Koperasi Negara 2023	2.9
	1st Cultivated Meat Conference	2.7
	BeST 2.0 Appreciation Dinner	2.6
2024	National Bioeconomy Showcase 2024	35+
	Launch of Jelajah Bioekonomi 2024	8.2
	MOSTI Minister's Visit to Free The Seed's Facility	3.6

BeST grads get hired

'Place-train-hire' prog will see 600 grads in high-knowledge, high-income jobs

TO date, the BioAgrotech & BioPharmaceutical Employability and Entrepreneurship Specialised Training (BeST 2.0) programme has seen the placement of 192 graduates in 25 biotechnology and bio-based companies under the 12th Malaysia Plan (12MP).

The programme, implemented by the Malaysian Bioeconomy Development Corporation (Bioeconomy Corporation) through the BioAcademy initiative, aims to "place-train-hire" graduates as knowledge workers in the biotechnology and bio-based industries.

Science, Technology and Innovation Minister Chang Lih Kang, in a press release, said he is confident that BioAcademy programmes such as BeST 2.0 can contribute to increasing job opportunities and reducing unemployment, while promoting modern technology application and rapid economic growth in Malaysia.

SKILLS IN DEMAND

Such programmes, he added, will lead to the country producing more knowledgeable workers as well as competitive bio-entrepreneurs who are ready for the global market.

"BeST 2.0 aims to place 600 graduates in high-knowledge and high-income jobs in the biotechnology sector under the 12MP.

"The success of BeST 2.0 is a positive step towards closing the skills gap between local graduates and the workforce, which is a common challenge in the biotechnology and bio-based industries in Malaysia.

"This programme is also poised to form a highly skilled workforce that can fill in the vacancies in biotechnology and bio-based industries, in line with the National Biotechnology Policy 2.0, which is aimed at developing an



Well done: Chang (centre) presenting a plaque to industry player Mohd Nizar Alias. Looking on are Bioeconomy Corporation chairman Dr Lee Boon Chye (far left), Mohd Khairul Fadzal (far right), and Science, Technology and Innovation secretary-general Datuk Dr Aminuddin Hassim (fourth from left).

efficient and adaptive workforce and talents for the biotechnology industry in Malaysia," he said at an appreciation dinner for BeST 2.0 participants and industry players on July 18 in Cyberjaya.

Its chief executive officer Mohd Khairul Fadzal Abdul Razak said the solid collaboration between Bioeconomy Corporation and biotechnology and bio-based companies is crucial.

"For the first BeST 2.0 intake in 2021, these host companies absorbed 93% of the graduates as permanent employees.

"The great support provided by industry players, including BioNexus Status and Bio-based Accelerator companies, made it easier for Bioeconomy Corporation to successfully match

biotechnology and bio-based graduates with the skills and academic qualifications required in these industries," he said, adding that collaboration and implementation of BioAcademy programmes will be expanded to train and produce more young bio-entrepreneurs who can commercialise biotechnology and bio-based research outputs in local and global markets.

This, he said, would create more job opportunities in technology-based industries.

Through the BeST 2.0 programme, local and international graduates and graduands are placed as apprentices in biotechnology and bio-based host companies, including those in the bioagriculture and biophar-

maceutical sectors. The participants undergo training related to soft and technical skills, as well as industry work experience for six months before they are offered permanent positions either in the placement companies or in other organisations.

Forty-four graduates, under the second intake of BeST 2.0 which began in March this year, are currently undergoing work placements at their respective host companies until this month.

The third intake, which started in July, attracted 45 graduates who were trained at Rekascap, Cyberjaya, for a month before being placed in host companies.

The fourth recruitment of 40 graduates received work placements this month.



▲拿督亚特古律 (中) 在莫哈末凯鲁 (右) 陪同下, 了解生物科技产品。

(本报 23 日讯) 沙巴企业对于生物科技的应用日益增加, 对提高沙巴农业水平发挥关键作用。

联邦科学、工艺及革新部副部长拿督亚特

沙企生物技术应用增 对提高农业水平发挥作用

古律说, 这包括涉及农业现代化、开发经济机会以及通过永续方案来解决全球问题。

"沙巴将通过生物科技的应用获得显著的经济效益, 特别是在海藻和生姜生产方面。"

他昨日出席大马生物经济发展机构 (Bioeconomy Corporation) 在此间举行的生物基产品及谅解备忘录签署仪式时, 这样表示。

沙巴生物基公司 Rhodomaxx 推出一种从海藻中提取生物基肥料产品 AlgaGrow。

另一家公司 Tamara Nanotech 则与一家本地企业交换谅解备忘录, 以便合作在斗亚兰建

立生姜种植试点农场。

亚特表示, 沙巴作为全国最大海藻生产州和第三大生姜生产州, 在国家农业和生物经济做出重要贡献。

他说, 上述机构展示创新行动加上对生物基产业的认真投资和策略伙伴关系如何推动沙巴农业发展。

"这符合国家生物技术政策 2.0 理念, 即集中全国生物基资源和活动促进全国经济繁荣、社会福祉和永续发展。"

另外, 大马生物经济发展机构首席执行官莫哈末凯鲁表示, 沙巴可在有关措施下, 减少对进口化肥的依赖, 从海藻业多样化市场渠道和生姜种植技术转移中受惠。(070)

Cell AgriTech to set up pioneering cultivated meat production facility in Penang

KUALA LUMPUR: Bio-based Accelerator (BBA) firm Cell AgriTech Sdn Bhd will set up its first main cultivated meat production facility in Penang by the end of the fourth quarter in 2024, with a total investment of RM20 million.

