

**BIO**  
**ECONOMY**  
**MALAYSIA**

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**Enriching the Nation, Securing the Future**

How do we create more **jobs?** <sup>Protect the</sup> **environment?**  
<sup>Raise</sup> **standards** <sup>of</sup> **living?** <sup>Improve</sup> **health?**

**WE CAN...**  
THROUGH





## What is Bioeconomy?

Bioeconomy refers to all economic activity that is derived from the continued commercial application of bio-based technologies in healthcare, industrial and agriculture sectors

It encompasses the production of renewable biological resources and their conversion into food, feed, chemicals, energy and healthcare wellness products via innovative and efficient technologies

The vast socio-economic potential offered by bioeconomy has spurred countries and regions such as the United States, Europe, China, Australia, Canada and Russia to launch bioeconomy initiatives or roadmaps that offers attractive incentives, promising programmes and significant investments to boost the bioeconomy sector

Recognising the significant growth proposition for the sector globally, Malaysia has introduced the Bioeconomy Transformation Programme (BTP) as one of the implementation strategies under the Economic Transformation Programme (ETP)



**Emerging Trend:**  
Countries establishing Bioeconomy Initiatives/Roadmap  
Bioeconomy to contribute a global average of **2.7% to GDP by 2030** (OECD estimates)



## What is Bioeconomy Transformation Programme?

Bioeconomy Transformation Programme is a platform provided by the Malaysian government for the private sector to channel and maximise commercial opportunities in bio-based industries

Through the Bioeconomy Transformation Programme, the Malaysian government and leading industry players will work in tandem to set national goals for the application of biotechnology in agriculture production, industrial manufacturing and human health, put in place the structural conditions required and develop necessary mechanisms to ensure that policy can flexibly adapt to new opportunities

The Bioeconomy Transformation Programme is designed as a Transformation Programme based on biotechnology's potential to cut across various different industries and transform Malaysia into a high income, inclusive and sustainable economy

The Bioeconomy Transformation Programme has been endorsed by Malaysia's Biotechnology Implementation Council and launched by the Honorable Prime Minister of Malaysia on 30 October 2012

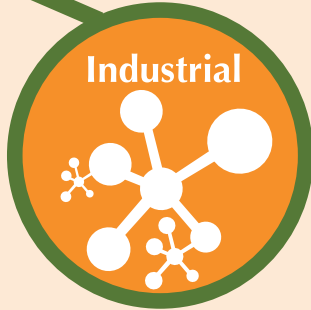
# Our Vision: Enriching the Nation, Securing the Future

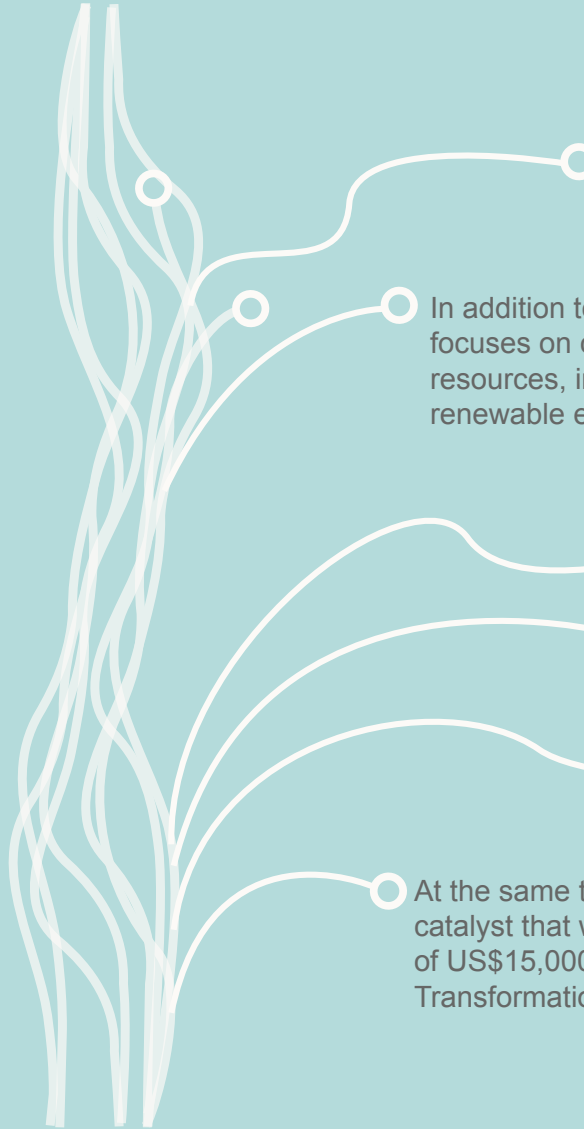


**2020**  
A global high income  
bioeconomy



Bioeconomy benefits the society and nation through breakthroughs in agricultural productivity, discoveries in healthcare and the adoption of sustainable industrial processes, having the effect of both enriching our society and nation through wealth creation besides securing our future