This pioneering facility for cultivated meat production will be the first of its kind to be established in Malaysia.

The company, which announced this yesterday at the First Malaysia Cultivated Meat conference, expects to launch its first cultivated meat product in May 2025.

Deputy Science, Technology and Innovation (Mosti) Minister Datuk Arthur Joseph Kurup who officiated the event said cultivated meat is one of the emerging solutions for sustainable source of meat that promises to revolutionise the food industry in

Malaysia by reducing environmental impact and improving animal welfare, while also potentially providing a healthier and safer alternative to conventionally produced meat.

"Research and Markets estimates that the cultivated meat market, currently valued at RM791.87 million in 2022, will increase to RM1.443 billion in 2027, with a CAGR of 12.76%. The development of cultivated meat technology in Malaysia promises to create job opportunities and revenue while addressing national challenges such as food security, health management, and climate change," he added.

He said that Mosti, through Bioeconomy Corporation will support efforts like cultivated meat to strengthen the nation's food security as cultivated meat is a vital part of Malaysia's

National Biotechnology Policy 2.0, specifically under Flagship Project 2, which aims to develop a food ecosystem for future high-value products using advanced technologies such as cellular agriculture for artificial meat, marine, and aquaculture products.

Bioeconomy Corporation's CEO Mohd Khairul Fadzal Abdul Razak said, "As the global population surpassed eight billion in November 2022 and with limited resources to produce enough food for everyone sustainably, the cultivated meat industry is poised to grow substantially."

According to a recent study by the Good Food Institute, he added, the alternative protein industry has attracted RM63.7 billion in global investments during the last ten years and that these investments have doubled year

over year.

Recognising the massive potential of this industry, he said, Bioeconomy Corporation will continue to collaborate with companies such as Cell AgriTech, Mosti, other ministries, and regulatory bodies to develop policies, regulations, and frameworks that will benefit the entire future food industry.

Cell AgriTech Group of Companies founder and manufacturing vice-president Jason Ng stated, "We are proud to be the first cultivated meat company in the country, bringing a sustainable and delicious alternative to traditional meat products. We believe that the future of meat is cultivated. We are committed to bringing this innovative and sustainable solution to the meat industry as our focus in the field of cellular agriculture."

全國生物經濟路演掀幕 要招募65公司參與2計劃

(亞庇2日訊) 大馬生物經濟發展機構今年通過一系列路演活動，欲達成吸引全國各地65家公司加入生物科技地位(BioNexus)和生物基礎加速器(BBA)計劃。

科學、工藝及革新部副部长拿督尤索夫阿達今日為2024年生物經濟路演主持推介，呼喚生物科技和生物基產業，特別是婆羅洲地區的企業家、公司和人才踴躍參與，善用該機構提供的服務來支持他們的需求。

他說，該部轄下的生物經

濟發展機構推行路演系列，旨在支持國家生物科技政策2.0 (DBN 2.0)，解決大多數業者面臨的挑戰，例如融資渠道有限、獲得認證和打入市場的困難以及知識型員工難找。

他指出，到2023年為止，共有488家BioNexus和BBA公司，獲得價值83億令吉的批准投資，創收204億令吉並製造近1萬5000個就業機會。

"自2021年以來，在創業專業培訓2.0 (BeST 2.0) 計劃下有超過1800人在這些公司實習受訓，就業率高达96%。"



尤索夫阿達 (右二) 在生物經濟路演推展禮上參觀斗湖人創立的醬料品牌攤位。(黃燕萍攝)

路演活動全國9地進行

大馬生物經濟機構首席執行員凱魯費查表示，該機構的目標是今年通過路演系列增加65家BioNexus和BBA公司，以及120人加入BeST 2.0計劃。

"我們將密切關注和指导參與者，確保他們能夠獲得所有承諾的設施和支援。"

生物經濟路演系列活動將在全國9個地點進行，包括沙巴的亞庇、斗湖和山打根；砂拉越的古晉和美里，以及大馬半島北馬、東海岸、南馬和中東地區。

行業參與者將接觸到生物經濟機構提供的便利服務，以便提高業務績效，擴大運營規模，獲取稅收獎勵等等。

該機構的便利服務包括產品開發、認證、實驗室測試認可，以及研究、開發、商業化和創新設施。

該機構也與其他機構合作，提供打通市場、融資、稅務援助、移民服務、監管事務、知識產權以及人才和知識型工人發展方面的諮詢服務和支持。

Jelajah Bioekonomi bermula di Sabah, bakal lahir ramai bakat bioteknologi

KOTAKINABALU: Timbalan Menteri Sains, Teknologi dan Inovasi Datuk Mohamad Yusof Apdal pada Sabtu lepas melancarkan siri Jelajah Bioekonomi 2024 di negeri ini iaitu sebuah program di bawah 'Malaysian Bioeconomy Development Corporation' (Bioeconomy Corporation).

Program jelajah itu menyokong Dasar Bioteknologi Negara 2.0 (DBN 2.0) dalam mengatasi cabaran yang dihadapi oleh kebanyakan pemain industri.

Ini termasuklah kekurangan akses kepada pembiayaan, kesulitan dalam mendapatkan pensijilan, akreditasi dan akses pasaran, serta kesukaran mencari pekerja yang berpengetahuan.

Beliau dalam ucapannya menyeru usahawan, syarikat, dan bakat industri bioteknologi dan berasaskan bio, terutamanya di rantau Borneo untuk menyertai Jelajah Bioekonomi dan memanfaatkan perkhidmatan Bioeconomy Corporation yang dapat menyokong keperluan industri mereka.

"Sehingga 2023, sejumlah 488 syarikat berstatus BioNexus dan BBA meraih pelaburan diluluskan bernilai RM8.3 bilion, menjana pendapatan RM20.4 bilion dan mencipta hampir 15,000 peluang pekerjaan di Malaysia.

"Sejak 2021, lebih daripada 1,800 calon berdaftar di bawah program BeST 2.0 untuk ditempatkan dan dilatih sebagai pekerja di syarikat-syarikat berstatus BioNexus dan BBA, dengan kadar pengambilalihan kerja sebanyak 96 peratus," katanya.

Sementara itu, Ketua Pegawai Eksekutif Bioeconomy Corporation Mohd Khairul Fidzal Abdul Razak berkata, pihaknya menyasarkan sejumlah 65 syarikat



PAMERAN: Yusof (tengah) melawat pempamer syarikat bioteknologi pada majlis pelancaran Jelajah Bioekonomi 2024 bersama Mohd Khairul Fadzal (empat dari kanan) dan Timbalan Setiausaha (Pembangunan Teknologi) MOSTI Datuk Dr. Mohd Nor Azman (dua dari kanan).

dari seluruh Malaysia untuk menyertai program Status BioNexus dan BBA.

Katanya, seramai 120 orang calon untuk menyertai program BeST 2.0 melalui siri Jelajah Bioekonomi pada tahun ini.

"Bioeconomy Corporation akan melakukan susulan rapat dengan pemain-pemain ini dan memastikan mereka diberikan akses kepada semua kemudahan dan bantuan yang dijanjikan.

"Dengan semangat bioekonomi untuk semua, kami yakin Jelajah Bioekonomi akan melahirkan satu lagi generasi usahawan, syarikat serta bakat yang hebat, berinovasi, dan berdayasaing melalui program-program bimbingan dan juran Kementerian Sains, Teknologi dan Inovasi (MOSTI) bersama Bioeconomy Corporation," jelasnya.

Siri Jelajah Bioekonomi akan dilaksanakan di sembilan lokasi iaitu Kota Kinabalu, Tawau dan Sandakan di Sabah, Kuching dan Miri di

Sarawak serta kawasan utara, timur, selatan, dan tengah di Semenanjung Malaysia sepanjang 2024.

Melalui siri ini, pemain-pemain industri didedahkan kepada perkhidmatan fasilitasi oleh Bioeconomy Corporation yang dapat meningkatkan prestasi perniagaan, memperluaskan skala operasi dan memudahkan mereka menerima insentif-insentif khas seperti insentif cukai.

Fasilitasi ini termasuklah pembangunan produk, pensijilan, pengiktirafan ujian makmal, serta kemudahan Penyelidikan, Pembangunan, Pengkomersialan, dan Inovasi (R,D,C&I).

Bioeconomy Corporation turut bekerjasama dengan MOSTI serta agensi-agensi lain di bawahnya dengan memberi khidmat nasihat dan sokongan dalam akses pasaran, pembiayaan, bantuan cukai, perkhidmatan imigresen, hal ehwal regulatori, harta intelek serta pembangunan bakat dan pekerja berpengetahuan.

Kuala Lumpur

Penghasilan 'emas hijau' atau produk pembungkusan terbiodegradasi yang diproses daripada sisa jerami padi di Gurun, Kedah dianggarkan mencecah nilai pasaran RM60 juta apabila diedarkan di pasaran tempatan dan antarabangsa mulai tahun depan.

Pengeluaran produk hasil kerjasama awam-swasta antara Malaysian Bioeconomy Development Corporation (Bioeconomy Corporation) dan syarikat berstatus BioNexus, Free The Seed Sdn Bhd (Free The Seed) itu bakal memacu industri terbiodegradasi negara melalui pemprosesan sisa jerami padi menggunakan enzim bioteknologi.

Ketua Pegawai Eksekutif Bioeconomy Corporation, Mohd Khairul Fdzal Abdul Razak berkata, kerjasama itu dijangka meningkatkan pengeluaran produk pembungkusan terbiodegradasi berjumlah 120 juta unit setahun untuk pasaran sektor perubatan, makanan, perindustrian dan elektronik.