Bioeconomy Transformation Programme will promote a knowledge based bioeconomy through the establishment of a sustainable ecosystem of R&D and commercialisation in the areas of agriculture, healthcare and industrial biotechnology

In addition to the biotechnology industry, the Bioeconomy Transformation Programme also focuses on other industries and economic sectors that produce, manage and utilise biological resources, including agriculture, forestry, fisheries, food production, healthcare, chemicals and renewable energy

The Bioeconomy Transformation Programme's vision is to develop Malaysia as a global high income Bioeconomy by 2020 and is a continuation of the implementation of strategies outlined in the National Biotechnology Policy

The Bioeconomy Transformation Programme encompasses new and existing biotechnology projects, existing Economic Transformation Programme (ETP), National Key Economic Areas (NKEA) and Entry Point Projects (EPPs)

It also includes participation of industry players and peripheral companies that support the development of the local biotechnology industry

At the same time, the Bioeconomy Transformation Programme will function as a catalyst that will enhance and complement efforts in achieving the national target of US\$15,000 in gross income (GNI) per capita by 2020 set under the Economic Transformation Programme (ETP)

# Malaysia's National Transformation Policy







## Creating Economic Value through Bioeconomy Transformation Programme

Bioeconomy Transformation Programme is estimated to increase Malaysia's Gross National Income (GNI) of up to RM 3.6 billion in 2020, with a total investments of RM 10 billion, thus enabling Malaysia to become a high income nation by year 2020.

Bioeconomy Transformation Programme also aims to increase the creation of quality job opportunities for Malaysians as well as improve the income of the Rakyat

In addition, Bioeconomy Transformation Programme will also promote “Green” Economy by contributing towards Malaysia’s target of 40% reduction in carbon footprint and emissions, and improving the health and well-being of the Rakyat through reduced healthcare treatment costs, early disease detection and cheaper, accessible medicines

# Bioeconomy Transformation Programme Outcome

GNI  
in 2020



**RM3.6 billion**

Job opportunities  
by 2020



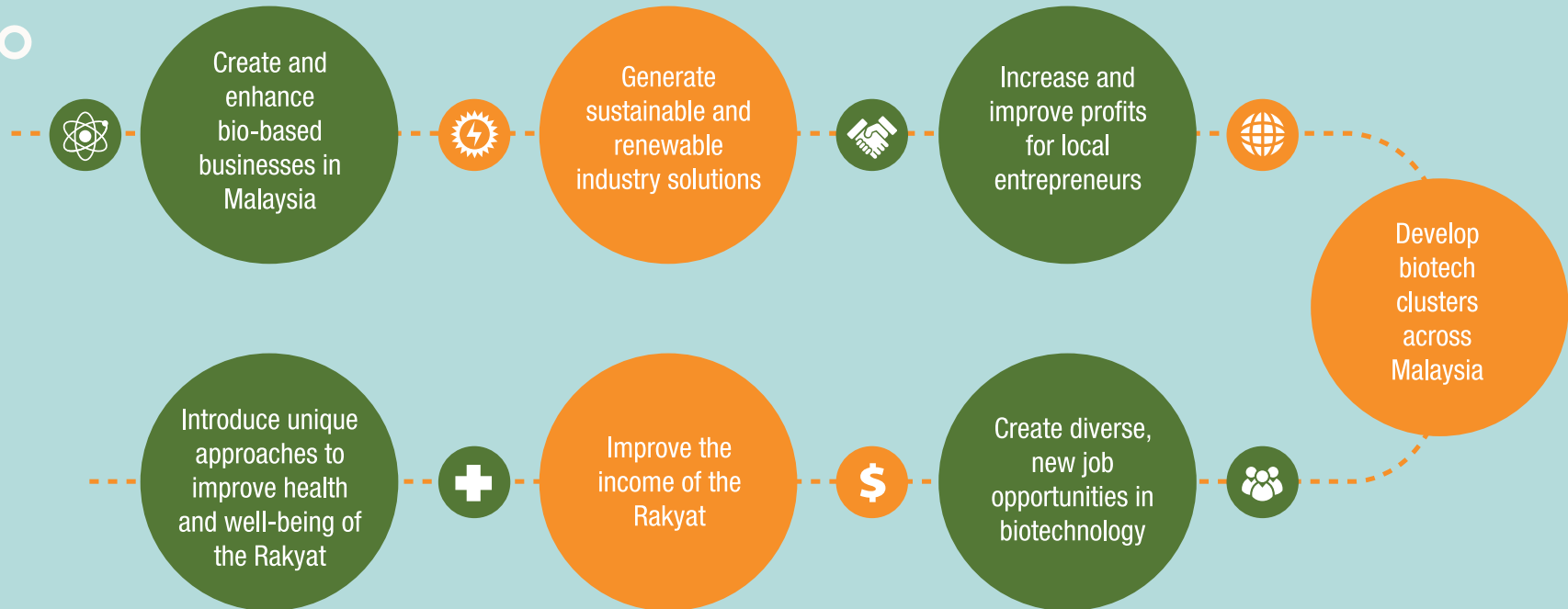
**16,300 jobs**

Investment  
by 2020



**RM10.0 billion**

# 7 WAYS



**Bioeconomy Transformation Programme Can Impact You**

# Bioeconomy Transformation Programme's Focus Area



Tropical  
Agro-Biotechnology




Innovative Healthcare  
Products & Services



Renewable  
Bio-Resources




**Bio-based farm inputs**



2 trigger projects

**High Value Bioingredients**



2 trigger projects

**High Value Food Varieties**




2 trigger projects

**10  
EPPs**



**Biosimilars**




1 trigger project

**Drug Discovery & Preclinical Services**




1 trigger project

**Molecular Screening**



1 trigger project


**Stem Cells & Regenerative Medicine**



1 trigger project




**Industrial Bio Inputs**




3 trigger projects

**Bio-based Chemicals**



3 trigger projects