"Pada awalnya pengeluaran produk tertumpu kepada pembungkusan makanan dan penjagaan kesihatan untuk dieksport tetapi kini berjaya memasuki sektor baharu termasuk penjagaan kesihatan tempatan, industri semikon-



LHH Kang (tiga dari kiri) melihat produk terbiodegradasi melalui pemprosesan sisa jerami padi.

EMAS HIJAU RM60J

Pengeluaran produk pembungkusan terbiodegradasi daripada sisa jerami padi di Gurun dijangka cecah 120 juta unit setahun

duktor dan industri tenaga mampan," katanya dalam kenyataan.

Menurutnya, pengembangan operasi hasil kerja-

sama dua pihak berkenaan juga berjaya mewujudkan sebanyak 120 peluang pekerjaan baharu dengan 30 peratus daripadanya terdiri

daripada pekerja berkemahiran TVET.

"Melalui sesi libat urus industri serta akses kepada pihak berkepentingan da-

lam sektor awam dan swasta, Bioeconomy Corporation telah menyokong Free The Seed dalam mengembangkan pasarannya.

"Sokongan ini membantu Free The Seed meningkatkan kapasiti pengeluaran untuk memenuhi permintaan pasaran yang semakin berkembang dalam sektor-sektor ini," katanya.

Sementara itu, Menteri Sains, Teknologi dan Inovasi, Chang Lih Kang yang mengadakan lawatan kerja ke fasiliti Free The Seed baru-baru ini berkata, pihaknya menyokong penuh usaha pengeluaran produk pembungkusan terbiodegradasi yang bakal diedarkan ke pasaran tempatan dan luar negara seperti Jerman, Belanda, Jepun dan United Kingdom pada 2025.

Beliau berkata, kerjasama itu juga berjaya meningkatkan rantai nilainya yang lebih besar apabila mewujudkan peluang pendapatan tambahan kepada pesawah dan komuniti setempat.

"Seramai 618 pesawah terbabit dalam projek ini dan pembabitannya itu dijangka meningkatkan kepada 3,700 pesawah apabila operasi sepenuhnya dimulakan pada tahun depan.

"Lanjutan daripada kerjasama antara Bioeconomy Corporation dan Free The Seed, pesawah dari kawasan ini dijangka menjana pendapatan tambahan sebanyak RM3 juta setahun bermula 2025 hasil daripada penjualan sisa jerami padi," katanya.



Mohd Khairul Fdzal Abdul Razak - Bioeconomy Corporation CEO

This morning, we witnessed the launch of 5 products by Science, Technology, and Innovation Minister.

8.0 Calendar of Events

Charting our journey through impactful events and key milestones that shape and strengthen the nation's bioeconomy.





10 January 2023

Working Visit from the Minister and Deputy Minister of MOSTI

Bioeconomy Corporation Office, Putrajaya: Bioeconomy Corporation was honoured to receive a working visit from the Minister of MOSTI, YB Tuan Chang Lih Kang, together with the then Deputy Minister of MOSTI, YB Datuk Arthur Joseph Kurup and the MOSTI delegation. During the visit, CEO of Bioeconomy Corporation, Encik Mohd Khairul Fidzal Abdul Razak, shared Bioeconomy Corporation's roles and latest developments.

13 January–24 March 2023

MOSTI "Sembang Santai STI" & Exhibition

MOSTI, Putrajaya: Organised as a knowledge-sharing platform on science, technology, and innovation (STI), this exhibition aimed to provide a better understanding of STI from various perspectives. Weekly dialogue sessions, "Sembang Santai STI", were held every Friday at MOSTI's Networking Lounge.



17 January 2023

Minister's Mandate and Exhibition by MOSTI 2023

MRANTI Park, Kuala Lumpur: Bioeconomy Corporation attended this key event, which served as a platform for the Minister of MOSTI, YB Chang Lih Kang, to deliver his annual mandate. The mandate outlined the ministry's strategic direction, priorities, and initiatives for the year 2023, ensuring alignment of all stakeholders.

8 February 2023

Visit by Agriculture and Food Security Minister

Smart Indoor Farming, Bio-PINTAR Project Site 2023, Putrajaya: The Bio-PINTAR Smart Indoor Farming Project is an initiative by Bioeconomy Corporation and MSD Innovation Sdn Bhd, a BBA company. The visit by Agriculture and Food Security Minister YB Datuk Seri Haji Mohamad bin Sabu underscored the importance of the initiative for the nation.





2 March 2023 Official Visit from Malaysian Nuclear Agency

Bioeconomy Corporation Office, Putrajaya: Bioeconomy Corporation shared its latest programmes and initiatives with the Malaysian Nuclear Agency. These included projects spanning three sectors, namely AgBiotech, Healthcare Bio, and Industrial Biotechnology.

8 March–8 April 2023 Who Run the World 2023 Virtual Run

Organised by Bioeconomy Corporation with Kloth Woman Up and Starun Malaysia, Who Run the World 2023 was a month-long virtual run celebrating International Women's Day. As Bioeconomy Corporation's first virtual run, it advanced the organisation's ESG goals while promoting the circular economy and women's empowerment, attracting 817 participants.



15–16 March 2023 1st Malaysia Cultivated Meat Conference

Kuala Lumpur Convention Centre, Kuala Lumpur: Cell AgriTech Sdn Bhd, a BBA company, is set to establish its first primary cultured meat production facility in Pulau Pinang by the end of 2024. The announcement was made at the inaugural Malaysian Cultured Meat Conference, which was officiated by then MOSTI Deputy Minister, YB Datuk Arthur Joseph Kurup.

6 April 2023 Official Visit from the MOSTI Secretary for Strategic Technology and S&T Applications Division

Bioeconomy Corporation, Putrajaya: The official MOSTI visit was attended by its Undersecretary, Puan Aidawati Misdar; Deputy Undersecretary II, Encik Mohd Fauzi Mohd Said; Principal Assistant Secretary, Puan Siti Zuhaini Abd Samah; Senior Assistant Secretary, Encik Ng Chee Loong; Assistant Secretary, Puan Nor Affini Zakaria; and MySTEP Officer, Puan Norsyamimi Mohd Rodzi.





12 April 2023

Meeting Ceremony Between the MOSTI Minister, STI Industry Players, and MOSTI Personnel

MOSTI, Putrajaya: The event to meet MOSTI Minister YB Chang Lih Kang was also attended by then MOSTI Deputy Minister, YB Datuk Arthur Joseph Kurup and its Chief Secretary, YBhg Datuk TS Dr. Haji Aminuddin Bin Hassim; Chairperson of Puspanita MOSTI, YBhg Datin Hajjah Murni binti Muda; senior officers; Heads of Units and Divisions; and other staff.

11–14 May 2023

Karnival Bio Kelantan 2023

Kompleks Islam Darul Naim, Kota Bharu, Kelantan: Organised by the Unit Perancang Ekonomi Negeri Kelantan in collaboration with Kelantan Biotech Corporation, Bioeconomy Corporation was invited to participate at this event that explores the pivotal role of biotechnology in ensuring food security.



7 July 2023

Launch of GLK Birdnest by Glyken Bio Products Sdn Bhd (Glyken): Biotech Advancements & Retail Experience

Glyken Specialty Bird's Nest Store, Mont Kiara, Kuala Lumpur: Glyken, a BioNexus Status company, launched its first specialty bird's nest retail store at Mont Kiara.

18 July 2023

Appreciation Ceremony for BeST 2.0 Participants and Host Companies

Dash Box Hotel, Cyberjaya, Selangor: An appreciation ceremony for all participants and host companies under the BeST 2.0 programme. MOSTI Minister YB Chang Lih Kang graced the occasion.





21-23 July 2023 Hari Koperasi Negara 2023

Sabah International Convention Centre (SICC), Kota Kinabalu, Sabah: Participation in Hari Koperasi Negara 2023 expanded Bioeconomy Corporation's footprint and the BBA programme to East Malaysia.

3-4 August 2023 Malaysia Commercialisation Year (MCY) Summit 2023

Connexion, Bangsar South, Kuala Lumpur: Launched by Prime Minister YAB Dato' Seri Anwar Ibrahim, the MCY Summit showcased products, technologies, and services that were successfully commercialised both domestically and internationally from 2016 to 2022. Free The Seed, a BioNexus Status company, won both the Supreme Award and the Commercialisation Achievement Award at this event.



12-15 September 2023 MIHAS 2023

Malaysia International Trade and Exhibition Centre, Kuala Lumpur: Bioeconomy Corporation invited innovative companies under the BioNexus Status and Bio-Based Accelerator programme to participate in MIHAS, a renowned world stage for Halal products and services that attracts over 20,000 visitors from nearly 80 countries each year.

20 September 2023 NIBM Open Day 2023

Malaysia Genome & Vaccine Institute, Bangi, Selangor: NIBM's Open Day highlights Malaysia's advancements in biotechnology through exhibitions, forums, and laboratory tours. The event was designed to showcase NIBM's role and contributions to the public, encourage collaboration, and raise awareness of biotechnology.





4 October 2023 Securities Commission Malaysia's (SC) SCxSC Grow Roadshow & Bioeconomy Corporation Conference

SC, Kuala Lumpur: This collaborative conference between SC and Bioeconomy Corporation raised awareness of alternative financing options among biotechnology and agri-related agencies and SMEs.

9–10 October 2023 Agra Middle East (AgraME) EXPO 2023

Dubai World Trade Centre, Dubai, United Arab Emirates: Bioeconomy Corporation led BioNexus Status and BBA companies in their participation in AgraME 2023, with the aim of promoting and developing market presence for the products and technologies offered by these companies.



19–22 October 2023 7th Selangor International Business Summit (SIBS) 2023 & Selangor International Expo (MEDIC) 2023

Kuala Lumpur Convention Centre, Kuala Lumpur: SIBS 2023 and MEDIC 2023 was organised by Invest Selangor Berhad and hosted by the Selangor State Government. The events featured 11 major events, 1,000 trade booths, and RM4.9 billion in potential business transactions for local and international industry players.