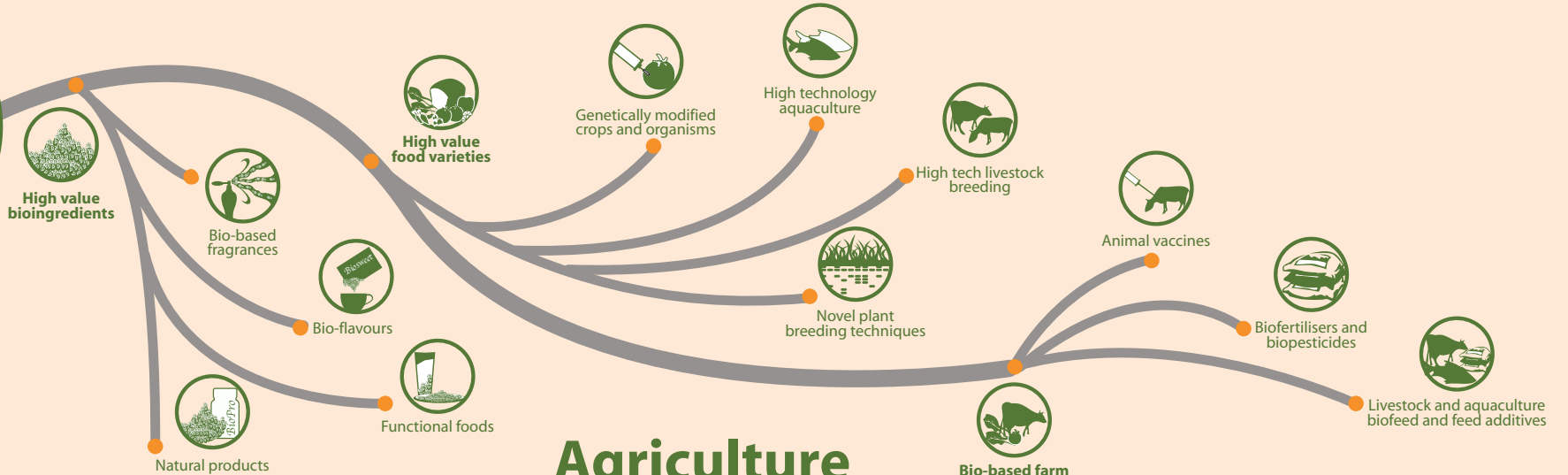
**Biomaterials**



4 trigger projects

**20  
trigger projects**

## Current Entry Point Projects (EPPs) and Trigger Projects



# Agriculture biotechnology

GNI: **RM 1.5 billion**

Employment: **7,000**

Investment: **RM3.0 billion**



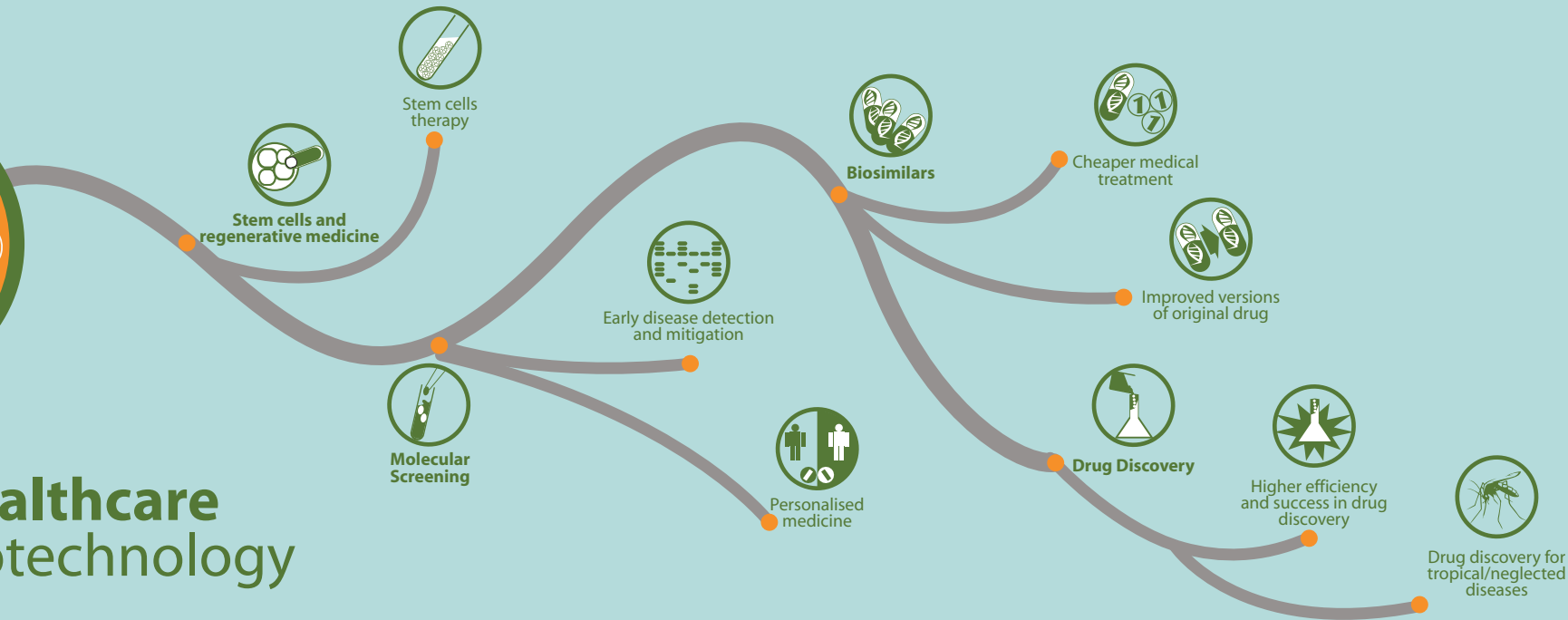
Healthcare

# Healthcare biotechnology

GNI: **RM 0.7 billion**

Employment: **2,000**

Investment: **RM 0.7 billion**



Stem cells and regenerative medicine



Stem cells therapy



Molecular Screening



Early disease detection and mitigation



Personalised medicine



Biosimilars



Cheaper medical treatment



Improved versions of original drug



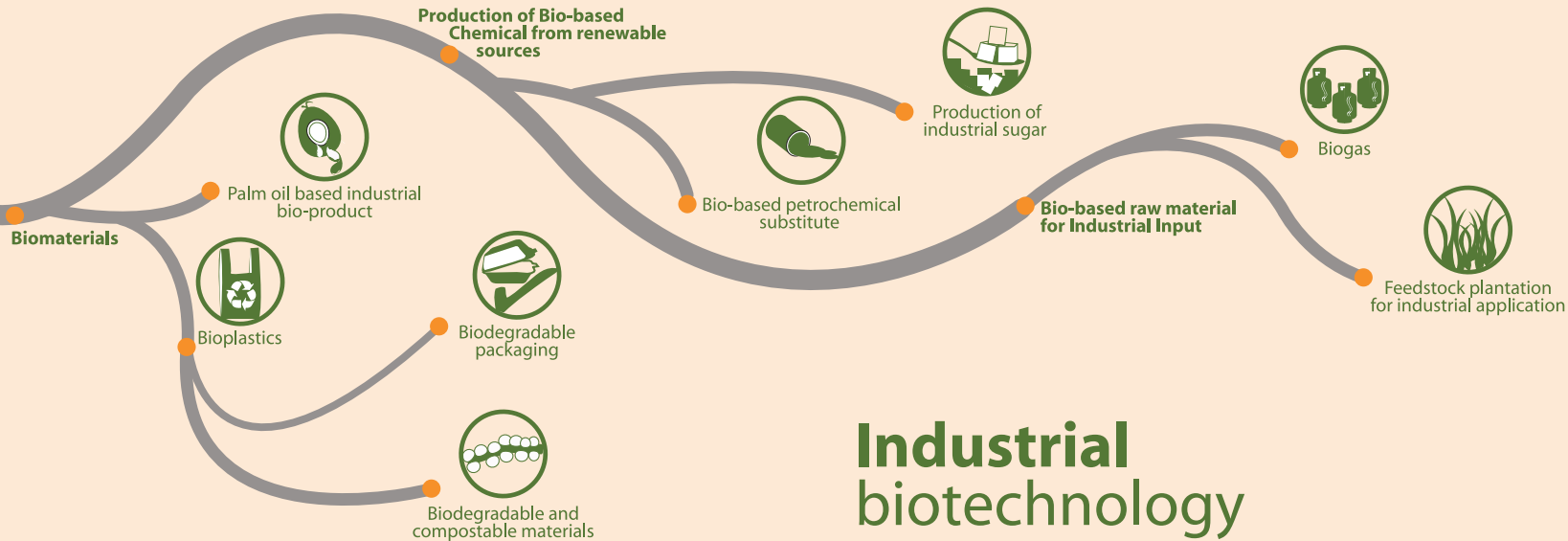
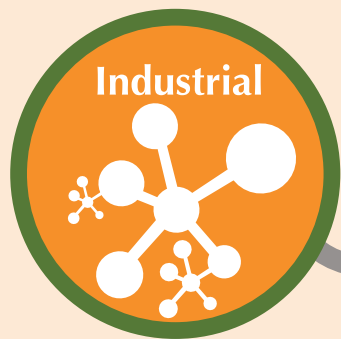
Drug Discovery



Higher efficiency and success in drug discovery



Drug discovery for tropical/neglected diseases