1 November 2023 Flag Off Ceremony for the First Shipment of Bio-Smart Greenhouse Vegetables to Singapore

MSD Innovation (MSDi), Cyberjaya, Selangor: At this event, MOSTI announced the first shipment of vegetables produced through indoor farming under the Bio-PINTAR programme to Singapore. MOSTI Minister YB Chang Lih Kang also highlighted that this first achievement was made possible through the strategic partnership facilitated by Bioeconomy Corporation between MSDi and Sustenir Agriculture (Malaysia).





17 November 2023 Memorandum of Agreement (MOA) Between Bioeconomy Corporation And Nextgreen Global Berhad (NGGB)

One World Hotel, Petaling Jaya, Selangor: NGGB signed an MOA with Bioeconomy Corporation to collaborate on the potential of enhancing biomass into higher value products utilising biotechnology applications for the biomaterial and agricultural farm sector.

6–7 December 2023 National Biomass Conference 2023 and Launch of the National Biomass Action Plan 2023–2030

The Everly Hotel, Putrajaya: This conference, organised by the Ministry of Plantation and Commodities (MPC) and MBIC, convened 200 participants and featured 30 exhibition booths. Among the exhibitors were four BBA companies, each showcasing their commitment to advancing the industry.



7 December 2023 Launching Ceremony of Bioeconomy Corporation Intergrity Blueprint 2023– 2025 (BIB) and 2023 Corruption-Free Pledge Declaration Ceremony

Bioeconomy Corporation, Putrajaya: Bioeconomy Corporation and the Malaysian Anti-Corruption Commission (MACC) jointly launched BIB in a special initiative. The event, which also included the Corruption-Free Pledge, was witnessed by the MACC Deputy Director.



8 December 2023 Signing Ceremony and Document Exchange

Bioeconomy Corporation, Putrajaya: Bioeconomy Corporation hosted a signing ceremony and document exchange between the Medical Products Administration of Guangxi Zhuang Autonomous Region, China And Tamara Nanoetech (M) Sdn Bhd.





8–10 December 2023

One Year with the MADANI Government

Bukit Jalil National Stadium, Kuala Lumpur: The Prime Minister's Office (PMO) held this programme to highlight new government policies and initiatives as well as reinforce trust through transparent performance reporting. The event brought together Ministries, government agencies, GLCs, NGOs, the private sector, and key stakeholders, including Bioeconomy Corporation, in strategic collaboration.

9 December 2023

Putrajaya Holdings (PJH) Tenant Day 2023 Ceremony

Kelab Tasik Putrajaya, Putrajaya: PJH organised the inaugural PJH Tenants Day with the aim of strengthening rapport and expressing appreciation for the longstanding business relationships that have been established.



12 December 2023

AgriNXT 2023: Digitalising Agriculture Towards Food Technology

MCMC Academy, Cyberjaya, Selangor: AgriNXT: 2023 is a technology competition organised by Malaysian Communication and Multimedia Commission (MCMC). Finalists of the competition included BBA companies in the areas of IoT and agriculture.





15 January 2024 Working Visit from MOSTI Deputy Minister

Bioeconomy Corporation, Putrajaya: During the visit by MOSTI Deputy Minister YB Dato' Haji Mohammad Yusof Apdal, CEO YBrs. Encik Mohd Khairul Fidzal Abdul Razak and senior management presented the organisation's role in advancing biotechnology, entrepreneurship, and job creation through BioNexus Status and BBA.

18 January 2024 Town Hall with the Chairman and Board of Directors

The Everly Hotel Putrajaya: Bioeconomy Corporation organised a town hall attended by Bioeconomy Corporation Chairman YBhg Dato' Dr Lee Boon Chye, as well as the Board of Directors of Bioeconomy Corporation, including Bioeconomy Corporation CEO YBrs. Encik Mohd Khairul Fidzal Abdul Razak and Bioeconomy Corporation's personnel.



5 February 2024 MOU EXCHANGE between Abeco Nature Science Sdn Bhd and Federal Land Development Authority (FELDA)

Park Inn by Radisson, Putrajaya: Abeco Nature Science, a BBA company, signed an MOU with FELDA. The MOU was on a joint research effort relating to the use of the Black Soldier Fly (BSF) larvae for the national livestock industry and the production of antimicrobial peptides.

25 February 2024 Closing Ceremony Of MADANI Rakyat Programme 2024 (Central Zone)

Kuala Selangor Sports Complex, Selangor: Prime Minister YAB Datuk Seri Anwar Ibrahim closed the Central Zone MADANI Rakyat programme. The programme was a continuation of the MADANI Government One Year Programme that served as a forum for the community to obtain information about 163 services offered under the federal government, states and related agencies.





2 March 2024 Launching Ceremony of Jelajah Bioekonomi 2024 - Sabah Edition & Seminar for BBA and BioNexus Status Companies Programmes

Hotel Marriott, Kota Kinabalu, Sabah: MOSTI Deputy Minister YB Dato' Haji Mohammad Yusof bin Apdal launched "Jelajah Bioekonomi 2024 - Sabah Edition", a programme under Bioeconomy Corporation designed to support NBP 2.0.

8 March 2024 Courtesy Visit By Chinese Delegation

Bioeconomy Corporation, Putrajaya: In conjunction with the 2nd China-Malaysia Science, Technology, and Innovation Summit 2024, a courtesy visit was conducted by a China Delegation from Beijing ZGC Science Centre and TusStar Guang Xi to Bioeconomy Corporation. During this visit, the potential bilateral collaborations and partnerships in the biomedicine and agritech sectors were explored.



16 May 2024 Jelajah Bioekonomi 2024 - Johor Edition & Seminar for BBA and BioNexus Status Companies Programmes

Holiday Inn Hotel, Johor Bahru, Johor: Bioeconomy Corporation organised the "Jelajah Bioekonomi 2024 - Johor Edition" seminar, which focused on presenting the Bio-Based Accelerator and BioNexus Status programmes. The seminar attracted more than 30 participants from both public and private institutions.

20 May 2024 Launch Ceremony of Kembara Komuniti: 'Ada Sisa, Jadi Bisnes Bah!'

Dewan Kampung Melangkap Tiong, Kota Belud, Sabah: MOSTI, through Bioeconomy Corporation, successfully launched the Kembara Komuniti programme themed as "Ada Sisa, Jadi Bisnes Bah!" (Waste to Business!). Under the programme, 30 farmers under the Kota Belud Farmers Association will undergo six months of training in bio-based vermicomposting technology.





30 May 2024 Visit From Guangzhou Daily Group

Bioeconomy Corporation, Putrajaya: Bioeconomy Corporation had the privilege of hosting a delegation from the Guangzhou Daily Group, accompanied by four distinguished biomedical enterprises from Guangzhou. The visit signified a significant milestone in nurturing bilateral relations and presented an opportunity for the Guangzhou Daily Group to explore potential investments within Malaysia's flourishing biomedical sector.

27 June 2024 Tax Workshop

Online Webinar: A webinar on Low Value Goods (LVG) Tax and Sales Tax Exemption was delivered by the Royal Malaysian Customs Department. The presenters included Customs II Senior Assistant Director Tuan Suhaimi bin Jamari, Customs II Senior Assistant Director Puan Rofiza binti Ramli, Customs Assistant Director Tuan Wan Asmawi bin Wan Othman, and Customs Assistant Director Puan Nurzaliza binti Radzali.



29 June 2024 Glyken Official Opening Ceremony

Glyken, Iskandar Puteri, Johor: Glyken's latest factory was launched by MOSTI Minister YB Tuan Chang Lih Kang. The new factory contributes to the growth of the bird's nest industry in Malaysia.

17-18 July 2024 NBIOSHOWCASE 2024

World Trade Centre, Kuala Lumpur: With the theme "Bioeconomy for All", NBIOSHOWCASE 2024 highlighted opportunities and advancements in the biotechnology and bio-based industries. Featuring nearly 140 booths and over 110 exhibitors, including BioNexus Status and BBA companies, the event attracted more than 4,000 visitors and secured 15 MOUs worth RM1.55 billion, involving nearly 30 biotechnology companies.





17 July 2024 BNP Labs Certificate Giving Ceremony

WTC, Kuala Lumpur: During this ceremony, which was held in conjunction with National Bioeconomy Showcase 2024, Bioeconomy Corporation awarded the BNP Labs status to 38 laboratories across Malaysia, including higher education institutions, research institutions, government-linked companies, and private laboratories.

18 July 2024 NBiOSHOWCASE 2024: MOU Exchanges and Product Launches

WTC, Kuala Lumpur: At the NBiOSHOWCASE 2024, MOSTI Minister YB Chang Lih Kang witnessed the signing of several significant MOUs and product launches, including MOUs between IBG Manufacturing and Xiamen University Malaysia, ATL Cosmetics and UM Pharmauji, Bioloop and 99 Speedmart, Bioeconomy Corporation and MedKad, and Bioeconomy Corporation and Malaysian Industrial Development Finance (MIDF).



26–28 July 2024 Sabah Agro Expo 2024 (SAEXPO 2024)

SICC, Kota Kinabalu, Sabah: SAEXPO 2024 showcased a wide range of agricultural products, technologies, and services. The expo provided a valuable platform for the agricultural industry in Sabah to showcase its products and services, and to connect with potential customers and partners.

12–13 August 2024 MCY SUMMIT 2024

Kuala Lumpur Convention Centre, Kuala Lumpur: MCY Summit 2024 recognised and celebrated the achievements of local technology researchers and entrepreneurs who have successfully commercialised their R&D products, technologies, or services in the local and international markets. The event also promoted MOSTI's current and ongoing initiatives.





5 September 2024 NIBM OPEN DAY 2024

NIBM, Kajang, Selangor: NIBM Open Day 2024 aimed to encourage local science, technology and innovation as well as to raise awareness about the role of biotechnology in Malaysia's socio-economic development.

11–22 September 2024 Malaysia Agriculture, Horticulture & Agrotourism (MAHA) 2024

Malaysia Agro Exposition Park Serdang, Serdang, Selangor: Celebrating its 100th anniversary, MAHA 2024 elevated the event to an international level through participation from multiple countries. The event strengthened efforts to build resilience in the food security sector and encouraged greater interest among the younger generation to pursue agriculture as a viable source of income.