## Industrial biotechnology

GNI: **RM 1.4 billion**

Employment: **7,300**

Investment: **RM 6.3 billion**



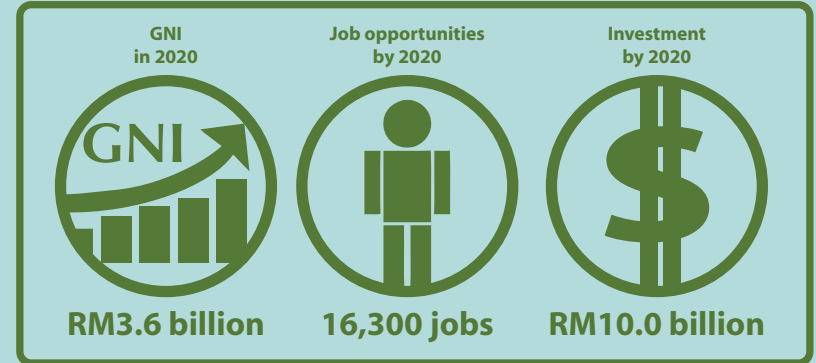
# Enhancing Malaysia's Biotechnology Industry through Bioeconomy Transformation Programme



10 EPPs



20 trigger projects





**BIOECONOMY**

Enriching The Nation,  
Securing The Future

The culmination  
of an economic  
plan 7 years in  
the making



RM 10  
Billion of new  
investments



Over 16,000  
additional  
jobs



Creation  
of new  
industries



An international  
business  
ecosystem





**Ministry of Science Technology  
and Innovation**

*Lead Ministry*



**Bioeconomy Transformation  
Programme**



**Malaysian Biotechnology  
Corporation**

*Implementation Agency*

For more information, visit [www.bioeconomy.my](http://www.bioeconomy.my) and [www.biotechcorp.com.my](http://www.biotechcorp.com.my)  
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