17–20 September 2024 MIHAS 2024

MITEC, Kuala Lumpur: MIHAS 2024 provided a platform for networking, knowledge sharing, and business opportunities. Exhibitors showcased their latest products and services, while visitors explored the diverse range of Halal offerings. The event also featured conferences and workshops, where industry experts discussed emerging trends and challenges in the Halal market.



16–17 October 2024 International Digital Economy Conference Sarawak 2024 (IDECS 2024)

Borneo Convention Centre Kuching, Kuching, Sarawak: IDECS 2024 was a premier event focused on AI for sustainable development. The event brought together industry leaders, innovators, and policymakers to discuss and showcase the latest advancements in technology and sustainability.





16–19 October 2024 Selangor Life Sciences Convention 2024 (SLC 2024)

Kuala Lumpur Convention Centre, Kuala Lumpur: SLC 2024 was a significant event that celebrated the vibrant life sciences innovation and investment landscape in the ASEAN region. It brought together professionals, researchers, and industry leaders from the fields of pharmaceuticals, biotechnology, healthcare, diagnostics, and academia.

20–23 October 2024 The 19th International Symposium on Biopolymers 2024 (ISBP 2024)

Setia SPICE Convention Centre, Pulau Pinang: ISBP 2024 brought together renowned scientists, researchers, industry experts, and policymakers from 33 countries. The event explored the latest advancements in bio-based and biodegradable plastics, their industrial production and application, as well as the relevant policy frameworks.



2–3 November 2024 Malaysia Fair 2024 Tokyo

Toyosu Park & Urban Dock LaLaport Toyosu, Tokyo: Organised by the Malaysian Embassy in Japan, the fair aimed to showcase Malaysia's rich culture, heritage, and tourism offerings to the Japanese public. The fair featured a variety of activities and attractions, including products from the Malaysian bioeconomy.

6 November 2024 Closing Ceremony of Kasih BIO Programme in Conjunction with Sciensation Bio 2024 @ STI 100^3

UMK Jeli, Kelantan: Kasih BIO is a CSR programme launched by Bioeconomy Corporation as an adjunct programme to Sciensation Bio @ STI 100^3. At this event, Bioeconomy Corporation also made zakat contributions totaling RM25,000 to 50 asnaf students.





12 November 2024 FundSphere Connect 2024

Hotel Pulse Grande, Putrajaya: Launched by MOSTI Deputy Secretary-General YBhg Datuk Ts. Dr. Mohd Nor Azman Bin Hasan, FundSphere Connect 2024 emerged as a strategic platform that facilitated funding matches, expanded market access, fostered collaboration, and stimulated innovation within Malaysia's bioeconomy.

19–20 November 2024 National Biotechnology Symposium 2024 (NBS 2024)

Bertam Resort & Water Park, Pulau Pinang: Themed "Navigating Plant-Based Research Towards Botanical Medicine", NBS 2024 brought together researchers, industry players, and policymakers to discuss the latest advancements and challenges in botanical medicine.



2–4 December 2024 I-Nation Global Summit 2024

Nexus Connexion, Bangsar South, Kuala Lumpur: I-Nation Global Summit 2024 proved to be a vital platform for advancing innovation and sustainability in the region. The summit brought together industry leaders, policymakers, and tech enthusiasts to discuss the latest trends and opportunities in the digital age. It also showcased the latest technological advancements and innovations from local and international companies.

5 December 2024 MOSTI Minister Visit to Free The Seed

Kawasan Perindustrian Gurun, Kedah: MOSTI Minister YB Tuan Chang Lih Kang made an official visit to Free the Seed's facility in Kedah, which focuses on biodegradable packaging solutions. The visit highlighted the company's success in converting agricultural waste into value-added products and supporting the implementation of NBP 2.0.





17-19 December 2024 Malaysia-China Summit 2024

MITEC, Kuala Lumpur: The Malaysia-China Summit 2024 commemorated the 50th anniversary of bilateral relations between Malaysia and China. The summit featured a leadership conference and a multi-sectoral trade and investment exposition, attracting over 500 leading companies from China eager to forge new partnerships with Malaysian counterparts.

26 December 2024 Kembara Komuniti: 'Kecilkan Jejak, Besarkan Impak' Programme

Dewan Orang Ramai Kampung Padang, Behrang, Perak: Alongside Pertubuhan Ibu Tunggal Kebangsaan Tanjong Malim Malaysia (PITKM) (Tanjong Malim Single Mothers Association), Bioeconomy Corporation successfully launched this community programme that empowered 35 single mothers with the skills to create nutritious foods and improve their livelihood.





Impactful Change by Jafni bin Muhammad.

COVER DESIGN CONCEPT

This mixed media artwork by a senior staff within Bioeconomy Corporation, powerfully visualises Malaysia's transition from fragmented biotechnology efforts into a unified bioeconomy, illustrating how biotechnology and sustainability converge at the national level to create impactful change.

The DNA double helix represents the foundational life sciences at the core of the nation's NBP 2005–2020. Merging into the fiery backdrop that represents the modern frontier, the rising double helix symbolises the emergence of a future-ready bioeconomy, advancing with purpose.

This transformation is further strengthened under NBP 2.0, which accelerates the growth of the nation's bioeconomy through innovation, sustainability, and economic resilience.

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